

# The Bauauviklo. CHICAGO ILI 

# A Barawik Triumph in Super Radio Values. 

Is This Splendid Single Control Illuminated Dial 6 Tube Receiver at about the Price You Might Expect to Pay for the Fine Console Alone!


Retail
Value \$110

## Your Ne \$46

With Inbuilt Speaker

Mantifactured under pir. erits license grants from Radio Corporation of America, Westinghouse Electric and Manufacturing Company. General Electric Company. ant American Telephone and Telegraph Company.

Gets All The Air Has to Offer Always

> The Sensation of The
> Entire Radio Industry

The Consolette is made of selected American walnut, dull rubbed, natural brown finish. It stands 40 in . high, 27 in . wide, and 14 in . deep. The set is fitted in a slideout tray for casy access at all times. Lower section has special cone speaker of an advanced design, especially made for this receiver. It is a
wonder for its fine reproduction and tremendous volume. The lower compartment measures $12 \times 23 \times 10$ inches and provides space for all power units or bat. teries, making this fine set completely self-contained.
The Receiver is the great Marvelo Single Control 6 , as described in detail on pages 4 and 5 .

## Wholesale Price List

1B13135-Set Complete, without accessories, but with in-huilt loudspiaker. Shipping wt., 70 lbs . List, $\$ 95.00$. Your Net Cost.

## For Battery Operation

1B13136-Set Complete, with all accessorics for battery operation, including four 201A type, one 200 A type and one 112 type power tubes, one Borawz 120 amp . "A" Storage Battery, two 4 ' 12 V ". "C" hatteries, thrie lage 45 V . "B" batterics and complete" Antenna and Ground ourfits. Shipring cwt., 175 lhs . $\$ 72.25$
List, $\$ 145.00$. Net Wholesale.

## For Socket Power Operation

1B13137-Set Comnlete, for Socket Power Operation, including four 201A type, one 200A type and 112 type power tubes, Abox "A"' Elmminator. Barawk Supreme "B" Eliminator, two 412 V . "C" hatteries and necessarv Antenna and Ground outfits. Ship. p:ng wet., 140 lhs. List. \$17i.00.
N-t Whotsale.

# Lowest Wholesale Prices 

Prices quoted in this catalog are confidential Lowest Wholesale Prices. Please do not divulge these prices to anyone outside of the Radio Trade. The NET PRICES shown have all discounts deducted-there are no further discounts. The List Prices shown are the generally accepted Retail Prices and are for your guidance in reselling. Should the market prices on any items decline, our prices will be reduced proportionately. Likewise, we reserve the right to raise prices, should market conditions force us to do so.

## Sell Marvelo Sets-10 Days Free Test

So sure are we of the excellent quality. fine performance and unequalled value of our maRVELO sets that we offer sou the prifilege of testing sample sets on a 10 days' free test basis. You order in the regular way, sending your remittance-or we will ship C. O. D.-as you choose. Test the MARVELO against any set you desire and prove to your own satisfaction that it is the radio set you want to handle. If for any reason you feel you can do better with some other make of set, return the sample set prepald and we will refund the full purchase price. All wo ask is that you be fair with the set and with us in making your trial test.

You take no risk. We must have superlative sets to stand this guarantee. Marvelo sets are just that. Many thousands of satisfed users throughout the world testify to their fine quality of reproduction, dis-tance-getting and volume.

## Fast Shipment

We have in stock ready for immediate shipment, one of the largest assortments of Radio Merchandise in the world. We believe we have the largest force of trained employees of any radio house in the country handling your radio orders. Experts for every detall. We aim to give same day shipments. We believe that past records prove that on the average we are the fastest shipping house in this business. And now, better than ever before, we are prepaced to give you service. Send in your orders. We will rush the goods to you.

## Quality Above All

Our Itnes are selected carefully from the chosen products of America's foremost manufacturers. We alm to eliminate any items that do not perform prop-erly-even though they may be highly advertised.

## Our Guarantee Protects You

We guarantee every plece of Radio apparatus we sell to operate in the manner intended for such apparatus. Examine the goods we shlp you; any articte which does not meet our guarantee, if returned at once, will be exchanged for perfect merchandise. We are able to make this guarantee because we handle ouly the best grade of carefully tested merchandise.

## Send No Money

If you prefer we will make shipments C. O. D. However, most of our customers send their remittance with order and in this way avold extra collection costs. W'e request that new customers in distant points, ordering heavy mercliandise, accompany their order with a reasonable deposit.

## Our Terms

We carry no open accounts. Our terms are cash with order or C. O. D.-as you choose. We sell to thousands of well rated firms on this basis-firms who save money buying by this money-saving method. We offer you values not equalled elsewhere.

## Make Big Profits

You can make big profits selling Marvelo sets. No big stocks needed. Just order a sample or two for demonstrators. Deliver them to your customers as sold. Order additional sets as required. We will rush them to you so that you will always have sets on hand to sell-yet your investment will be very small. Mans dealers average better than $\$ 100.00$ per week it profits following this plan.

## 

in all states except these few distant ones: New Mexico, Colorado, Wyoming, Montana, Arizona, Utah, Idaho, Oregon, California, Florida, Washington, Maryland, and New England States. If your shipment is ordered by freight, send us your paid irelght bill with the order number you will find on the label on the outside of your shipment and we will allow it.

Orders shipped by express or parcel post go forward and are dellvered to you much more quickly than freight. We will allow you what ordinarlly would be the freight rate on all orders of $\$ 50.00$ or more which are shipped by express or parcel post.

## EXCEPTIONS TO THIS OFFER

This offer does not include orders of " $A$ " batteries, " $\mathbf{B}$ " batteries, insulators, cabinets only, console cabinets only or radio furniture when ordered by itself, but does include all radio sets of any kind. Make up an order of $\$ 50.00$, get it in one shipment and save the amount of the freight charges. Whether you have your order shipped by freight or express you will always save the amount of the frelght cost.

## Thousands of Barawik Radio Sets Prove Our Reliability

The Barawik Co. began selling radio apparatus before the present radio broadcasting was known. We are one of the very few old established companies in the radio business. You can depend on getting real values and prompt service with fair dealing when you buy from us.


ONE OF AMERICA'S OLDEST RADIO INSTITUTIONS COPYRIGHT 1927 BY THE BARAWIK CO. ALL RIGHTS RESERVED.

# A Stupendous Array of Special Features Make This One of America's Finest Radio Receivers 

## Completely Shielded

All motal plazals, combilotely anploging all parts, prosent. Lug thisering and protecting the instruments from dirt and dust. Kecps out most ruicrophonic noises. suppresses out-
 securely anchored. assurhag permanent aligmment und perfert operation oren after long shipping hauis.

Illuminated Single Dial Control
Only one tuning knob. Dlal is Illuminated, making possible operation of set in the dark. .ilso acts as autonatic sigmal to prevent leavhing set turned on.

## Perfected Balanced Circuit

The result of years of expertment. test and experience iy hble radio engineers. one untuned, two tuned radio frequency stages, one Inctector, and two stages of oversize dudio amplification. Free from howls. stupals. it ghtides smoothty into station after statlons. Ease of control is a wonder to all who tume It!

## Instant Distance Control

A new device! $B$ s simple slap of this switeh (the left one on panel front) the reeefrer is matintly changed from halrwith rolume actually makes two sets in onfe, the ontions for congested diftricts, the other for points far remored from broadcastling stations.

## Oversize Audio Transformers

The beautlful tone quality of the Marselo is a wonder to all who hear it. This is hargely arcontullshed throukh giant. thest quality andio transformers. Selected sllicon steel gires are used. Migh inductance primaries with low ratio brimp faithiful reproduction, rekistering wit the frequencies within
reach of the haman ear. As hlustration shows, these transreach of the haman car. As mustration shows, these ir
formers are encised in a special sepmrate shielded edse.

Viow ef Chassis from Bottom


## Power Tube Operation

Ni, alteratlon needed for hastallation of wower tubes. All sockets are phainly matuked so that anyone can place tubes Without likellhood of any mistake. The 112 type umplifier
is recomnended in hast audio stage. is recomnended in last gudio stage.

## Shock-Proof Detector Socket

Thetector sorket is cushbouth to prevent miverophontie nolses hnd insure berfect recelition of signals. All sockets have Wipimg contacts, providing wh flow of current and preventing tube noises.

## Special Space-Wound Coils

Thae new typu. woumb on threaded Bakelite tubes. each one exiatily alike-absolutely rientrivally and inductively correct. shbjected to the most right tests. Gemerally considered by must radio ehminers to the the ideal radio coll.

## Special Metal Panel

Rhehly desifned and embossed with heautiful escutcheon desikn. Alam brown walntit tinish which perfectly matehes !lic. wood of consules allel tabinets. Shze of panel. ixls juches.

## Size of Chassis

l'anel. ixal inches; upright; clenth of chassis, 10 tmenes: overall withh. 1s inches. Fits almost ull standard cablnets and consoles.

## Don't Be Fooled by "Low" Prices

There are many sets now on the market of the same general design as the MARVElO Shielded 6 offered at lower prices. Do not be fooled! Unless the article be meritorious, there is no bargain in a low price. And, we know from sears of experience, that no really fine quality radio receiver can le offered by anycome as low or lower than the prites here quoted. We know that you are willing to pay a fair price for quality and that is what jou get in the MABVELO! Built at a minimum cost, distributed without expensive advertising and selling expenses, MARVDELO sets come to you at the rery lowest possible prices. When you cumpare, compare the UTALITY as well as the PRICE! MARYELO sets are ummatched in real value anywhere!

## Price List of the Cabinet Model



## For Battery Operation

IB13186-set Complete with all acessories for Battery Operation inoluding four gola type, ons good type and one lli type power tubes, one
 farge t5, volt "B" balleries and coumble Anteran and $\$ \mathbf{5 0}$ List, $\$ 120.00$.

NET.

## For Socket Power Operation



 cround outtits. List, $\$ 152.00$. NET....
1813188-Siet Complete for Strateht Flectrle Operation with four (B226. UX2e7 and one VV11: A. U', Tubes. Plate and flament current suipply, necessary Ground and Anfema onthts; complete- $\$>25$ List $\$ 131.00$, NET into light sucket.
List, $\$ 131.00$. NET. . . . .

## If You Desire a Special Cabinet or Console

For those who hafe a cabinet or console, or desire to select a special one from these shown on pages 114 to 125 of this book, we offer the chassis of this fine receirer separately.
1B13189-MARVELO 6 Single Control lluminated Dial Shelded Chassis only (see size in panel alofe).
List. $\$ 60.00$. NET...
\$29.40

## Magnificent Table and Battery Cabinet for the Table Model

A most tasteful design that will fit in well with all types of furniture. Made of genuine walnut plywood, in a soft, rich rubbed finish. Genuine maple overlay, fluting and Inlay effect glve it a most striking appearance. Sliding shelf for cont or horn speaker. Outside dimensions: Width. 30 inches: depth, 15 inches; height, 30 inches. Battery compartment provides sutficlent space for all batteries, chargers or power units. Shipplag wt., 40 lbs.
I6B6575-Table Only.
List. \$23.50. NET. EACH.
${ }^{5} 13{ }^{35}$

A Masterpiece of Radio Efficiency and Console Beauty and a Sensational Value!
Brings a new thrill to the fascinating enjoyment of radio! Range and power that places the entire country's stations within reach of the fancy of the operator. Unsurpassed ease of control and sharpness of tuninggliding into station after station, quietly, surely. Rich, full tone quality never before dreamed of. Those who have heard it ave astounded and enthralled at the lifelike naturalness of reproduction. Beauty of line that places it in the class of the finest furniture, a fitting addition to the most luxuriously appointed home. The ultimate in radio-as fine as anyone might wish for, yet so reasonably priced that all may afford it!


## Marvelo 6 <br> Single Control Illuminated Dial Completely Shielded

## The Wonder Set of the Year!

This new Marvelo Six with one Contral is truly the sensation of the season 1 It is already the talk of the country. See pages 4 and 5 for detalled description of its many features.

## Symphonic Type Cons ole

Made of genuine walnut plywood, beautifully finished with high lighting and two tone effect. Drop leaf arm rest. Top raises for easy access to set. Equipped with long air column deep-toned horn. Ample power unit and battery space--open in rear. Stands 36 in . high, $23 \frac{1 / 2}{} \mathrm{in}$. wide, 18 in deen.
WHOLESALE PRICE LIST
IB:307 1 -Set Complete, without accessories, but with inbuilt loudspeaker. List, $\$ 120.00$.
YOUR NET COST............................. $\$ 6.50$

## For Battery Operation

| B | 3072-Set Complete with All Accessories for Battery Oneration including four 201A type, one 200A type and one 112 type power tubes, one Barawik $120-\mathrm{amp}$. " $A$ "' Storage Battery, two $41 / 2 \nabla{ }^{\circ}$ "C" batteries, three large 45 . ${ }^{4}$. $B^{\prime \prime}$ " bitteries and complete Anteuna and
Ground outits. List, $\$ 170.00$.
YOUR NET COST.
$\$ 91.75$
For Socket Power Operation
IB13073-Set Complete for Socket Power Operation, including fuur 201.1 type, one 200A type and one 112 type power tubes, Alsox "A" Bhiminator, Barawik Supreme "B" Eliminator, two $41 / 2 \mathrm{v}$. " $\mathrm{C}^{\prime}$ " batteries and
 List, $\$ 200.00$. YOUR NET COST
IB I 3074-Sct Complete for straight Electric Operation with four 226 type, one 227 type and one 112 type A. C. Tubes, necessary ground and antenna outfles: completo with all equipment ready to plur into light socket. List, $\$ 180.00$.
YOUR NET COST. CHASSIS Only. List, $\$ 60.00$. COUR NET COST.......................... $\$ 29.40$
$\$ 109.50$

# A Pioneer Builder of Radio Barawik Now Leads in Values 



## This Magnificent Model Offered Far Below the Standard Market Price

For those who want true beauty as well as unfailing efficiency in their radio receiver, this wonderful model is the answer. This strikingly designed Console harks back to the fifteenth and sixteenth centuries, when furniture craftsmen spent lifetimes of ardent labor over the making of high-boys for their royal clientele. The period's masters of the most lavishly fitted mansions pointed with pride to these rich and aristocratic looking pieces. Here in modern times we have these splendid designs perfectly adapted to radio use without the slightest sacrifice of their original beauty and charm. Truly a fitting setting for one of radio's finest sets-the Marvelo!

Bearing in mind the superior quality, compare Barawik prices! Search the world over and you cannot match them!

## Tudor High-Boy Console

An unusually high-grado and beautifully designed console radio cabinet with bullt-in long air column, deep-tone horn and L'tah lotud speaker unlt. Has doors in front of speaker and radio set. Top raises. Both grille and back are removable, giving access to power unlt or batterles trom front or back. Made of fenulne walnut plywood, figured maple overlays on posts. Herringbone mahogany orerlass un doors. Beautiful stump acracia overlays on center of doors. Herringbone mahogany and curly maple scroll overlass on anron. Curly maple scroll overlay on stretcher, blended rich warm finlsh. Outside dimenslons: 44 Lu . high, $26 \% / 4 \mathrm{in}$. Wide, $161 / 4 \mathrm{in}$. doep.

# MARVELO 6 Shielded Receiver 

## The Great Marvelo 6 Receiver

Turn to paros 1 and 5 for complete specifications of Wha sumatloinal nen ralifo retelver.

WHOLESALE PRICE LIST
IBI 3077 -Ret Complete, withuut atcessorles, but with Inbuilt loudsueaker.
LIst, $\$ 145.00$. YOUR NET COST
$\$ 72.50$

## For Battery Operation

1B1307B-Set complete with All Accessorles for hattery Operation inclullige four 201 A iyne, nule $20 \|$

 teries, three large is roulfins batteries and complete List, $\$ 195.00$, YOUR NET COST
$\$ 98.15$

## For Socket Power Operation

IBI3079-set Complete for Socket Power Opera tion. Including four 201. tyie, one 200A type alla one 112 tgpe power tuhes, Abox "i" Eliminator;
 batteries and necessary Anlenna and Ground Out fits. Llat, $\$ 225.00$.
YOUR NET COST.
$\$ 116.50$
IB 13080 -set complete for straigit Electric of. oration with fuur 326 tyipe, one 327 type and one type A. C. Tubes, necessary kround and antenn.

YOUR NET COST.
CBAOB 3 Marvelo Single Control Shelded Six
CHASSIS Only for Battery or socket power opera-
 tion. List, $\$ 60.00$. YOUR NET COST.


## MARVELO <br> Illuminated Dial Single Control Completely Shielded <br> The Hi-Boy Console

Due credit must be awarded the progressive furniture makers who have so deftly adapted the charming old period styles to modern radio uses. Here is an outstanding example of their ingenuity in this quarter. It would be difmeult to imagine a more pleasing, richer, more tastefui console than this beautiful model. The work of skilled craftsmen. The wood used is cloice American walnut with stump walnut front. Flgured maple overlays on posts and stump acacia center overiays. Zebra overiays on corners glie that dash of color now so much farored. Special treatment finish in Adam brown. Top raisos for easy aceess to receiver. Behint the artistic grille is dcep-toned, long alr columu horn with genuine Utah unit. Power unit space behind and around speaker. Outside dimensions: 45 in . HIgh, 25 伿 lis wide. $191 / 4 \mathrm{in}$. deep.

WHOLESALE PRICE LIST
IB13100-Set Connplete, without accessories, but WiH1 injult loudspeaker. List, $\$ 150.00$. $\$ 79.50$
NET WHOLESALE NET WHOLESALE For Battery Operation
IBI3101-Set Completo with All Accessories for lsattery Operation lacludlug four 201A type. one 200 A type and one 112 type rower tubes, one Barawith 120 -amp. " $A$ ". Storage Baitery, two $41 / 2 \mathrm{v}$. "C" batteries, three large 45 v . "B" batteries and camplete Antemna and Ground Outits.
List, \$200.00. NET WHOLESALE.....
For Socket Power Operation
1B13:02-Set Comptete for Socket Power Operation lucluding four 201 A type, one 200 A type ant one 112 type power tubes, Abox " $A$ " Eliminulur: Barawilk Mi:ster "B" Eliminator, two 41/2 v. "C" batterles and hecessary Antenua and Ground Outfits. List, $\$ 230.00$.
NET WHOLESALE $\qquad$ cratlun with four 226 type, one $2: 7$ type and one 112 type A. C. Tubes, necessary ground and antenua outfits: complete with all equipment ready to pluts linto light gocket.
List, $\$ 210.00$. NET WHOLESALE..... $\$ \mathbf{\$ 3} 50$ IBI3104-Marrelo Single Control Shtelded Six CHASSIS Only, for battery or socket power operation. List, $\$ 60.00$.
NET WHOLESALE

# MARVELO 6 

## Illuminatod Dial Completoly shioldod

## Classic Console Model

The kind of radio rooemer that would appear a good barnala at twle Barawiz's apecial pricel It prorides all those refinemente that place it in the frit rank of quality teta. For range, power and tonal qualley, it has few equala.

## The Period Style Console

Rarely beautiful is this ontirely closed cabinet console in the popular orthophonic style with larse inbuilt long air column, deep toned specker. This hugo spoaker has the Utah unit and is a marrel in its rich, fuli rounded, powerful reproduction. Togother with tho plendid audio sys tem of the set itself it brings the ultimate in radio onjogmant of brosdcant rocoption. Made of cholce American walnut plywood with stripe mahogany orerlaye in front. Dbony finlehed molding effect on the two
 to the larase size bettery and power unit section. Top rajses to reach set easily. Stand $41 \% \mathrm{in}$. high, $241 / 2 \mathrm{in}$. Wide, 18 in . deep.
A full detcription of the Marvelous Marvelo 6 Recelver sppears on pares 4 and 5 .


IBI3106-Set Complate, without accemprien


## For Battery Operation

IB13107-Sat Complote With All Accossories for Bettery Operation, inciuding four 2014 type, one 200A type and one 112 type power tubea, one Baramit 120 -amp. "A": Storare Bsttery, two $4 \frac{1}{2} \mathrm{~V}$. "C'" batteries, three large 45 F . "B': battorios and complete Antionina and Ground Outhes and complete Antonna and list, $\$ 10000$.
NET WHOLERALE


## For Socket Power Operation

IB 3 IO8-Set Complete for Socket Power Operation, including four 201A rype, ono 200A tupe and
 Liot, $\$ 210.00$. NET WHOLE8ALE.......................................... . .
IB13109-Marrelo Eingle Control ghielded BHx CEASEIS Only for Battary or ocket power eperation Lint. \$60.00. NET WHOLEBALE.


## For Battery Operatlen

IB13112-Set, Complete with All Accessories for Battery Operation including four 2014 type, one 2004 type and one 112 type power tubes, one Baramik 120 -amp. " $\Delta$ " storage Battery, two 4 1/2 v. "C" betteries, three large $45 \mathrm{\nabla}$. " $B$ ' batteries and complete Antenna and Ground Outfits. Llat, EI70.00.
s8265

## For Socknt Power Operation

IBI3113-Set. Complete, for Socket Power Operation, including four $201 A$ type, one 2004 type and one 112 type power tubes, Abox "A" Eliminator, Barawli Master "B" Miminator, two 4 1/2 V . "C" batterles and necessary Antenna and Ground outfitg. List, \$200.00. NET WHOLESALE.

## MARVELO SIngle control 6

Illuminated Dial Completely Ahlalded

## Splinet Desk Model

As fine and beautful tade set as anyone might reasonably wish for is this pretty Spinet Dest Model, a most pleasing design in rich A da m brown rubbed, pollshed and h 1 gh Lghted walnut. The best of cabinet workmanship diatingulshes it as a fine plece of furniture. Stands 36 in , high, 40 in . Wide, 16 in . deep. It has an excellent horn type inbuilt speaker which gives roomful volume, with beautifully althful and lifelike reproduction. All are amazed who hear it.

## The Remarkable Recelver

Perfectly housed in the center section is the great Marvelo Single Control 6, a complete description of which appears on pages 4 and 5 .

## WE PAY FREIGHT

SEE PAGE 3

# MARVELO 7 DRUM CoNTROL <br> TUBE RECEIVER 

## BARA WIK'S NEWEST CREATION



## Adjacent Drums-the Newest Idea in Tuning Control

These are the days of great power and speed. Huge locomotives have replaced yesterday's puffing, struggling engines. The motor highways swarm with fast, powerful, multiple cylindered cars.

Now in the field of radio we have this same spirit satisfied in this great 7 tube broadcast receiver. Four stages of highly efficient tuned radio frequency amplification precede the detector. This brings a degree of sensitivity rarely attained even in the most costly receivers. The faintest far away signals are readily picked up and stepped up through these first four tubesamplified to great strength before delivery to the detector.

Thus you have a receiver of vastly greater power, one that will reach out long distances and with sufficient reserve to break through local interference in congested broadcast areas. In sharpness of tuning, ease of separation of stations and generally smooth operation, this wonderful receiver is a sensational revolutionary revelation to the average operator. It brings to the radio owner the same thrill, feeling of pride and confidence to conquer all conditions, as the driver of the highly perfected balloon-tired, powerful motor car on the highway.

## The Simplicity of Tuning

There are two knurled dises, directly adjacent, reaching through the escutcheon on the front panel. These may be turned with one finger either separately or in unison. Thus, a single or dual control is afforded as the operator might wish. The single knob below the drum control, regulates the volume and also operates the switch for turning on and off the set.

## Truly a Power Receiver

This wonder circuit has been especially developed to take full advantage of the new highly perfected power tubes. Tremendous volume, with the most liquid, sweet tonal reproduction characterizes the output of this marvelous receiver. Giant audio transformers pass and amplify all audible freguencies with true fidelty and extreme mellowness. There is no hint of metallie coloring lu even tho highest cones. Critics of music pronounce it a masterplece in tone qualitles.

## A Perfectly Balanced Circuit

No trick devices or complicated parts are employed in obtaining the accurate balance of this marvelous circuit. Irrecision made units, spaced to the fraction of an inch to prevent capacitative coupling, with an all metal chassis, bring a smoothness and stability that is a marvel even to experts. Rugged mectianical construction assures permanent alignment and securlty of all parts so that his shipping and moving about no harm is done. This is a feature in a radio recelver yon should demand. The Marvelo 7 will give a lifetime of perfect service.

## The Precision Made Coils

The heart of the set. They are of the proven Solenoid type, space wound, while more expensive to build than ordinary colls, perfect performance and stability can be obtalned in no other way. The U. S. Bureat of Standards has pronounced this the ideal radio coil.

## S.L.F. Condensers

We pay an extra preminm for the baboratory type, straight line frequeney, varlable condensers used to tune thls receiver. skilled radio engineers with the use of the most delicately adjusted instruments group these condensers into perfectly matched sets of four. Each side of the drum rotates two of these condensers wheh are speeclally gamged in groups of two as shown in the smal illustration.

## Improved Audio System

Giant oversize audiu transformers with finest quality Silicon steel cores are used. High lndurtance primaries with low ratio bring out the tones with absolute trueness. All frecutencies within read of the human ear are perfectly registered. From a whisper to the roar of a kreat band, the output is soft, mellow, true. And especially are the low notes brought out in true resonance, neither over emphasized nor submerged-but faithfully correct.

## All Metal Chassis

All steel chassis with metul insulated panel forms a rugged mounting for all units. Protects the delicate instruments from the hard knock of shipping and moving. It also acts as an effective shield, suppressing outside interference and absorbing the natural internal operating noises of the set. Ifichly finished in a neutral shade lacquer-a very beautiful and finished appearance.

## Shock-Proof Detector Socket

The detector socket is Ingeniously cushioned to insure perfect, unhampered detection of signals. As do the other six sockets, it has positive wiping contacts, firm and strong. Each socket is rigidly tested before assembly.

## Scientifically Built and Tested

Each step of assembly in the making of this fine set is under the constant supervision of trained radlo experts. Only highly skilled hands touch the careful painstaking assembly. Though produced in mass quantities, each and every reeeiver is exactly alike-preclsion built like a good watch. After assembly, all individual parts are again rigidly tested. Then the entire recelver is placed in operation and undergoes the most careful odjustment. Tone quality, sensitiveness and selectivity is each thoroughly tested on the air and no receiver is naespd unloss it roachos the high standards of Marvelo performance.

## Unsurpassed in Value

Compare this fine recelver witly any other of similar design and quality. Compare its ruggedness, its splendid mechaniral constrintion, ite procrision made untits and perfect assembly. You will find that nowhere can you mateh it for anywhere near the special Barawik price. Efficient manufacturing methods, huge volume and economical distribution methods make thls extraordinary price possible.

## 10 Days' Free Test

You need not take our word for the quality and performance of the Marvelo 7. We want you to see and know for yourself. We therefore sell this receiver strictly on its merits through our 10 day free test privilege as explained on page 3.


Rear view of chassls, plahly showing with what care and skill is the assembly of unlts.

## WHOLESALE PRICE LIST

1813151 -set with cabinet, but with- $\$ \mathbf{3} \mathbf{3 9 5}$
1014. hecessories. List, \$67.50. NET,

## For Battery Operation

1B13152-Set Complete with all accessories for Battery Operation including flve 201 A type, one 200 A type and one 112A type power tubes, one Barawlk $120-\mathrm{amp}$. " A " Storage Battery, two $42 / 2$ volt "C" batteries, three large 45 volt " B " batteries and complete Antelina and Ground outfls.
List, \$1 10.95.
\$5925 NET

## For Socket Power Operation

IB13153-Set Complete for Socket Power Operation. lncluding five 201 A type, one 200A iype and one 112 A type power tubes. Abox "A" Eliminator, Barawik Supreme "B" Eliminator, two $41 / 2$ volt "C" batteries and necessary Antema and $\$ 7975$
Ground outfits. List, \$151.70. NET......................
 Seven CHASSIS Only.
List, $\$ 57.50$. NET $\qquad$

## BATTERY TABLE

The fine walnut table Illustrated forms a perfect setting for the table model. Genulne walnut with maple overlay rlchly fintshed. Width, $30 \mathrm{in} . ;$ depth, 15 in.; height, $30 \mathrm{in} . ;$ sliding shelf for speaker. Ámple power unlt space in back. 16813 i48-List, $\$ 23.50$.
$\$ 5-85$ your price.


# Most Sensational Value 

## in Fine Quality Console

 7-Tube Drum Control Receiver
## Masterpiece of Beauty and Efficiency

Here is a typical Barawik Triumph in supreme radio value! It is an offer that stops all competition and gives our customers the opportunity to enjoy the finest in radio with but a nodest outlay.

This beautiful cabinet is extremely popular because of the very refined and pleasing appearance it presents. A striking feature is the round grille filling the entire lower compartment, placed in an offset effect. Cutaway posts with flutes ending in a charming carved pilaster effect. An air of solidity and strength is given by the specially arched design of the lower cross stretcher across the front. Cabinet is substantially made by cabinet-makers of national renown and beautifully finished in
the soft natural walnut color, rubbed to a velvety smoothness.

All panels are veneered with choice select walnut stock. The outside dimensions are: Height, 44 inches; width, 30 inches; depth, 15 inches. The large compartment at the bottom measures 22 inches high, 28 inches wide, $123 / 4$ inches deep, providing ample space for the speaker, as well as all necessary batteries and power units.

Directly behind the handsome grille is installed the world renowned Utah Cone Speaker. This is unquestionably one of the finest cone speakers ever made and forms an ideal reproducer for the great Marvelo 7. It was specially chosen for its perfect harmonization with the audio output of the receiver itself.


## MARVELO DRUM CONTROL



Refer to pages 10 and 11 for the details of construction that make this the sensation in the radio industry.

## 10 DAYS FREE TEST

See and hear this great receiver without obligation or risk. Turn to page 3 for complete explanation of this most liberal offer.

## PRICE LIST

IBI3156-Complete, but without accessories. Shipping weight, 100 lbs .
List. \$130.00.
NET


## For Battery Operation

IB13157-Set Complete, less Speaker, but with all accessories for Battery Operation, including five 201A type, one 200A type and one 112 type power tubes, one Barawik 120 amp. "A" Storage Battery, four large 45 v . "B' Batteries, 9 volts "C" Batteries and complete Antenna and Ground outfits. Shipning weight. $210 \mathrm{lbs} . \$ 950$
List. $\$ 172.00$. NET.........

## For Socket Power Operation

IB13158-Set Complete for Socket Power Operation, including fire 201A type, one 200 A type and one 112 type power tubes, Barawik Supreme "B", Eliminator, Abox "A" Eliminator, 9 volts "C" Batteries and necessary Ground and Antenna outfits. Ship-s ping weight, 100 lbs.
List, $\$ 212.00 . \mathrm{NET}$.

# Beautiful Spanish Design High-Boy Type Console Here Forms Ideal Setting For This Wonder 7-Tube Receiver 

Reflecting the influence of the Spanish on present day designing, this beautiful cabinet is an outstanding example of how cleverly the richness and charm of these old designs has been retained in fitting them to modern radio uses. It takes its general contour from the old Spanish HïghBoys and retains many of the motives which distinguish those great old heirlooms handed down from that romantic period. And, although very moderate in cost, it is befitting to the most elegantly appointed home. In its construction has gone the skilled craftsmanship of superior artisans, who have fashioned it from finest American walnut veneers with choice matched grain burl waluut front. The doors and battery compartment have polychrome over-
lays. Decorative antique hardware adds to the tasteful appearance. The base is distinguished by perfectly turned legs and a graceful brace construction. Behind the charming grille at the top is a long tone travel horn of scientific design and perfect reproductive characteristics. This horn is fitted with concert type unit affording the best possible results in both quality and volunce. The battery compartment is 11 inches high, 21 inches wide and 12 inches deep. The console measures over all 48 inches high, 25 inches wide and 15 inches deep.

It would be difficult to imagine a more striking, pleasing housing for this advanced radio receiver than this splendid console. It will grace the most luxuriously furnished home.

# MARVELO Drum Control 

 Try it 10 Days at OurRlsk-See Page 3
In volume, selectivity, range, power, ease of control, this amazing set satisfles the most narticular onerator. To prove it, we freely give you the privilege of testing it for 10 days before deciding to keep it. Sce page 3 for detalis of Lhis extracdlinaiy offer.
On Pages 10 and 11 Is Complete Description of the Marvelo Prum Control 7 Tube Chassis

## Wholesale Price List

IBI316I-Complete with inbuilt speaker, but without accessorles. Shipping weight, 1 П5 lbs. List, \$155.00. NET $\qquad$ s7850

## For Battery Operation

IBI3162-Set Complete with all Accessories for Battery Operation, including five 2014 type, one 200 A type and one 112 type power tubes, one Barawik 120 -amp. "A" Storage Battery, three large 45 . "B" Batterles, 9 . "C"' Batterles and necessary Antenna a $n$ d Ground outfits.
Shipping weight, 205 lbs. $\$ 1,0500$
List, $\$ 197.00$, NET.......... List, \$i97.00. NET...........

## For Socket Power Operation

1BI3163-Sct Complete for Socket Power Operation, including fire 2014 typo, one 200A typo uind oinc 112 tgopo portor tubos, one Abox "A" Lilminator, Barawlk Master "B" Eliminator, 9 volts "C" Batteries, necessary Antenna and Ground outfits. Shipping weight, 195 lbs.
List. \$237.00.
NET
\$12475


strength and pleasing proportion. It is fitted with a long air column horn with a metal throat, and a special unit chosen for the acoustic properties of this console. The dimensions over all are: Height, 51 in.; width, 27 in.; depth, 16 in. The large battery compartment measures $221 / 2 \times 10 \times 14$ inches.

## A Radio Triumph

Piercing the air from coast to coast, the Marvelo 7 places at the whim of the operator his favorite stations far or near. Sensitire, selective, jowerful, it marks a new step fortward in radio perfection. Rugged and sturdy, it stands rough handling in shipping and mov-ing-as stable and reliable as any receiver erer built.

## Wholesale Price List

IBI3I75-Set Complete. without "Exesasulus. but hilli minuill lund.


## For Battery Operation

1.B13176-Set Complete, with all Accessories for Battery Operation. including tre zula type, one zuOA ype and one 112 -3pe . power rubes, one Rarawik 120 -amp...A Storage Rat-
 large 45 $\quad$ F. ${ }^{\text {B }}$ batteries and com

NET WHOLESALE..... $\$ 1$ |is
1B13177-set Connplete. for sorkut lower operation, heluding flye 201.1 tybe, one 200 A tyive and une 112 tywe power tubes. Abox ".".", EHIMIlintor. Barawik Mastrer " R " Filiminator, two 41/2 r . "C'" hatteries sand liferessary Antenna gnd dirnima omtHts. List, \$232.00.
NET WHOLESALE.... $\underset{\text { MARVELO }}{\text { Drum Control }} \mathbf{7}$


Beauty
and Efficiency Brought to the Highest Point of Development in Radio


# The New Marvelo 

## The Most Sensitive, Sharpest Tuning, Radio Receiver Ever Developed

Those who have followed radio development know that the Two Dial Receiver is favored by many of the makers of America's finest sets. There is a basic reason for thls in a six tube receiver. There are two distinct circuits in the signal reception-the antenna and the radlo frequency. One of the condensers operated by the left-hand dial tunes the antenna, the other two stages of radio frequency. This arrangement makes for the greatest efficiency in picking up and strongly amplifying the incoming signal before passage to the detector. The result is, you have a set of great power and range. The reports from this wonder recelvor are truiy sensational. Ono operator logged forty stations in an evenlig. Many report reception from the Eastern scaboard to California.

## An Easy Set to Tune

So precisely balanced is this highly developed eircult that there is alnost perfect synchronization between the two dials. Stations may be sclected with the greatest ease, merely by setting the dials to the wave length of the desired station. Many operators become skilled in exactly turning the dials in unison With the two hands. The razor-edge selectivity, cutthe from station to station on a degree or so, is a marvel to all who use this wonder set.

## Beautiful Tone Quality

For months one of these splendid reecivers has been In operation in our service store here in Chicago. It has always been the center of an admiring group when recelving broadcast programs. Capable of enormous volume, yet its purity, faithfulness and smoothness of tone is a delight to hear. Huge low ratio transformers developed by an acoustical-clectrical expert provide a quality of reproduction that is well nigh beyond belief. Clear, distinct, defined. All tones and overtones are reproduced with minute fidelity. One might well imagine the broadcaster within his very presence.

## Tremendous Volume

Transformer coupied audio amplification is used. No ordinary andio transformers are these-they have been especially designed and bulit for this wonder cir-
cuit and represent the efforts of a recognized builder of the finest instruments. They incorporate the most advanced, perfected features of quality transformer construction and provide tremendous volune without the slightest hint of distortion.

## An Unsurpassed Value

Precision mado to the hifghest standards of manufacture, you niglit expect to pay double the speelal Barawik price at which this fine receiver is listed. Mass production under ldeal conditions, plus the most economical distribution method known bring it to our customers at an unheard of low price.

## 10 Days Free Test

So sure are we that you will pronounce it even superior to our claims for it that we sell you this MARVELO 6 on a 10 day free trial basis, as explained on Page 3.

## Wholesale Price List

IB13056-Set Complete. Without \$
accessorles. List, $\$ 60.00$.
NET WHOLESALE.................

## For Battery Operation

IBI3057-Set Complete with All Accessories for Battery Operation, including four 201A type, one 200 A type and one 112 type power tubes, one Barawik $120-\mathrm{amp}$. " A " Storage Battery, two $41 / 2$ v. "C" batterics, three large 45 v . "B" batteries and complete Antenna and Ground Outfits.
List. \$110.00.
$\$ 5375$

## For Socket Power Operation

IB13058-Set Complete for Socket Power Operation, including four 201 A type, one 200A type and one 112 type power tubes, Abox "A" Eliminator, Barawik Supreme "B" Eliminator, two $41 / 2 \mathrm{v}$, "C" batteries and necessary Antenna and $\$ 7100$
Ground Outfts.
List. \$140.00. NET.
1Bi3059-Marvelo Twin Dial Six Chassis only. List.
$\$ 45.00$. NET WHOLESALE

# Note These Speclal Features of the MARVELO 

TWIN DIAL

## The Panel

All metal, rich walnut grain finjsh with gold striping. Size, $7 \times 18$ inches. Acts as an effective shield, suppressing interference and insuring greater selectlivity.

## Precision Condensers

Their design insures even spacing of stations throughout the entire band. Perfect balance between the three is obtained by an ingenious adjusting device. A special panel knob controlled vernier clears up the circuit under extremo reception conditions. No greater sharpness cau be obtained than In this mamer.

## Solenoid Coils

No expense has been spared to make this department of the receiver us nearly perfect as human knowledge and skill can. These coils are generally accepted as the idealelectrically and inductively perfect.

## Low Ratio Audio Stages

Glant, oversize audlo transformers provide tremendous volume without hint of distortion. This division of the clrcuit is arranged for power tube in the last stage producing maximum amplification with delightful tonal qualities. Even the most critical listener remarks at the beautinui naturalness and purity of reproductinn. The morrerful audio systenn of this recelver brings a reserve power sufficient to amplify the weak sig. wals on distance reception that are lest by the urdhary set.

## Mechanical Perfection

The buyer wants his radio set to appear neat and workmanlike, The Marvelo owner may take pardonable pride in his receiver because of its Hnished mechanical construction. It is neat, precisely built, the work of an engineer who has insisted upon nothing short of perfection.

## Tested-Rugged

Each Marrelo is subjected to the most rigid inspection and reception test right here in Chicago, the most difficult "Spot" for broadcast reception. Staunchly built, this proven performance is always assured years after it leaves our laboratories.

# Streamline Spinet Desk Model of the Wonder MARVELO TIAL 6 

Here we have brought to perfect enjoyment of radio reception the beauty of fine furniture. This pretty spinet Desk will Hnd favor with those who prize the sentimest of tasteful fittings for their home. The Spinet Desk had its origin in the historic, romantic days of Colonial pioneering of this new country. In its lines may be seen reflection of that elegant refinement, which characterized the breeding of the good old "Virginia Familles" of long ago. The followers of early American history know that the finest hones cherished and handed down through the generations these beautiful desks on which the fine ladies of the period penned their frequent communications. A perfect setting for this wonder receiver-the heralds of the air bringing joy and education to replace the quill pen of long ago!

This pretty desk is fashioned from American Watnut in antlique rubbed finish with delicate high lighting, strokes of the master Hnlsher in clever replication of heirloom pleces! It is 40 inches long, 16 inches deep, 36 inches high. The drop leaf acts as an arm rest and writing space in logging, as well as protecting set when not in use. The tasteful grilles conceal an efflcient inbuilt loud speaker on one end, the other space for batteries or power units. In this combination of the wonder Marvelo Trin Dlal receiver and this beautiful desk, you have all that might be desired in a radio reeciver.

## Wholesale Price List

IB1306I-Set Complete, without acressorles.
Shipping wt., 100 livs.
$\$ 5275$
List, Silo.00. NET WHOLESALE.

## For Battery Operation

1B13062-Sut Complete with All Accessories for Battery Operation, Including four $201 A$ type, one $200 A$ type and one 112 type power tubes, one Barawik $120-a m p$. "A" Storage Battery, two $41 / 2$ F. "C"' batterles, three large 45 v . "B" batteries, and complete Antenna and Ground outfits. Shipping wit.. 160

57895 lbs. List, $\$ \mathbf{1} 0.00$. NET WHOLESALE

## For Socket Power Operation

IBI3063-Set Complete for Socket Power Operation, Including four $201 A$ type, one $200 A$ type. and one 12 type power tibes, Abox " $A$ " Eliminator, Barawik "B" Eliminator, two $43 / 2$ v. "C" Eliminator, Barawik batteries and necessary Antenma and Ground outfits.


## MARVELO ${ }^{\text {DWIN }} 6$

 Hi-Boy Console ModeI

Beautiful console in walnut plywood with figured maple overlays on posts. Herringione mahogany overlays on front. stump a ca ei a orvilays un doors. Curly maple sersll Grerlay on streteher. Rich rubbed Adail browa flisish. laluullt long air column speaker with genuine Utah unit. Top raises. firille and hack renwablie for casy agaoss to battory soction. Overall dimensions: Height, 44 in.; width, $283 / 4 \mathrm{ln}$.; depth, $161 / 4 \mathrm{in}$.

The receiver is the famous Marvelo Twin Dial 6 described in detail on pages 16 and 17.

## Wholesale Price List

IBI3115-Set Complete, without ac
cessories. Shipping wt., 120 lbs.
List, \$125.00. NET WHOLESALE
${ }^{5} 63^{\circ 0}$

## For Battery Operation

1B13116-Set Complete with All Accessories for Battery Operation, including four 201A type, one 200 A type and one 112 type power tubes, one Barawik 120amp. "A" Storage Battery, two $41 / 2 \mathrm{v}$. "C" batteries, three large $45 v$. " $B$ "' batteries and complete Autenna and Ground outfits. Shipping wt., 210 pounds.
List, si75.00. NET WHOLESALE:
$\$ 8925$

## For Socket Power Operation

1B13117-Set Complete for Socket Power Operation, including four 201A type, one 200A type, and one 112 type power tubes, Abox "A" Eliminator, Barawik Master "B" Eliminator, two $41 / 2 \mathrm{~V}$. " C " batteries and necessary Antenna and Ground outfits. Shipping wt.. 180 lbs.
\$107응

## MARVELO TWIN 6 Ortho-Type Console Model

The very fatest in fine console design and an instant favorite. Generally considered the ideal design for the proper acoustleal qualltles so necessary for the best resulis in reproduction. Ma de of genuine watnut plywood, beautlfully finished, with high light and two tone effect. Fitted with deep-toned, long a ir column horn with heavy duty unit. Drop leaf in front of set provides tuning a $r \mathrm{~m}$ rest. Top raises. Ample power for batteries and power units-open in rear. Stands 36 ln . high, $281 / 2$ in. wide, 18 in . deep.

The receiver is the Marvelo 'rwn blat 6 described in detail on pages 16 and
 17.

IBI3120-Set Complete, without accessories. Shipping wt., 110 lbs.


## For Battery Operation

IB13121-Set Complete with All Accessories for Battery Operation, including four 201 A type, one 2001 type and one 112 type power tubes, one Barawik 120amp. "A" Storage Batterr, two $41 / 2$ จ. "C" batteries, three large 45 v. "B" batteries and complete Antemna and Ground outfits. Shipping wt., 215 pounds,
List. \$155.00.
NET WHOLESALE
$\$ 0195$

## For Socket Power Operation

IBI3122-Set Complete for Socket Power Operation, including four 201 A type, one 200 A type, and one 112 type power tubes, Ahox "A" YMminator, Barawlk Master "B" Eliminator, tho $4 \%$. v . " C " batteries and necessary Antenna and Ground outfits. Shipping wt., 195 lbs. List. \$185.00. NET
s9975


## MARVELO Twin DIAR

 Easy Chair ModelBecause of the ease and comfort in tuning this style of console has become deservedly popular. Just place your favorite easy chalr alongsidie and the dials are just in the proper pusitiou for ready tundag.

The console is constructed of genuine walnut plywood in dull rubbed Adam brown finish. The worknitanship in uvory detall exprisulita the Effort of shillou furnlture artisans. Behlud the pretty grille is a splendid long ait column, deep-toned speaker equipped with Utah unit. famed for lits excellent reproduction. Top raises for quick access to tubes and connections. Stands $353 / 4 \mathrm{in}$. high, $231 / 2 \mathrm{in}$. wide, $175 / 8 \mathrm{in}$. deep.

The receiver is the remarkable Marvelo Twin Dial 6, described in detail on pages 16 and 17. It is one of the most efficient receivers ever made.

## WHOLESALE PRICE LIST

IBI3125-Set Complete, without accessories. Shipping wt., 120 lbs.
List, \$95.00.
NET WHOLESALE


## For Battery Operation

IBI3126-S'et Complete with All Accessories for Battery Operation, including four 201 A type, onc 200A type and one 112 A type power tubes, one Barawik 120 -amp. "A" Storage Battery, two $41 / 2$ v. "C'" batteries, three large 45 . " $B$ "' batteries and complete Antenna and Ground outfits. Shipping wt., 210 lis.
\$7620:

## For Socket Power Operation

1B13127-Set Complete for Socket Power Operation, including four 2014 trpe, one 200 A type, and one 112 type power tubes, Abox "A" Eliminator, Barawik Supreme "B" Eliminator, two $41 / 3$ v. "C" batterles and necessary Antenna and (iroumd outfits. Shipping wt., 180 lbs .
$\$ 9395$


## MARVELO Twin D A L

## Consolette Model

Unquestionably one of the greatest values ever of fered in the history of radio. Although low in price, this is actually a high quality receiver in every resject.

The Consolette is constructed of American walnut nlywood in duIl rubbed antique tinish. Its pleasing design harmoulzes aduirably with almost any other furniture. It stands 40 in. high, 27 in. wide and 14 in . deep. The set rests in a slide-ont tray for casy access to tubes and commections. The lower compirtment houses a special cone speaker of an advanced design developed for us by one of the best makers of fine loud speakers. It is a marrel for its fine repro© cluction and tremendous volume. The lower compartntent measures $12 \times 23 \times 10 \mathrm{in}$. and provides space.for ©all power units or hatteries, making this fue set com-- pletely self-contained.

The receiver is the famous Marvelo Twin Dial 6. described in detall on pages 16 and 17 . For distance, volume and fine tone quality it has no superior and few equals.

## WHOLESALE PRICE LIST

IBI3131-Sct Complete, without accessories. Shipfing wt., 110 Ibs.
List, \$85.00.
NET WHOLESALE
$\$ 4,50$

## For Battery Operation

IB13:32—Set Complete with All Accessories for Battery Operation, including four 2011 type, one $200 A$ type and one 112 type power tubes, one Barawik 120-amp. ".l" Starage Battery, two $41 / 2$ V. "C" batteries, three large 45 v. " $B$ " batteries and comnlete Antenna and Ground outfits.
Shipping wt., 215 ths.
\$7075

## For Socket Power Operation

IB13133-Set Complete for Socket Power Operation, including four 2014 type, one 200A type, and one 112 type power tubes, Abox "A" Eliminator, Barawik Supreme "B" Eliminator, two $41 / 2$ v. "C" batterles and necessary Antenna and Ground
buffits. Shipping wt., 195 lbs .
List, \$165.00. NET.
$\$$
8850

The kind of set that most people want. A good look ing, easy to operate, rellably performing set, that has long enjoyed an unrivaled popularity in all parts of the country. Thousands of them are in daily use and overy user is loud in its praise. Its price strikes the popular appeal. Its quality sets it far above anything in the fleld, oven at twice the price! Radio experts know that for perfect results no type of control equals the three dial system. It provides that elasticity needed to bring the circuits to precise synchronization under any and all conditions. This is the sharpest tuning set made.

In performanco you can stake this set against any other 5 -tube set on the market and many 6 -tube modiels. For long distance reception it has few rivals and thousands of users testify to really a mazing results with it. A simplified, balanced circult, built up with the finest of parts, its feats of perforniance are sometimes almost beyond belfef. In selectivity, it is as sharp as many multiple tubo sets, yet tuning is not diffcult. All controls are synchronized to watch-like accuracy, makIng logging simple and reliable. Its true, natural, clear tone is a subject of wonder to aH who hear it.

## Unsurpassed in Performance

A stabilized, perfectly balanced Radio Frequency Clircuit ; two stages radio, detector and two audio stages. Last audio stage arranged for proper C bias for Power Tubes, a feature seldom found on sets in this class. Covers entire broadcast range. 200 to 550 meters, perfectly. No oscillations, no squeals, no howls. Amazing volume and pure tone over entire scale.

Radio colls are of the Solenoid type, wound on bakelite tubing (the kind of coil pronounced the best by the Bureau of Standards and cost us much more to make than the ordinary type).

Straight-line frequency condensers of adranced style; mechanically perfect. Low ratio Audio Transformers provide perfect reproduction of both high and low notes in great volume-perfectly shielded, preventing interstage coupling and insuring greater selectivity.

Nicely flilshed Metal Panel, of the quality found only on higher priced sets. Snappler appearance, greater ruggedness, better performance. Tuning and volume controls of advanced design.

## Wholesale Price List

IBI 309 I-Set complete, withOnt accessories. List. $\$ 40.00$

YOUR PRICE.....

## For Battery Operation

IBI3092-Set Complete with All Accessorles for Battery Operation including ive matehed 201 a type tules, one Barawlk $1.00-A m y$. "A" Storage Battery. "C" battery, two large 45 v . "B" batteries and completo Antenna
and Ground outhts.
List List, $\$ 79.50$. YOUR PRICE.

## For Socket Power Operation

IB13093-Set Complete for Socket Power Operation including four matched 2014 type, one 112A tyje mwer tules. Abox "A"' Elimiaator. Harawik supreme "B" Eliminator, na and Ground outfits.
List, \$117.50. YOUR PRICE. IB1309 cabin 094--Chassis Only-withwt List, $\$ 35,00$. YOUR PRICE.


## Console Table

Makes an Ideal setting for the cabinct model receiver. An esmecially pretty design. It is fully described on page 123.

16B11374
List, \$18.00.
NET
$\$ 9.25$


## MARVELO three dial RADIO RECEIVER

## Arm Chair Modal

Extromely popular is this Console model which is low enough to permit the operator sitting alongside the recelver in his favortte easy chair. Console is made tn genulne walnut plywooc. in rich rubbed finish. Behind the artistically fashionec grill 3 is a high longe air column, deep-toned speaker equipped with a gen-1 uine Utah unit. Top ralees. Amplu space for batteries and power unlts is found in the roomy lower compartment around the speaker. Outsice dimenslons: Helght, $35 \%$ Inches; width, $281 / 2$ inche3; depth, : 7\% inches.

## The Splendid Recelver

The Marvelo 5 ham been on the market for years and step by stop has been refined and imp. oved unt1l linday it monds probminont amona finc oplalit: flup tube receivers. In all its parts, only th. Hnest of materials and the most expert skin uas lwen used lit its bullding. The reports from users everywhere iestify to its marvelous performance and stablity. On nage 20 is i. more detalled description of the chassls.

## Wholesale Price List

IBI3083-Sot Complete, without sce ceskorion. Llat $\$ 90.00$. NET

## For Battery Operation

$18: 3084-$ Sot Completo with All Accossories for Batiery Uperation incluting five matched 201A. type tubes, one Barawik 120 -Amp. " $\Delta$ " Storage Battery. " $C$ " batterg. two large 45 V. "B" bettories and complote Antenne \& $\$ 795$ NET WHOLEBALE

## For Socket Power Operation

18:3088-8ot Comptete for Socket Power Operation incluuing four matohed 201 A typo, one 113 A type power fubes, Abox "0" A" Eliminator. Barawik "B" Biminator. "C" bettory and zecesary Antonne and Ground ontnth Litu \$197.60. NET

9195


## MARVELO THREE DIAL RADIO RECEIVER

## Compact Console Mode!

A most compact oonsole in the popular semi-highboy style. A decided adrantago lios in the speaker beling below the recelver. Constructed of cholce Amertcall walnut in the Adam brown rubbed finish. 1nhuilt is a splendid loud speaker exulpped with the genulue Ltah unit, known for its exceptionally fine reproduction of broadcast. The lower section provides generous space for all batterles and power unlts. The tols raises for easy access to set. Outside measurements Height, $38 \frac{1}{4}$ inches; width, 22 inches ; depth, $14 \%$ Inclues.

## Unmatched for Value

Here we have proof of Barawik's leadership in bringIng to homes of nodest means the finest Radio has to offer. The great Marvelo three dial recelver has lont distinguished itself under all conditions to be one of Amertca's sets. In range, power, sweet tonc quality and dependability, it has no superiors. You Will make no mistake in choosing it. See opposite page for more detalled description of the chassis.

## Wholesale Price List

IBI 3087-Set Complete, without a-
cessories. List, $\$ 80.00$.
\$4250

## For Battery Operation

1B13088-Set Complete with All Accossorles for Battery Oporation including five matched 201A type tubes. one Ploneet Oporailon ". $A$ "' storage Battery. " C " battory. two large 4 s
 NET

## For Socket Power Operation

1813089 -Set Complete for Socket Power Oparation in. cluding four matched 201A rype, one 112 A type power tubes. Abox "A" Ellminntor, Barawik "B" Eliminator, "C" battory and necessary Antouns and Ground $\$ \$ 80$
outfits. Lit, $\$ 157.60$. NETE. Lit, $\$ 157.50$.


# Select the Right Accessories to Get the Proper Results from the Radio Receiver of Your Choice 

## Barawik Furnishes the Best

Many a good receiver suffers from the use of old tubes or indifferent batteries (or power units) or both. The buyer can save himself an endless amount of gref by using only good quality equipment and accessorics.

Marvelo Sets are a quality product. In choosing accessories for them, we selected only tho best grade. Dua't be fooled by low prices! Some distributors make a practico of furnishing cheap batteries, poor quality tubes and cheap power units in order to make an "attrictive" price on complete outfits. We will not do that. There are no "hidden" valtes in Barawik offers-yout see and understand everything, because we are frank and open.

Below aro shown the accessory units listed as equipment with Barawik Scts.

## "Full Electric" and "AC" Receivers

There seems to be general confusion as to what is meant when you say a set is electrically operated. There are really two kinds of electrically operated receivers, those using standard tubes and " $A$ " and " $B$ " battery climinating devices run from the light socket, and those using the nev A. C. tubes with "raw" A. C. current.

As to the A. C. Receiver, using the new $A$. C. tubes. wo are as yet not fully decided. Our laboratorics lave been working on this problem for some time, as have many other companies. but, we do not believe that the A. $C$. Receiver is now sufficiently developed to permit of widespread distribution. We believe in the idea and we are pasitive that within a year or so, it will be perfected. When that time comes. We will he ready with our linc. In the meantime, we urge catution in this fairfer. In order to combat all present competition. we have listed some of the Marveln Line for A. C. operation and theso numbers will be farnished to order in that tyje.


## For Battery Operation

The Outfit furnished with Marvelo Sets for battery uprratlone and ava

For 6 Tube Sets

1 yond Type Irover Detuetor jrube................ 4.00
1 113 Type Irower Anplitier Tuhe.................. 4.50
3 Largo Upright biblit Star " $1 \mathrm{~B}^{\prime}$ " Batteries
(4) \$3.75 .......................................... 11.25

2 " 2 "atery... 20.00 1 roncer 1

Total Retail Yalue. ........................... $\$ 51.45$
2B307-Your Net
\$2620

## For 5 Tube Sets

Same as abore excernt witlo lum 201A type and one 112 type puwer amplititer tuives. Total Retail Vilue, $\$ 47.75$
266366-Yo
Net Cost.........
For 7 Tube Sets
$\$ 24.75$
Simo as abore excent will fire fola type one sona power detector ant onte 11 type power amplither tubes. Total Itetail villue, $\$ 53.20$. $\$ 27.15$

For Light Socket Operation
The Outfits furnished with Marvelo Sets for Light surket. Operation, and availablo for shmilar receivers. routain the following:


For 5 Tube Sets
Same as abore excent with fuur 201A type and one 112 tywe juwer amplitier tubes. Tota Retail Value, \$88.45.
$\$ 42.85$

## For 7 Tube Sets

Samo as above excelt with five 201A type, one 00 A power retector ant one 112 type power amplifler tuhes. Total Retall Value. \$94.20. \$46.55




# New Improved HYATT 6-Tube Porrable Radio Receiver 

Relieves dreary days or nights of their monotony. There is an individuality about the HYATT Portable that engenders companionship. Wherever you go, wherever you are, it is a dependable source of entertainment. If you have a standard radio, it helongs to the family. If you have a HYATT Port. able, it lelongs to you. It may be taken to the seclusicn of your own room-to your office or to your Summer Camp. When you travel, it provides entertainmon: en route, and at your destination it is still on the job. No home is complete without a radio. The HYATT Portable serves the home as well as the individual.

## A National Sensation Is This Fine Portable! Three Stages Radio Frequency-It Steps Out!

The Hyatt is known throughout the Country as one of the most reliable portable radio receivers. some truly amazing reprets have been made of its performance. It easily excels any other portable which we have tried.

Great care is exercised in the workmanship and material used in this Receiver. The wilnut pancl and knobs, gold trimmed Vernier dial, tho black corner talis and landle, mako a color combination that is pleasing and attractive.

Transformers, both radio and atudio frequency, built under our own specifications and name. mownted on a bakelite base. Benjamin tube sockets are uscd throughout.

The Baritono Loud-speaker Cuit is of spectal construction for this re-
 ceiver, The horn is hand-made, of seisoned mahogany, and has a teninch throat. The reproduction gualities are a revelation-true, clear, and with great volume.

The circuit used is untuned radio fretuency, employing three stages of radio frequency, one detector, and two states of audio frequency, matched and batanced ta sccare maximam effleienty.

The casc is especially attractive in artiticial leather covering with ship desian on the inside of cover which lwases the loop. The view it the left belta thows the liceeror totally undmed for carrying. Size, 11 inches hiph, 14 inches lang, and 9 inches leep; weighing, enmpletely equippeal with hatteries and thber, less than 2 g lumds-without acecesories, 15 putbints.
 terics: Lwo 45 -solt "B" batterie and ouc $t$,

1B6357-Set only. no Equipment. Retail Price. \$95.00.
NET WHOLESALE ......... ©t \&88
1B6358-Set Complete with all accessories as specified above. Retail Price. SII5.00. NET. WHOLE-

## The Trav-Ler Portable

## Amazingly Compact-Light in Weight-Easy to Operate

The first extremely compact portable, the Trav-Ler has beconie rery pumalar. The case is rigidly made and cuvered with black leatherette. It will withstithd a lot of banging aromed. A time-tricd and proven 5 -tube circuit employing 2 stages of Radio Freruuenry, 1 Ietector and 2 stages Andio Amplifleation. By the use of the finest parts, full size low ratio audio transformers, both tone quality and volunte ar e surprisingly good. A glant speaker unit, coupled with a scientitically designed tone chamher, produces rnom-tilling volume that amazes all who hear this wonderful little receiver.

Simply place the loop acrial which is contained in the rover on top of set, turn on the switeh and the receiver is ready to operate. Tho direction of tho loop
together with the singlo vernier dial mithes tuming very simple with pood sehetivity. ditek is jrovided for he at d Whone use if desired.
size prer all is only \& i.n fineles deen, 10 inches high, 1:': inches wide-no larerer that an ordinary smand handbaz. Weighs only 24 pumbls-a child ean earry it abont. The vifew at right slmws how shomy all hattories, tubes and parts are arranged-inot tun imeh of space wasted. Ship. wt., 28 lbs. | B55 | 5-Set only.
List Price. $\$ 65.00 . \quad \$ 8,20$
NET. EACH............... NET. EACH................. with all accessories (tubes and batteries) ready to operate. List price,
$\$ 85.00$.
NET.
\$50으

in offering it to our Dealers sund a raceiver and we take priderely behind it. Batteries and and power unlts are a thing of the past with this new All Electric Recelver. It is as dependable as your electric light. There are no complicated parts to get out of order. Simply plug into the light socket, turn on current, tune in and enjoy the finest, easiest reception you have ever known. wonder tubes. We believe that this

Slow in coning, hut here it is-a thoroughly rellable A. C. Electric Radio Receiver. A. C. tubes have been on the market for some time and have been accepted as practical. having reached a hifh point of perfection. Yet, it was quite another problem to develop a receiver that would give perfect. results using these

## ad Ac fromLishtsock

AC from Light Socket and Employs Kellogg AC Tubes

## A Wonderful Six Tube Circuit

The circuit of this wonder set is a perfectly balanced, stibilized six tube arrangement, emplowing three stages of tumed A. fïbes are the Kelloge A. C. type-no haterles of any descrintion are Power Tube is used in the output audio stare. All fubes are the Kelloge A. C. type-ho haterles of any description are incornoratrin. The tulies will last an long perfod of lime and thelr smonthness of geration is a marvel to all who havo heard this revolutionary recelver.

## Single Control-Illuminated Diai


 Thuing is done by a single control. frectsion made at esery stage, with each $R$. F. stage suecially and genarately shielded, selectivity is amazingly sharp. Staticn after station is brought in hy the slightest turn of the dial and there is complete absence of squeals and howls. a small light brightly jlluminates the dial. so that it inay be tuned in the darkness. I'his light also acts as signal, preventing leaving the receiver turnet on when rocemion is finished. The llustration gives some diea of the tasteful beauty of the pancl front, reflecting the slmplicity which characterizes this highly perfected re-
civer.
You Have Never Heard Anything to Excel IE!
This wonderful receiver wan doveloped by radto enineers of hanf prnerionen. It la hiü wimply a radio Set of conventinnal dosign rabrangel to tisa $A$. C. robiest the pomplify ground up it has been designed aromind the ponnling aliaiactertstles anu operating qualas a the Keslogs A. C, tuhe It in just as "quict" as a buyl Di C. recelver, there is no hum. fluttering or mierophonic nolsps of any kind to mar tliu anect, even 110 of reception. Great vglume ts nossitha pith: In the sitirltest surgestion of difitortion or "forcing." In tonal ralue, it is unsuryassed.

## Magnificent Period Style Console

Such a receiver deserses housing in only the Ameat cunsuis. Here we have an impressive, magnificent cal, inet constructed of Amprican walnut, riehly ribecied with jorifarty matohod butt walnut front did strikins overlay panels. It stands 51 inches high. 27 inches wide and 16 inches deep. The workmanslip and the hand rublied and mollshed finish mark this n flue piece of furniture, worthy of the most richly furnished home.

Comes Complete-Nothing Else to Buy
Ns unita ut uthat euplpment aslde from aerlal and ground aro requirgh dil the onprition of thia sat. Ahal. chere 18 bothing to wear out exerent the tubes. Tlicac can easily be replaced by anyone-no expert knowledice is required. Years of test thare shown that they will
outlast the ordinary D . C. style of tube.

## Barawik Leads in Value

You will find by comparison that the prices listed are far below the standard market for this type of receiver -quallty considered. You can stake this tine receiver against any other electric set on the market and find it will perform with the best of them. It is truly an amazing vilue at this snecial price.
This All Electric Six operates from any 110 volt, fo cycle Atternating Current, as generally found overy: where for lighting purnoses. It is equipped with cord and plug, all ready for listant operation. Shipping weight, complete, 175 pounds.
KBII 528 -All Electric Recoiver, complete with six Kellogg or McCullough A. C. Tubes, attachment cord and plug. Retail List Value, $\$ \rightarrow 00$
$\$ 275,00$ NET WHOLESALE

# How to Electrify Any Radio Receiver Using the New A.C. Tubes 



## Does Away With all "A" Batteries "A" Eliminators and Chargers

The day of the completely electrically operated radio receiver is dawning. Many methods have been suggested including "A", and " $B$ " eliminators. It is true that a " $B$ " eliminator tagether with a good " $A$ " eliminator will clectrify any set, but this method requires considerable equipment and expense. In the offer made here the " $A$ " eliminator has been elimmated. Hero is a small kit which allows any

## Genuine A. C. Tubes

These tubes are the very newest development in the tube fleld. They operate from raw A. C. and no complicated apparatus is needed. You need only wire the tubes as wo show in our simple instructions and you have a set which obtains its complete a current from tho light socket. If you then have or buy a good B eliminator the set will be a truo A. C. set. Iou need make practically no chinges in your set. Just simply add the naterial furnished in the kit and replace your old tubes with these A. C. tubes.
set to be electrified in a few minutes. It is a very simple matter when our simple instructions are fol.

## lowed. <br> Now Modernize Your Old Set

Now is the time to buy the kit listed here and make your set the latest thing it not only inereases the ralue of yonr olu set a ment mouns but ald Tour It always receives the proper voltage. No more run down hatteries causing your set to be slusgish but plenty of strong menyy power at all thmes. Sow you can really enjoy raclio.

## 6 Tube A.C. Kit

The Essential A Kit-Consists of 1 snecial transformer, ,0 0 mim rheostats, 1500.00 m olim resistor, 12 mfd . conenger, 5 hinding posts, mounting strijs, denser, 5 hinding posts, mo
3B6533-List price, $\$ 15.00$. NET........ 0
Complete A. C. Kit containing the Essential kit quoted ahove, 5 Voltron A. C. Electric Amplincr \$ 50 Tubes, 1 voltron Electric betector Tulse. 3B6534-List price, $\$ 36.00$. NET.

## 5 Tube A. C. Kit

The Essential A Kit-Contains 1 special transformer, ${ }^{2}$ 20 ohm rheostats, 1500.000 ohm resistor, 122 mfd , condenser. 5 binding posts, mounting strins, wiring diagram, hushar wirc.
3B653/-List, $\$ 15.00$.
NET
Completo A. C. IVit containing the Essential kit above 4 iomitron Electric Ampliticr Tubes and 1 \$ 80
Vollron Electir

Voltron A. C. Tubes
3B6523-Voitron A. C. Ampifier Tubes. $\$ 1.9513 \mathrm{B6524-Voltron} \mathrm{A}. \mathrm{C} .\mathrm{Detcctor} \mathrm{Tubes}$. List, $\$ 3.00$. NET

List, \$6.00. NET.
For Listing of RCA, Cunningham and Daven A.C. Tubes SEE PAGE 54

New McCullough A.C. Tubes


For new A. C. operated sets hoguires no storage battery or dry cells for thament lightints. Operates directly from the howse lighthe current throuse step down transformere Guic opetation. No crophonc. better xtremely rugged with long life. 2B824-List,
$\$ 5.00$ NET … 43.43 2B6522-McCullough A. C. Power Tube.
List, $\$ 7.50$.
NET.
$\$ 5.15$
New Sovereign A.C. Tubes
Requires no "A" batteries for flament cperation. Heater type. Operates clirect from the house lighting current through a step down transformer. may receiver to an A. C. operated receiver to an
set. Long lifc.
$286520-A$. C. Tube.
List, $\$ 5.00$.
$\$ 3.19$
2B6521-A. C. Power Tuhe 2or last audio stage. $\$ 3.81$
List, $\$ 6.00$. NET...
 Thordarson A.C. Filament Supply Transformers for Popular A.C. Tubes


## For Kellogg

 McCullough Tubes This trans. rormer is $O$ or use only with the Kellogr and McCullongl A. suffelent capac them and the cgulpment neeled for them so that you may obtain the fullest enjoyment from your set this season. The Thor darson transformer type T-2445 is te signed espectally for the Cunninghan and RCA tubes. Three separate flat ment voltages aro suppled. $1 \frac{1 / 2}{2}$ volts to supply up to 6 UX-226 or CX-32 tubes: C 327 detector tubes: and 5 volt to sunply two 5 rolt nower tubes. Also equipperl with roceptacle for B supmly Input plug. Shipplug wt., 6 lbs. 3B6536-A. C. Tube Supply. List price, $\$ 10.00$.
$\$ 5.88$ ity to suply to 10 of these tubes
Pimary is for i10-115 rolts, 50-60 cyeles. Sccondary 3 volts with center tap. current capacity 10 amperes. wt. 5 1bs
3B6537-List price, $\$ 7.50$.
\$4.41

## NET

For Van iforne Tuijes
The Van Horne Tube operates on raw A. C. and is similar to the UX-226 exent that it consumes and hale s tukes safely.
lifinary is for $110-115$ volts A. C. 60 cycles. Secondary 1.25 volts, no cenfer tap. 6 foot cord and attaching plug. 3B6538-List price, $\$ 5.00$. \$2.94

# BALKITE Radio Power Units Replaces " $A$ "., battertes entirely and supplies a nolse-

 <br> <br> Balkite "A" (Batteryless) Replaces "A" Batteries-Model 6} <br> <br> Balkite "A" (Batteryless) Replaces "A" Batteries-Model 6
} less. uniform "A" filament current direct froni the light socket. Hepliaces elither storage or diry "A" batteries. Employs no battery in any form. Does away with baticries, chargers, relays and switches. Consists of a rectifier and electrolyte pilter-conden combined in one celli. Positisely noiseless in-condenser and has no hum. No tuber to burn out or replace. its current output is uniform and constant.

Operating only durime, reception, it is the most economical source of " A " current and outlasts any other power unit.
Hated outmut: $f$ volts, 2 amperes. Diniensions $6 \times 1034 \times 833$ liclies high overali. Oyprates from 110 volt $A$. C. 60 eycle cuirent. Shipping weight, 30 lhs. 2B5277—List, $\$ 35.00$.
\$20.58
 and Trickle Charger
"B"-180 Universal "B"' Supply
A new Improved universal model for all sets using any tyne uf tube inclucling 112 and 171. ${ }^{\text {and }}$ Remarkably amonth ulfluethaling uniform output. Neets the needs termediate taps for smaller gets quality is required. Intermediate taps for smaller sets.

Output 55 milliamperes at 180
 voits. A. © 60 cycle current. 285275 Whist. $\$ 42.50$. 285275 -List, $\$ 42.50$.
NET.
EACH............. $\$ 24,99$
$\leftarrow$ "B"-135 New

## Improved Model

## 有 <br> type tubes. Smowth, nimiluc-


 Dimensions: mamperes at 135 wolts
$111, A . C, 60$ eycies. simket power "B" surpily devices on the market. the hest

$2 \mathrm{BS276}$-List, $\$ 35.00$. NET, EACH,
\$20.58 2B5285-Special for 25 cycie current.
\$23.23
 List, $\$ 39.50$. NET, EACH.
upply Recommended Popular Priced "B" Supply having 5 tubes or less, and Recommended for sets having 5 tubes or less, and re-
guilling 67 to 90 voltg. Has semarate tap for detectur
 25 cycice. Vifficient. nolselecsa current. Special nioriel for rent without annoyince of conit furnishes const ant current Mithout annoyance of continuous adjustments.
 285274-Model

B" W. R. Special for $\$ 16.50$

## The "AB" (Batteryless) <br> Replaces Roth <br> "A" and "B" Eatteries

 Baiklte "AB" consists of Balkite ing The Baikite side is alt numpleto rectifier and electrolytic filter condenser ramhline in oneIte "Be, "t it is new improvect 13n:eration amal has no hium. In has no tubes to burn out or rephace.


Model "K" Trickle Charger
neres. The first. rata is sufficlent as 8 atu trickle charger for sets up to 5 tibes. The second for stets of up to 8 tubes, in "luding power tubes. Operates from II0. ne $A$. (. Dimenstons: $41 / 8 \times 712 \times 6^{1}$ inches high. Charging rates: .5 and .8 2B857-For 50.60 encle. List, $\$ 9.50$. NET, EACH
$\$ 5.59$ 28856 -model R N . Sveetal 1 or 25


Charger rate ampore. For rate 11 s 2nimpore. For
with
sets of
6 of
6 tubes or less.
nerted to the battery it may he left of l at all ferning the battery ing it into an ' $A$ nower unit convert from 110-120 A. C., With moclels for 50 or 60 cycles. Dimensions: $23 \times 516 \times 1$ inclues jingl. Slarging rate: .5 amp. 2B855-LIst, $\$ 7.50$. NET. EACH.
\$4.41

## Kingston " $B$ " Eliminator

Readlly adaptaWe to any set. nro-
viling three rariable taps. Any de-

## Burns B-Power

Handles all sets of slx tubes or less, inclucing thoso laving inf parer tubes it the last stage. \$o num--no acid-no rollage dron eren 180 rolts at 35 mily with Delirers
 valations on mower tap and twiso resulating knots Power. Two by undewitters. Noisele ess, derenendaile. $\$$
 Milg wt. 18 ins. Coniplete with ture.
285278 -List, $\$ 335.00$. NET.
$\$ 20,58$

## Majestic "B" Eliminators

Every Majestic unit is guaranteed for one printed against electrical and mechanical defects. A printed ' $B^{\prime \prime}$ rectifler tube is guaranteed for 1,000 loours (equivalent to about one year's average use). Nacionally adpertised and known as one of the finest, most reltable 'B ' oliminators. Cabinct futite panel In miack crystay in deen $51 / 2 \mathrm{in}$. wide and 9 in Dimensions. 10 with and plues with. Complete with extension control switch. Shipping wt., 22 lhs .

Majestic Super " $\mathbf{B}$ "-rating, 50 milliamperes at 180 rolts. Sufficient power for sets up to 12,201 A tubes or equivalent. Delivers 180 rolts for the new type 171 power tubes. Two varlable output voltage controls tusure perfect ojeratinn, Rectifylng Tube.


$$
\text { List, } \$ 29.50 \text {, Your net whotesale cost, EACH. }
$$

$\qquad$ Tube.
$\$ 17.35$ Majestic Master " 55 " -rating, 60 milliamperes at 200 rolis. The prectsion "1b" Power Unit for the owner who wants the verstrol of all output - $\mathbf{B}^{\prime \prime}$ eliminator for extra large sets. With complete contro
$\$ 19.11$
$\begin{aligned} & \text { voltage taps. Complete witli Majestic } 100 \\ & 2 \mathrm{B7780} \text { LIst. } \$ 32.50 \text {. NET, EACH. }\end{aligned}$
287780 -List. $\$ 32.50$. NET. EACH.
$\qquad$ Similar in appearance and design to Master " ${ }^{3}$ ". but equlpped with 4 B timps for $201 / 2$ rolt, $671 / 2$ rolt, 90 rolt and 135 volt, as required on many taps, for $221 / 2$ volt, $67 / 2$ rolt. Majestic 100 milliampere tubes. 2B7781-List, $\$ 32.50$ NET, EACH.

## MAJESTIC ACE MOUELS

Equivalent to Master " 13 " in output rating and all-around efficiency hut equipped with step-down transformer and output terminals for filament counections for supplying current for A. C. Tubes. List Each Complete 100 Mill. Tube
 The newest dry "A" unit. thoroughly tested, to replace 6-volt "A" Battery.
2B7837-Majestio Najesto "A", List, $\$ 39.50$ EACH................... $\mathbf{4}$. $\mathbf{2}$. majestic "B" rectifier tube, a gas filled tube of the thest qually with ionizer which increases jower, lowers opprating temperature. greatly to the life of the tube. 100 milliamperes. 2B7782-List, $\$ 4.50$ NET, EACH
H. ... d on many "B" rectifier tube. $A$ sturdlly denad tube especially nade for replacement of all meviurs models of Majestic " $B$ " units and all other " $B$ " eliminaturs, usir. Eas type (cold cathode) tubes.
287733 -List. \$5.00. NET, EACH
\$2.55

## Acme E1 "B" Elimina © <br> for 1 to 12 Tube Sets

Constant, nolseless "B" power direct trom in ${ }^{-}$ light socket. Has rariable controls. detector and intermedlate roltages. Will furnish suffelent reltarge and current for operation of 112 and 171 nower tubes. Furnished wilh high-low gwitch, making pessible two ranges of roltuges with both aljustments. Onjs $31 / 4 \mathrm{in}$. Whale. 81 i in. deep and $71 / 4 \mathrm{in}$. hioh. Attractive tan fisish case. Complete with cord and plug and leads. Furnithes unlimited puwer withotht lum or distortion. Jotr 110 volt. fol-60 cycte A. C. current. Comמlete with hayt!eon tule.
2B6320-List. $\$ 50.00$.
$\$ 29.40$


NET, WHOLESALE


## Sentinel "ABC" <br> Power Unit

## Completely Automatic

Combines both Sentinel Automatlo "A. and Sentincl "J3 (!" unfts. formfor all current needs. The " $A$ " dirision temsists of a high-grate stora\%e hatcery of 60 ampere eapacity, together with a heary duty 2 -rmpere Tunsar tybe charger with complete autmatic control. The " $B$ g" Power mit is the simplest. most efficient derice of this type ecticr tuhes and has much all servielity for the "ealer. ". "B". Fower unit. Jelivers 80 miliammeres greater capacity than the usial gises a tremendous reserve over and almove of etrrent at 180 wolts. This gives a tremendous reserve orer ant almoly
 quiet mat no hum. Furnishes intermediate witage for radio frequency rariable 0 to 110 : detector roltage, 0 to 7 Fi : cutput roltage for last ratlo stage is ratiable to 200 rolts. Prosides two sets of negative "C"M Mias voltage-the first
 nating curreat. SNipping weight. 15 lhs.

2B7776-F or 6 Vo!t. List. $\$ 9850$. NET $\qquad$ $\$ 57.92$
Sentinel Standard "A B C" Unit (not lllustrated).
$\$ 46.75$

## List. \$79.50. NET. EACH

## KODEL－KUPROX Light Socket Power Units

KUPROX Standardized Trickle Charger Replacement Unit

Replaces elec rolytic jars on all trickle charg ers：power units Very simple to install KUP－ place of jars Gives full wave rectification and double forme charging rate（ 8 to .1 amps ．）Shlpping wt． 2 2B7752－List，complete 28．60．Net，each．

## KUPROX Rectifier Replacement Unit

Replaces allacids，liquids，bulbs． vibrators，etc．Doubles charging rate of any trickle charker，ellmi－ nates noise，heat．adjustnients，re－ placements．Requires no atten－ tion－lasts indelinitely Develo ampere charging rate．Shipping w 2B7753－List，\＄4．50． Net，each．
$\$ 2.65$

## KODEL＂A＂Transifiers



Models
102 and 103
Absolutely no hum，increased
volume，sus－ talned power． Contalns no charcer Ilquids or tubes and roquires absolutely no Guaranteed for a mindmum life
of 1.000 operating hours．
2B7750－Kodel，Model $102^{\text {＇}} \mathrm{A}$＂Trans－ jer for all 6 Tube and Smaller Recelvers and handles one Power Tube．Automatic con trol switch．Size， $5 \times 41812$ 多 inches．Ship－
pling wt．． 35 bs．For 115 volt． $50-60$ cycle A．C．current．
List．complete， $\mathbf{\$ 2 9 . 5 0}$ ．
Net，each．．
2B7751－Kodel，Model No．103．For all recelving sets．no matter what size．Auto－ matic Switch Contro． 40 1se， Inches．Shippin． 50－60 cycle A．C．current．
List，complete，$\$ 39.50$ ．
Net，each．
$\$ 23.23$
KODEL No． 120 Combination

## Power

## Amplifier

and＂B：＂ Transifier Adds one stageof amplitication to eny re－ celver with outchangein outrin Whas．
inatesal B absolutelyno hum．Gives greater vol－ ume－better tone－reduces strain on loud speaker－eliminates distortion．Contains no Hgulds．Supplies 45，90， 180 volts＂ B ＂and 45 volts＂C＂current．For＇ 115 volt $50-60$ cycle A．C．Size． $5 \frac{1}{2} \times 10^{3 / 4} \times 121 / 4 \mathrm{in}$ ．long． Shipping wt． 24 lbs，

## $287766-$ Model 120，without Tube．

 LIst，$\$ 45.00$.Net，each．
287759－Rectitying Tube．
$\$ 26.45$
.51 .50

KODEL
＂A，＂＂B＂ and＂C＂ Translfiers
Contain no nelds．Hquids or charging bulbs of any kind．Clean． are，sllent－ equires no ttention whatever． Fitted with ew KUP
ROX dry rectitier and standard＂$B$ elinninator tube

Model 106 combines both the KUPROX $161^{\prime \prime} \mathrm{B}$＂and $101^{\text {＂A＂}}$ transtiers in a com－ mon case．Ample tor all recelvers with 6 $01^{\prime} A$＂or 5201 ＇A and one power tube Size， $51 / 3 \times 103 \times 121 \mathrm{in}$ ．Shipplag wt．， 4 ibs．For 115 volt．50－60 cycle A．C．current 2B7763－Model 106 ＂$A$＂and＂B＇ eliminator tube，$\$ 58.60$ ．\＄34， Net，earh．

Model 107 Super－Power $A, "$＂B＂and＂C＂．Transifier．Replaces all＂A．＂＂B＂and＂C．＂batteries on any set，regardless of size or voltage require ments．Size． $101 / 2 \times 10 \% \times 12 \%$ inches． Shipplng wt． 75 lbs ．For 115 volt， $50-60$ cyce alternating current．
2B7764－List，without Tubes．$\$ 97.50$ ． Net，

43 ．33
quired）．List，\＄5．00．
$\$ 3.00$
 Models 162 and 110 Model 161 fect＂B ellminator for all ${ }^{6}$ sinaller re－ ceivers．de－ fuli 180 volts for powertube eparate taps for 45.90 and 180 volt size， $11 \times 4 \times 71 / 4$ in．Shipping weight． 16 ibs．
Model 110 is for larger sets，up to 10 ubles，delivering full 180 volts with varl able detector control，taps for $45,90,150$ and 180 volts，＂$B$＂current．
Both are nolseless－no hum－giving in－ reased power and perfect reception re－ ults．Both operate on 115 volt， $50-6 \mathrm{f})$
 Type Tubes．
2 B 756. Iodel 110 ．Llst．without Net each
2
2B7757－Model＂＇161＂
File，$\$ 26.60$ ．
$\$ 23.23$

Net，each．．．
$\$ 15.58$


## KUPROX

Trickle＂B＂
Recharger
R－i．luťヶだ diy cel 13 butteries to ertain inmited de gree，glves lonker life to ordinary dry Operation is thtire

ly automatic and plate current is practically consumed direct from liuht socket．Supplies $45,90,135$ and 180 volts＂ $\mathrm{B}^{4} \mathrm{from} 115$ volt 50－60 cycle A．C．circuit．Shipplng wt．， 8 Ibs 287755－Complete With Tube． $\$ 10.00$.
Net，each．
$\$ 5.88$

## KUPROX Trickle Charger



For charging 6 volt on cycle $A$ C solutely dry，employ ing the efficlent kup rox rectilying unit an amazing value Compact－318x41ix ak inches．Shipping $2 \mathrm{st}, 6 \mathrm{llns}$.
$\$ 6.18$
plete．List．$\$ 10.60$
$2 B 7769$


Fast 5 ampere charging rate－charges all uto and radio butterles over night．Re－ uvenates paralyzed and Ilfeless tubes．Sup－ plies A．C．flament current for power ampil－ ying tubes．And，it does these three jobs with full efficiency．Uses no bulos or liquids． Shock－proof，fire－proot－gpproved by fire underwiter．Size． $6 \times 8 \times 73$ inches．Ship－ pling welght．， 15 lbs．
2B7770－For 115 v． 60 cycle A．C．List． 19.60.

Net．
287
\＄11． 47
$\$ 21.00$.

## 54

Net．
4－．
．．
．．．．．．．．．．
A．c．List
．．．．．．．．．．．．．．．．．．．．．．．．．$\$ 12.35$

## MODERN＂B＂




A Gould Product

## Type AC-6-K

## Furnishes 6 - volt "A" power

 from $110-125$ volt, 60 eycle alternating current. Containg relay any " ${ }^{3}$ " eliminator. Consists of a special Gould storage battery in combination with a nolseless rec-
## Unipower Type AC-4-R

Designed speclally to supply a coninuous, unain UV 100 tubes tor al quio sets Very compact only $8^{1}$ quime. 5 in wide and $s^{3 / 3} \mathrm{in}$. ligh Consists of a special Gould " 4 " battery in conbination with a noiscless rectifying unit all enclosed in a hancisonio black rul)ber case with nickel plated fit-
tings. Has gas tyve cover of exclu ire design with vent tube. Equipped with the special Mastor control switch, which turns on the house current to clarger automatically when set is shut off. Operates on 110 125 rolt, 60 cycle alternating current. Shipplng wetght, 40 $2 \mathrm{B5} 269-$ List, $\$ 29.50$.

WESTINGHOUSE "A" Socket Power


Conslsts of a 4 or 6 -volt D. C. -7 Battery and $14 / 2$ ampere Rectox trickle charger housed in hard rub her case. Battery is being charged at all times even when bit is in operation. Will operate a 5 tube set. containing ons power tube. Shipped wet, fully charged. ready for service. DimenEions: $133 / 4$ in. long, $41 / 4$ in. wide, $67 / 8$ in. high. Slijp. ping weight, 40 lhs.
Output, 6 Volts, from 110 Volt, $50-60$ Cycle Current. Lapacity One ampere rate,
NET
EACH .........

285266
Same, except 4 Volt Out put. List, $\$ 20.00$.
$\left.\begin{array}{l}\text { NET. } \\ \text { EACH. }\end{array}\right] 76$

## AA"Auto Power

Comblnation of high capacity storage battery ( 40 anp. hour) whith trickle charge rectiner jermanently uttached. Very ethcient and economtcal. using less current than a 15 watt lami, W II 1 outlast several storage batteries. Rectifier operates by means of an electron discluar: betwepli a copper plate ace of the plate. No tubes, no elcerice parts Mo ithrathow tog g le switch controls the Autopower. Switch automatically cuts of est hum All-rubber case. Shpg. wh., 65 libs.
est hum. A 5267
For 6 Volt Fubes from
10 volt 60 cycle current List, $\$ 25.00$

## NET.

sot and starts charger. Absolutely nolseless-not the slight-


DeLux 285287
Relay Switch to contro Automatic and " B " Eliminator current NET List, $\$ 35.00$.



Dispenses with batteries entirely. Will accommodiate sets with six or more tubes, including power tuhes. For 110 solt. 50-60-cycle A. C. Provides 180 volts at 60 MA and containg especially large " $A$ " Battery. Shipping wt., 80 lbs.
$2 B 6263$
Type A-B686 - with Philcotron rectifier List, $\$ 69.50$

NET

## $\$ 4515$

2B6264
Type A-B386 wIth Dry rectifier. List, $\$ 79.50$.
NET

2B5286 For sets of six or less tubes with Philcotron rectinger.
List, $\$ 59.50$.
$\qquad$



## BARAWIK Radio "A" Battery

## Guaranteed 3 Years Extra Long Life and Uniform Power

## Without quastion, one of the finest radio "A" batteries ever constructed Scientifically designed to meet the exacting requirements to which a good bat tery of this type is constantly placed.

It has thick, heasy lcad plates. separatel wleh selected cectar separators. assuring the maximum of power and performance under the most severe condi The fow of voltage is constant and ease with a strong ball handle.
The flow of voltage is constant and even. No variat jon, hence no disturbing interference For clarity. unfformity and evenness of operation, ow device has ever teen conceived that will matell a good storage battery for constant unvary
Pioneer storage batteries are guaranteed for three years agalnst any defect in matertal or workmanship. This does not designate the life of the battery, sures you a long period of unbroken conditions.
Shipped from warehouses at Chicago, Minneapolis, Kaisas City, Mlwaukee and Brookiyn at prices quoted. Also shipged from Memphis, Dallas, Atlanta
$2 \mathrm{Z} \mid 1050-6$ y., 60 amp . size. List, $\$ 15.00$. NET, EACH.
\$5.88| $\begin{aligned} & 2 \mathrm{BI} 1 \\ & \text { LIst. } \$ 20.00 \text {, NET, EACH. } \\ & \text { 2 }\end{aligned}$
725 2Bi 1053 - 6 v., 140 amp. slze.

## THORDARSON Charger

Model R 175. An entirely new. amazingly efficient charger of all the fine quality its name $\mathrm{tm}-$ plies. Full 2 ampere rate. Will bring average bat tery to full clarge over nlght. No liquids or bulbs - requires no attention. Equipped with Raytheou e a r-
tridge rectifier. Very compart.tridge rectifier, Very compart-
only $2 \pi / 4 \mathrm{in}$. wide, $5 \% / \mathrm{in}$. long only $23 / 4$ in. wide, $5 \% / 2$ in. long parts-entirely noiseless. will fast Indefinitely. Shipping wt..
6 lbs.
2 B
2 Raytheon Car-
tridge complete, $\$ 35$ $\$ 12.50$. NET..

## HANDY Fully Automatic Charger



Operates entirely automatic. Consista of Tungar bulb rectiffer COMMINEH WITH TWO RELAY's. When set is turned of the charser turns on auto2 to $21 / 2$ ampercs. This continues until battery reacines full charge--ithen potenThe relay operates and euts off charger. a mart of this charger, takes ciare of the 13 mat of this charger, takes care of the on or off, depending on whether or not the radio set is turned on or off. Ship-

2 B7730-For 110 volt. 50 or 60 cycles, somplete with Genuine Tungar......... $\$ 11.88$ Bultes. List, \$20.00. NET.. 2B7771-For 25 cycle current. List, \$22.00. NET.
12.94

## ACME "A" Charger

A real advancement in charger design and construction. No acid. no limuids or tilaments. itses the new Raytheon "s" cartrlatie rectitler. Small and compact. Qulet In operation and recuires absolutely tho attention. Grackle flulish east thase, slafied toj. it presents an attrative appearance. romplete with cord and plug and hatlery leads with elips. Shimung wt.. $X$ lis.
2B6309-M odel A. C. $6.2^{\frac{1}{2}}$
amp. Charger with one Raytheon "A" unit


## Retall, $\$ 12.50$. NET

Rays 10 -Model A. C. 7.5 amp. Charger with 2 |n 5
Raytheon " $A$ " units. Retail, $\$ 18.00$. NET

## HANDY Trickle Booster Charger

Keeps "A" battery fully charged con. stantly. Is permanently connected to battery terminals and, with switch to low side. battery receives constant easy flow of nolveless current ( $1 / 2$ ampere) If battery shows signs of weakening merely bush switch to "fast" sive ant the battery will receive a pull quic charge (: to $21 / 2$ ampres) and is culchly brought back to full strenuth furkly life. 2 -ampere bulh. Duto dark mat roon finsh, all metal case. Really manverts laftery into light sotket unit with wrmanent connections. shiphint wt 2 27フフ3.
287773 -For 110 volt. 50 or 60 cycles complete with bulb. $\$ 8,23$
List. $\$ 14.00$. NET. EACH. . $\$ 8,20$

$2 \mathrm{B7774}$-F or 110 volt. 25 cycle, complete with
bulb. List, $\$ 16.00$. NET, EACH............ with
$\$ 9.41$
 $2 \mathrm{B6} 3$ II-List, \$i2.00.
NET, WHOLESALE

## BARAWICK Special 21/2 Amp. Dry Charger

Not a trickle charger. Em. ploys the new Haytheon "A" dry cartridge rectifier. No acids, no bulbs, no moring parts. disolutely quiet, simple-nothing to get out of order. Full $21 / 2 \mathrm{am}$. pere charging rate. Will charge any storage battery to full rapacity over night. Small and compact-will fit alnost a n $y$ where. Requires no attention and lasts indefinitely. One of the nost effficient chargers ever made and offered at an amazingly low: price considering its high quality of material a n d workman. ship. You will make no mistake in choosing this splendid charger.

## WHITE "A") Power Unit Tungar Bulb Type

## Ont of finest "A" powers mate. tises Ho battery or trickle marger. charged-nt. Never charged. Alw a y  full, clear reception. fimple in construc. iton, fool-proiof.

 trouble-pronf. E mnloys solld
 lloys solld jlate filter-no acids or corrosion. Shipped dry and adtultion of water every six monthis is all attention retraniformer. Doesn't heat up and fliter units. sets using from four to nine $1 /$ inn tubes. No vibration hum or ripple. ampere with voltage fluctuations up to 24 volts. Shipplng wit., 28 lbs. 2B7772-List, without
tube, $\$ 3950$. NET.

New Dry Rectifying all others.

## Elkon Bone Trickle Charger

 Illis or mosing parts. naximmin etticiency, and irom that point to replenish the $28209-0.7$ amp. 60 cycle. LIst. each, $\$ 1350$. NET. 2 B2 | 3-0.7 amp. 25 cycle. $2 B 6375$-Trickle Rectifying Unit.2B6376-Three-Amp. Rectifying Unit List, \$6.00. NET use turing recepploing un fiminishing thlament i,ower to the full caburity of the charger, no matter how 2B2 14-List, $\$ 6.00$. NET
$\$ 3.60$
Tritox Automatic Trickle Charger-with Wastinghouse Rectox Unit

No Bulbs,
1roulasor montr pars. Regures no ru-
newals nor attention. Com1) inealwith switch to switch charge oft when set is with set. Starts with $3 / 4$ ampero charge which tapers down to $1 / 2$ ampere. Very ecmpact. Full wave eitichincy your olit hattery into
unlt with this charger.
2 B2 17-List, $\$ 16.00$.
NET..
\$9,60

## Valley Battery Charger



Equipped with bincung post connections for charring fo a 1 ad Operates on 110 volt. 60 crale Bakelite pmel. Transparint molded Rests on rubher feet. shipg. wt. 12 lbs .57 - 1 st price. $\$ 1 / 13$ \$19.50. NET 2B5658-Special for 110 volt 25 eycle A. C. Current. List, $\$ 21.00$. NET \$13.95


Operates without noise, without attention, without acids, The 0.7 Amp. size starts charging 6 -volt batteries at about. 0.7 amb. but automatically tapers off as the batteries reach rrent to trickle, in as is necates charging at 3 amperes and tarers down to 2 amperes or less as mattery ana Neat japammed metal case. equiphed with torgle switch. Guaranteed. Shipping sts.. 6 and 15 lbs . Ojerates on 105 to 120 volts.
\$ 7.95 $2 B 2$ I2-3 amp, 60 cycle. 1029 List, each, $\$ 17.50$. NET..................
Elkon Rectifying Units

Replacement dry rectifying units for Elkon Chargers


Junior Bulb Type Charger silent in Gives very results. Tii wo.sible br cause of simple y et sifective Ilas no moving

quites no adjustment. c'onnects to 110 wolt 60 cycle A. Charges 6 volt auto or ratio or $B$ hattery up to 90 volts. Ior a necting cord and plug amilbs ineluded stifyplng wt., 10 and 15 lbs .
2B304-(2) amp. 2B305-(5) amp

## Direct Current Battery

 Charger
$285655-(2)$ amp. NET $\ldots \mathrm{s}, 9 \%$ Genulne Tungar Rectifylng Tubes
2RR24-(1) amp. NET...... $\$ 2.76$
$2 R 835-(2)$
amp. NET...... 2.76
$28836-(5)$ amp. NET...... 5.50


By the GenCral Electric or 4-volt luittorles at
ann. rate. Silent in opcration. huires ac tuires no acid
or water not overejarge. clarging rato. compact. Recommended for use witl low amperage mittery. 30 to 60 amp. It may be used with 4 or 6 volt storage battery. Has adjustable chargiug rite. Sifpplns wt.. S lins.
2B775-List price, $\$ 10.00$.
NET.................................... 4.51

## Yaxley Automatic Power Control Does alt the extra

 switchins for you. Itlakes care of you "akes ". elimimator or triekle clarger or turn your set cn. the tririve clarger is aff the the "B"* eliminator is on. When youl turn the set off. the
1'0w r somel for wou It wors atuto maticatly ami witlout fail to turn of the "1b" eliminator and turis on the tiickle charger. *higr. ut., 2 lus.
2B3 I 4-Serles Type for use with sets with tuhes having a current draw equal
 283 15-Multiple type for use with any set, but especially recommended fer sets having current draw or ess List, 56.00 . NET.


## Service Station Battery Charger

## Capacity: 17 Batteries, 6 Amp. Rate.

 wicn to make money charging batteries a slagle batlery.Prasses muderwriters' specfications wherorer installed. Charges all makes of auto, cumes or lighting hatteries. sasy to on current consumpition, effecting $40 \%$ to Guro saviag la current liflls. Easy to operate. Just ccnnect latterles in series to the ate. just commect Satere requireal about Ilx charging circuit. Siace recuired about 1x $13 \times 12$ hwhes. Mounts on wall. Operates on 110 rolts, fited with switch, meter and regulator. Automatic cutuff turns charge ot it case of ine currcht fallure and on wot illscharge accialentinly. Price includes rectifyint bulh. Shipping wt., 26 lbs. $2 \mathrm{ZIIO43}$-For 60 cyele cur- $\mathbf{\$ 4 9 . 7 5}$ 2B1 1044 -For 25 cycle cur- 56.75


## Switch

Connects Battery harger and " Is" Filminator to set alld makey and breaks all ronnections when 1JJament panel switch is thrown. Automatically turns on light socket current to off and when set is on, it cuts off charser :nnd " 13 " Ellmalnator is thrown onto set and ronnected to light socket rurrent. For 4 or $f$ volt batteries. Shipping wt., 2 bis.
28328-List, \$8.00.
Net, each.
$\$ 4.70$


## Improved Automatic

 Relay SwitchHelps electrify uny radio set. ilhe nwitch on set is turned on, it automaticalls shints of the charker and Instantly starts When the set switch Is turned off it stops the "B" eliminator and tnstantly starts the charger. Cian also be used with either trickle charger or "B"" ellininator separately. Shpg. wt. 13 3bs. 28327 -List. 33.00 . Net.

$\$ 1.77$

## Extension Cord Set


fiss 6 feet of >o. 18 twisted pair Inmpeord. Irass shell sorket on oue enrl. u piece separabic pins on other eud. 4B7438tarh...

59c


## Jewell A-B Relay

An automatic switch which rontrols eliminator and trickle eharger. Makes any set fully automatic. Simply switching on the set autonatirall. switches the eliminator on and the charger off. Makes poseible remote full automatio comatrol of battery, charger and elininator.
$286354-$ Type 503, for sets using 5 or inore 3 -volt tubes. 2B6355-Type 5aj, for sets using 4 or more j-volt tubes. I, ist, \$5.00.


## Brach Controlit Switch



An antomatir relay for oower suppi find "A ${ }^{\text {" }}$ elinit hator. Antomateally switchtis "R" . eliminutor and A power or off. Entirely as the set is switched on or off. Entirely thutomatic. Recommended by Balkite. Shnz. wt.. 1 13 1 bs.
2B311-List, \$4.50. $\qquad$ $\$ 2.65$
2-Piece Plug A sturdy well riesigned. good quallty beveled ends. Ample space for wiring.
4 B7283-Each.
Net
 0
 Lamp cord Connector
For lamp
tetnions. Quickly makes or breaks wontart sed for coun
$286356-$
Net.


## 2-Way Plug

Well bult composition Plup It is a good domestic make. 4B7284-Each.

Extra Tap
Designed to double the capaclty of a single PinType receptacle mide of tine pollshed composition. 48728714c


## Trio Tap

A three way pintype - Inster with standar Chister with standart
Purallel prongs to $t$ acle any fush rece tacle. 4B7354-Each

11 C

## Combination " $B$ " Supply and Power Amplifiers

## PACENT POWERFORMER

## Combination Power Amplifier and "B'" Supply

Reproduces the delfcate inflections of the human voice and the finest shades of the violin with absolutely true tidellty and with volume from a whisper to a roar. With it you can enjoy the best music with the shading and expression of the orfginal rendition by the far-off artist. You can easily distinguish the various instruments and volces in an orchestra or chartette. It puts the artist right before you and gives you an undistorted volume ranging from a whisper to a roar

In addition to these fine qualities. It also supplles continual sllent and inexhaustible " $B$ " supply for the entire set.
Case is made of metal $8 \times 8 \times 10$ inches. A hinged door provides easy access to the tube. An attractive face plate contains an input and an output jack. control switch and pilot light. Jouvres at sides provide ventilation No adjustments, no controls. Flip the switch, and the Powerformer is at work.
Operates from any 60 cycle, 110 volt alternating rurrellt sitprly, Uses $1-U X 216$ or $\mathrm{CX}-316 \mathrm{~B}$ Rectither Tube and 1-UX210 or UX310 Ampllfylug Tube. 285674 -List. Less Tubes. Shpg. wit. 40 tbs., $\$ 82.50$.
40 tbs., $\$ 82.50$.
Net...... . . . . . . . . . . . . . . . . . .
$553=65$


Timmons Power Ampilifier and "B"' Supply
The comblnation amplifler and " $B$ Supply produces not only the power for the truest tone quality, but also supplies inexhaustible "B" voltare for the entire receiver. Very slmple to use with any set. In additiun to supplylas 350 volts to the plate of its superpower audio tube, ft also furnishes the high "g" voltare to prevent distortion. Eिses one UX-216B or CN316B tion. Eses ons UA-216B or CX316B UX210 or CX 310 audlo tube. For nise on 105-120 volts, $50-60$ cycles right from your light socket. Handsome metal case $113 / 4 \mathrm{in}$. long. $4 \% / 4 \mathrm{in}$. wide, 534 in. high.

Power ampllfer only is amme style but does not supply "B" current. 285677 Combination Power Am40 lbs. List. $\$ 70.00$. Net Shlpping wt. 40 lbs List, $\$ 45.00 .40 \mathrm{lbs}$.

## POWERIZER UNIVERSAL

## A B C Supply and Power Amplifier

The Powerizers sipply not only high volitage " $\mathrm{B}^{\prime \prime}$ and " C current for their power tube but also for the complete recelver. They are designed esperlally for use with $A$. C. tulles and supply $11 / 2$ and $21 / 2$ volts for A. C: tubes UX226 and UY'227.
The Powerizers require 1-UX210 or UX310 amplitier tube and -UN230 or CA380 full wave rectifier Tube. With this unlt and the necessary A. C. tubes you can make your set a completely ight socket operated recelver, and in addition obtaln great volume with pure reproduction. "A" plug connectlons, adapters and directlons included. A. K. models include harness, adapters e control. Use A. C. tubes type UY227 for detector; type UX226 for R. $\mathrm{F}^{F}$. and amplifers.
$3 E 5679-M$ Model PYX, 1 Universal, without Tubes, 110 volt, $40-50$ cycles. List price, $\$ 60.00$.
Net.
385
$385680-$-iodel $9 \times \dot{x}_{1}$ i por 110 volt. 25-33 cycles. List, $\$ 66.00$. $\$ 39.60$
$3 B 568$ i A. K. Model for AtwaterKeut Models $20,30,33,35$. Wlthout Tubes. List, $\$ 60.00$.

## Net.

$3 B 5682-\mathrm{A}$ Kodel Kent Model 32 Set without Tubes. | Kent Model 32 set without rubes. |
| :--- |
| List. |
| 2.00 . | Net.iping welght ail models, 40 lbs .



Many now sots and kits now appearing on the market make se of the 210 type tube to secure more power and better reyroduction. The 210 is crapable of handling a very ereat amount of nower without a trace of distortion. It is the laeal tube for replacement in the last staze of a suiser heterodyne type revelver. it improves the tone quality of the ket so mreatly that one can liardly distinguish tho railio from the real entertainnment. However, to oltaln wower, power must also be consumed. Therefore, batteries are not economical when this type tube Is used. Thls power park economical been designed to meet the demand created by the 210 has been designed to meet $B$ and $C$ power for the 210 and "B": power for the entire recelver. It is easily constructed B power rom the par the added pleasure or better following parts are supplied: battery replacements. The following parts are suppifeditenser

1 Thordarson power compact R210, 1210 flter contenser block, 18,000 ohm fixcd resistance, $2,10,000$ ohm flxed re* sistance, 1,000 ohm resistance, $2, L X$ sockets, 7 binding posts, 1 binding post strip, baseboard, screws, wire, instruetions.

The tubes requirel; but not furnished, are $1316 B$ rectifer tube and 1374 regulator tube.
$3 B 6312$ LList. $\$ 41.70$. NET...
R-210 Power Ampllfier and "B' Supply contains, In adall. tion to the abore, 1 Thordarson R200 transformer. UX socket. Thordarson $R-76$ output transformers. Lises 1 316B tube. 1374 voltage regulator and 1210 power tube (not inciuded). 3B6373-LIst, $\$ 56.20$ NET

## Thordarson Power Compacts <br> Power paek essentials for 171

 and 210 power ampliflers. Consists of power transformer, filter chokes, flament wincling and buffel condenser in one case with cord plug and terminals. Specified for plus and to anal 210 nower packs $3 \mathbf{2 0 3 2}$ - R210 P owe compret List. $\$ 20.00$. YOUR$\$ 11.88$ $382030-$ compact 3B+2
$\$ 8.82$
Dongan Power Supply Transformers


## Power and Fliament Heating Transformers

 Power supply transformers for सastheon BA 350 mil . tube, $A B C$ tower pack. Fur supplising A, $B$ and $C$ roltgages to 201 A tubes. 700 volis center tap $300-400$ mils. 5

$$
\text { volts center tap } 1 / 2 \text { amp. } 4 \text { Volts, } 5 \text { amp. }
$$

## 3 B63 3 cels List, $\$ 15.00$. NET

$\$ 8.92$
Power supply transformers for $G$. R. S, 400 mll tube AHC power supply. 750 volts center taj. $300-400$ mils. 5 rolts center tap. 1 amp. 4 Folts, 5 amp.
$\$ 8.92$
3 B63 4 LList, $\$ 15.00$. NT it Raytheoll 350 mil. trans Double chake for uge witransformer Two chrokes bult into former metal case For ABC wuwer supply unlt 3 B63 $\mathbf{5}$-List, $\$ 15.00$. NET.

## Filament Heater Transformers

For TX-210 tube, ity vults. $13 / 4$ amp. center tap.
3B6316-List, $\$ 2.50$. NET
$\$ 8.92$

Filament heater for UX-112 or UX-171 power tube
$\$ 1.70$ Famp. center tap.
$3 B 63 \mid 61 / 2$-List. 52.50 , NET.

Thordarson
R-171
Power Supply and Amplifier

This outfit was designed for a dual purpose. There is a great demand for an extra stage of audio ampliHeation to increase the great enjoyment of radio. There is also a great demand for a derice for ellminating the constant replacement of dry " B " batteries. This dertee completely satisthes both of these requlrements. It not only adds greater volume and superb tone quality due to the inherent qualitles of the 171 tube but it also supplies A B C power for the 171 tube and B nower for the entire reculver, It can be assembled br the most inexperienced in an evenling's time. The following parts are supplied:

1 Thurdarson 171 compact, 1 171 filter condenser. 1171 tapped resistance, 2 LX sockets. 1 Thordarson 196 ehoke, 12 mf . filter condenser, 2 1 mf . by-pass condensers. $1 \rightarrow$ post terminal strip. 1 bakelite strip, 2 tip jaleks, 1 9xil inch baseboard, 4 binding posts, screws, wire.

Tubes required (not furnished) are 1 Raytheon BH tube and 1171 pwer tube. 3B6317-List. \$42.10. NET.

## Thordarson R-171 Power Supply "B" Eliminator Only

For supplying complete "B" current to any recelver a lso "ABC" Folitage to 171 rower tube. Consists of 1 Thordursun 171 compact, 1 171 flter condenser liank, 171 tapped resisiance, 1 bakelite socket, 21 mid. fl-
 2 -post terminal strlp with posts, one 5 -post terminal gtrip with posts, screws, lugs, wire. 2 lemgths
spaghetti tubing. spaghetti tubing.
3 B63 8 -List.

## Amertran Power Transformers

Amertran transformers have Fained a rejutatlon for thelr faithful unfalling serrice and performance. For years thes live hern standards In many circults. Thw new power transformer is no exception to their wonderful record.
 The Amertran Tripe P. F. 5* iratusformer was designed for use with the 21 fB tulue to subnly the bigh soltage necessary lu an ellmoluator or power amplitlat buck for the CX 314 tybe porer tube. Also supMies proper voltage for the rectifer nild power tube flaments. If is specficd In many power jucks including the Amertran Power C'onipact.
3B6319-List, S18.00. NET.
National "B" Eliminator is shown on Page 36 of this catalog.

## Samson 210 Power Amplifier and B C Eliminator

 superiority of Samson products. Large orersize cores and windings assure full current capacity and long loours of coninuous service without overheating.

The nesv 210 power kit when bullt up supplies constant $B$ and $C$ roltage for tha, entire receiven and also provides one assured by repraduction Transformers. They give relumo and reproduction never before attained. The 13 roltages supplied to the set are: 45 to 67, $90,13.3$, and 150 rolis. C ro:tis're: $-41 / 4,-9$ and -40. In addition the power amplifier stage uses tro 210 tubes, the $\triangle B C$ power for them being supplied from the power block. This unit dellvers 500 volts at 95 MA .

Parts supplied as follows: 1 Samson 210 Power Blcek; 1 Pair Samson Symphonje Push-Pull Transformers; 1 SHamson "Tohe" B and C Condenser Hlcek: 1 Fiectrad Trurolt Variable Resistor: 4 Benjamin ['X Nockets; 12 Ehy Binding Posts; " Tobe "B'" Resistors; 2 Tobe 'C" Reslsturs; 12 Hole Binding
 l'ust Strip; wire; screws; baseboard.
The tubes required for this unit are 1-281; 1-874 and 2-210 typo tubes (not furnished with kit). Ship. wh., 45 lbs. NET

## Samson 718 Power Amplifier and B C Eliminator

This kit when built up supplies the fol lowing 13
to 67,
90
, and 135 for the receiver: 45
$C$ voirages: to 67,90, and 135 volts. © volrages: is a stage of power amplificalion employing 2-171 type tubes in a push-pull circult using Samion Symplionic Push-Pull Trinsfermers. The AlbC current for this stane is supplied by the power block which delleers 200 volts at 95 M.A. While the volume obtained with 171 tspe tubes is not as creat as With the 210 tubes it is ample for any reasonably sized roma. Tho deality of reproduction is amazing, seldom approached.

## Ward Leonard Vitrohm Resistors for Power Packs



Thase resistors were desianed espe cially to meet the requirements of thic jower pack for which they are specificd. Their resistance ratines are accurate and permanent. Shlpping welght, 1 lb .
3B658 I-Amer-Tran Power Pack Rosistor, List, $\$ 7.50$. NET...... $\$ 4.83$ cults. List, $\$ 6.75$. NET........ $\$ 4.39$ 386583 - F or 85 NA MBG circuits. Tayped for plate voltases of 30. 67. 100 and 180 velts. List, $\$ 6.75$, NET. $\$ 4.39$ 3B6584-For use in iso volt Current Sumply t'nit. Tapped for 29, 45, 90 and 180 volts. List. $\$ 4.75$. NET.... $\$ 3.09$ 3B6585-For 400 volt power pack circults. Output roltanes of $30,45,90$ and 400 rolts. List, \$6,75. NET, .. \$4.39 3B6586-For GRS 400 mili, circults. List, $\$ 7.50$, NET................... $\$ 4.88$ 3B6587-For Thordarson in-i71 Power Compact. 13000 olims tapped in stejs of 2000. 3000, 3000, 3000, 2000. List. \$2.15, NET
$3 B 6588$ For Thordarion $\mathrm{B}-2 i 0$ Power Compact. 13000 ohms in steps of 2000, 2000, 2000. 7000. Llst, $\$ 2.65$.
NET
For Thordarson R-.........................
. $\$ 1.72$
3B6589-8000 ohms in steps of 1200 and 6800 ohms Llst 51.55 And 6800 ohms. Llst, $\$ 1.55$.
 Watts. List, $\$ 1.25$, NET.
3 B659 3B659 I- 1000 ob h s.
......81 8 walts. LIst. 85 c . NET Capacity 386592 Silver-marshail Vo. 655 to tal 11350 ohms. List, $\$ 2.50$.

 sistor total 16800 olimes. List, $\$ 5.00$ NET
$\$ 3.25$
Other Ward-Leonard Resistors Page 97

Parts supplled as follows: 1 Samson "718" Power Biock: 1 Pair Simson Synson '"Tobe' $B$ and C Condenser Block 1 Electrad Truvolt Variable Resistor: "4 Henjamin Sceliets; 10 Eby IBinding Posts 1 Tolio "B" Resistor: 1 Tole "C"' Re ${ }^{\text {sint }}$ itor; 1 ISaseloard; 10 Ilole Binding Post Trip: Wire, Screws, ete
re: 1 -type required to operate this kit are: 1-type 280; 1-type 874; and 2type 171 tubes. No tubes included. Ship. ning weight, 40 los.
386578-Complete
set of parts. List,
$\$ 91,90$ NET
Mard

## Ward-Leonard Adjustats

The Adjustat Is a whe- wound, ritreous lage 1.3 slejs of reslist ance. lt is essential ing high current and rerguiring positive adjustment to lie $m$ a de
and kept. Those famillar with Ward Leonard resistances know that there are none bet ter.


| oz. |  |  |  |  | $\begin{aligned} & \text { Curt } \\ & \text { rent } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cur- |  | Ohm | MIA) |
|  |  | rent | 386606 | 50 | 650 |
|  | Ohms | (MA) | 386607 | 6000 | 190 |
| 3B660! | 1 | 4000 | 386608 | 1000 | 125 |
| 3B6602 | 2 | 3000 | 3B6609 | 2250 | 90 |
| 3B6603 | 6 | 1500 | 386610 | 7500 | 50 |
| 3B6604 | 20 | 1000 | 3B6611 | 10000 | 40 |
| 3B6605 | 30 | 800 | 386612 | 25000 | 20 |
| List, Each. \$3.00. |  |  |  |  |  |

## Electrad Truvolt <br> The Electrad Tru.

 rolt is one of the best voltage controls that you can buy for joarer derices. Spestruction gises it a rery large radiation area prerenting deterioration and assuring permanent accuwound cf nichrome wire exposed directly to the air for more radiation of heat. Permits potentiometer control and eires a metallic contact at all times with 30 exact readings of reslstance. Shipping weight, 8 gz .|  | Current |  |  | Current <br> Ohms (NIA) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 3P6615 | 500 | 224 | 386619 | 10000 | 50 |
| 3B6616 | 1000 | 158 | 38662J | 20000 | 35 |
| 386617 | 2000 | 112 | 3R6621 | 25000 | 32 |
| 386616 | 5000 | 71 | 386622 | 50000 | 22.5 |
|  | $\mathrm{ch}, \$ 3$ | .50. |  |  |  |

## Samson Power Transformers

Samson's newnevt acluerement. $A$ ost grade power s:mnsfonners. Con-
structed in structed in usual Samson style with
oversize cores whuines cores and not heat up eren under orcrloact. 60 cy. A. C
3B6625-30 Henry Choke, 30 MA cap, Shpg. wt., 4 lbs. List, $\$ 5.00$.
 $6626-30$ iienry Clioke, 80 MA NET $386 \dot{6} 27730$ Henry Cho............... 120.15 can. Slipg. wt., 9 lbs. List, $\$ 12,00$. NET

 Supplies 200 Folts at 80 MA; filament supply for 380 type rectifier tube and filament roltage for one or two 171
 386629 - No. $162 \cdots$ Transformer. 500 rolts for plate of type 210 tubes and fllament voltages for 381 tubes and for 210 type tubes. Slipg. wt.: 10 llos.
List, $\$ 19.00$. NET.......... $\$ 12.35$ 3B6630-No. 232 Transformer, 200 rolts. Also separate windings for supplying filament of 5 -type 226 A. C. tubes ; filament for two type 227 tubes; and fllament of two 171 type tubes. Slipg. wt., 11 lbs. LIst, $\$ 16.50$ NET
. $\$ 10.73$ 38663 i- No 262 Transformer. 500 rolts from 105-120 Folt 60 cy. A. C. Also filament for 5-226 trye tubes.

 3 B 6632 -No, 713 o w e P block.
Contains transformer supplying 180 rolts at 50 to 80 MA , filament current for $1-380$ type tube and filament for 1-171 type tube. Also contains two choke colls and a special B ellminator
 $386633-$ No. ing $P$ ow or Block. Supplies 200 volts at 80 MA . Contains 1 No. 132 Transformer and 2 No. 380 choke colls. Shug, wt., 23 lbs. List, 386634 No, $\because 10$........ \$2 21.76 $386634-$ No, 210 Power Block.
Supjlies 500 volts at 80 MA , Utilizes ene No. 162 Transformer and two No. 330 Chokes. Slipst, wt., 23 lbs. List. \$3750. NET .................... $\mathbf{\$ 2 4 . 3 8}$ 3B6635- No. 463 Transformer. Supplles from separate windings fil. roltage for two type 227 A. C. tubes; fire type 226 A. C. tubes, and two 171 or 210 type tubes, Shpg. wt., 12 lhs. List, $\$ 1450$, NET.
 Supplles filament voltage for two 171 or 210 type tubes. Rating 20 watts. Shpr. Wt., 9 lbs. List, $\$ 12,00$.

# Improve Old Sets, Make New Ones Better with These Latest Devices 

 plekup. without other part of radio set except batteries, it provides reproduction even surpassink the most expensve advertised electric phonosranhs. This unlt, an electile plekup and a apring motor proside the essentisl units for an elriric plowoniaph that you can make yourself. $121 / 2$ inches long, $21 /$ inches whe. $^{2}$ is Inches high, Ship. Wt. $61 / 2 \mathrm{Jbs}$. 385784 LList. $\$ 25,00$. NET.

## National Power Amplifier and "B" Supply

Furnishes complete its own A, B and C sup. ply as well as B supply for the balance of any radlo receiver. For Ruythenn $B$. H. tithe and X 171 power tube. A National tons fiter kerps D. C. out of sveaker aild watches thy impedance to the power tube and protects
 to 180 rolte Easily Installod without rewlring; battery troub.e. Furnlahes high quality power amplification.
286322 -Type E I in kit form without $2 B 6327$-Type E completely assem tubes. List, \$68.00. NET.

$\$ 5010$

## Power Amplifier L-3

Complete three stape power amplifler and "B" eliminator. For H1-Mu tubes in the irst and second stazes and $1 \tilde{j} 1$ power tube in the last stage. Kaytheon B. H. tube used. first and second stages and lil power tube in the last stage. Kaytheon B. Bita tube used. mperance and set.
2B6323-L 3 Kit without tubes. List, $\$ 78.00$. NET
$\$ 45.95$ 2B6324-L 3 completely assembied and wired without tubes.
List, \$89.00. NET. .
$\$ 51.88$

## Steinite Interference Eliminator



A scientifically constructed coll fur use in ule anellminate intertereliminate interier
ence and Increase ence and Increase
selectivity. Uged on any set operating with an aerial. Attractive black case.

3B271 1 -EACH

## C. R. L. Station Selector Not a Wave Trap



Tunes out short wave interfering sta. tlons. Increases selectrity of any set on stations close to locals. No adjust. ment. Simply turns on and off. Stations that broadcast close enough to each other to cause interference however may be separated with ease with the Centralab station selector. S1mple to install, just cen neet it In series with antenna lead In. 286325-List Prlee. \$1.00. NET.

600

## Muter Interference and Static Eliminator



## Centralab Tone Amplifier

 teries. Tone filter protects the speaker. $3863281 / 2$-List Price, $\$ 16.00, \$ 9.50$

## The Vari-Unit

By changing the setting of a multipoint switch inside the unit, arid alter fourtuen blinding posts at the back. the Vari-Intit can be made to serve us a stare of neutralized radio frequemy, detector with or with-
ut regencration.

## strabint radio freauency. osellator, sta=

 tion selector, auperluelerodyne flrst de. tectar. wavenutur, etc.Fish Vari-Vnlt. messulug 7xixat Inches, contuins a .000:35 variable eolldenser, a . 000015 nudut condenser, rhed, stat, unfrersal scoket. mrld leak, fixed condensers. multiple suitul and subnantl with monntings for haterchangeable colls that cover the wareband from 80 to 2,600 pieters, Thuse furnsheil retularly are for the broaulcastling ramse of 200 to 550 meters.
(*in be used with standmrd receirel cijher to wharpen tunfing ux to receive very long and Fery short warco. Conthris any set (except reflex) into a loup) operated remefice with nore selectivity and greater bensitivity. Shipging Weigli, 8 lbs.
3B1571—Llst. \$20.00.
NET
$\$ 11.88$



Celatsite Silk Battery Cables


A neat thin flexible silk inclosed cable for naking buttery connections. (ionin stand insulated with celatsitc covering handy and useful, for it slips in between doors, windows, through sinall drilled holes, etc. Its flexlbility nakes it very
practical. No lugs on cable. practlcal. No lugs on cable.

No. Con-Luth., J.lst


Art. No. ductors
282803 -Five
282804 -six $282805-$ Scven $282806-\mathrm{Five}$ 282849 —Seven
$\qquad$ Celatsite Silk Conductor Cord
Same cord its used in Celatsite silk cable. Cable of any length nuy be made with this cord. W82841-25 ft. 5 wire. Net....S2.25
382851 -25. $\mathrm{ft}$.6 wire. Net.... 2.75
38284 $382851-25 \mathrm{ft}$.6
$382843-25 \mathrm{ft}$.7 wire.
3 wire.

Radio Eattery Cables


Made of flexlble stranded conductors rubber insulated and covered with bralld Assembled with soldered lug termhuls which prevent loose connections. ductor of sepe connectlons. Each conwith R. M. A. code standards.

| No No. Con | gth., | List | Net |
| :---: | :---: | :---: | :---: |
| Art. No. diletors | Ft. | Price | Price |
| 282801 -Five | 41/2 | \$0.50 | \$0.23 |
| 82829 -Six | $41 / 2$ | . 60 | 29 |
| 282802-Seven | 415 | . 70 | 3 |
| 282830-wirht | $41 / 2$ | . 85 | 43 |
| $282831-N H e$ | 4114 | 1.00 | 5 |
| B2832-Ten | $43 / 2$ | 1.15 |  |
| 282833-live | 10 | 1.25 |  |
| $282834-\mathrm{Slx}$ | 10 | 1.55 |  |
| 2B2844-Siven | 10 | 1.85 | 5 |
| 2B2845-Ninht | 10 | 2.15 | 1.28 |

## Battery Conductor Cablos

Same conductor as above cables without solder lugs. 25-foot eolls. Malie cible of any circti. 3B2846-ifiveConductor. Per
 , 18 382848 -Seven Conductor. $\mathbf{C o l l}$. Per 1 . 40

## Battery Cable Cosnnectors

## 5e- 드

Made of flexlble stranded wire with soldered lug terminals, for usc in Batteries.

IAst,
5 Each
inch
-inch

Battery Terminal
Connectors $3 \mathrm{B2821}$ - Each, 19 c et
rusten to post of uny lasten to post of iny anto storage battery to
adapt it for use with radipt it

Net

Non-Drip

## Hydrometer

The " $110 n-$ drip" feature makies thls the ideal radio or service station hydrometer. clothing, because the acid cammot drpp out. The "Can't Stlek" flout and small barrel insures easy accurate reading always. Rubber parts are of good quallty rubber.
2B2815-Lisi, \$1.00.

## Bargain Hydrometer

## 2B2816-Lst, 50 c .

## Vet....................... $26 \boldsymbol{6}$

Accurately graduated font shows you exact condition of charge in your battery. Tests both " $\mathbf{A}$ " and " $\mathbf{B}$ '' batteries.

## S. O. S. Hydrometer

 2B2817-List, 75c. Net....................... $49 e$ Three bulls show exact connition of charge.three foat battery is full. If one ball sinks nearly charked. two sink charge

## Leader Hydrometers

Have accurate reading, beaded floats which are practically unbreakable curte lorge size is suthate for battery stations and for denkers ${ }^{\text {c }}$ testing purposes, beling of special, almost unbreakable construction with rubber shock absorber and practical, unbreakable beuded float.
2B2818-Largesize. 2B2819-Extra large size, service station mode List, \$2.50. Net. S1.45.

## Hydrometer Floats

3B2820-Lst, 25c. Net, 17 c
No need to throw away the old hydrometcr because of a broken flout. Just remove the fulb from the top of the glass burrel and Insert a new hydrometer float. Scale is graduated so it can be read at a glance.

 2B28121.st. $\$ 1.00$. Net. Sut your 36 c on this mat and avold ally joussible chance of injury to rugs or urniture. Takes largest size battery. Acld proof.


Battery and Radio Clips Positively su perior to any Lead coating
protects agalnst corrosion.
Jaws List Net No. Capacity Length open each 10 3 B2828 $10 \mathrm{amp} .11 / 2 \mathrm{in}$. $5 / 8 \mathrm{In} .5 \mathrm{c} \$ 0.37$ 3 B2856 25 amp. 23 in in in. $10 \mathrm{c} \quad .67$ $3 \mathrm{B2857} 50 \mathrm{amp} .35 \mathrm{in} .11 / 2 \mathrm{In} .20 \mathrm{c} \quad 1.30$
50.553 B2858 100 amp. $41 / \mathrm{in}$ in 1 in. $35 \mathrm{c} \quad 2.40$

Connecting Clips
For connecting lead wires to "B" batteries, binding posts on sets, tc.
3B2824-Neat nlekel 382826-Pee Wce, copper finish. Very

## Battery Lead Tags

Metal tags for marking battery connecting wire. Once on, you always make connections correctly and quackly. Two markings: $\mathbf{B}+$ Det., $\mathbf{B}-\mathrm{A}+$ markings: $B+$ Det., $B-, A+$.
$A-$ Amp.
$3 B 2814$-List, per set, 15 c . Net price.


## Fest-A = 3at Storage

Battery Tester
A meter designed to attach permanently to any storase battery and by simply pushing a button kives accurate reading of its condition. Non-corrosive lead terminals. Dial in three colors.
3B2859-List, \$1.75. Net, each, S 1.05

| Jewe! | Battery Tester 282836 -Lst, 92.76. |
| :---: | :---: |
|  | Net........ . . . . $\$ 1.68$ |
|  | Reads 0 to 50 volts. Ac- |
|  | curately constructed. Senle |
|  | callbrated for close read- |
|  | ings. Enameled black case |
|  | with glass crystal. Flexible |
|  | connected cord. A high |
|  | quallty precision instru- |
|  | ment. |

## Battery Meters

2B2837-0-50 volts. IIst, \$1.00. Net.. 55 c $282838-0-100$ volts. Accurately tells you Accurately tells you coudition of "B" battery. Gonvenient. Watch cuse whe. Metni cary pollshed nickel futsh with glass rystal. Tests $221 / 2$ and 5 volt batterles.
2B2839-Combinatlon Meter. Reads 0-50 volts: $0-40$ ampres. Tests " $\mathrm{B}^{2}$ " and "A" ry cells. Same style as meter above. style as meter $\$ 1.50$. Net...75c


## Cable Markers

 3B2813-List price, 26 c.Markers easly read and convenFit snugly to wire, allowing the wire to be drawn ireely through a small opening. Packed in boxes of 11 containing the follow-


# Famous BRIGHT STAR 

 DRY BATTERIES
## "A" "B" and "C" Units That Outlast All Others!

High in voltage, full of fresh, active materials of the finest grade, Bright Star Batteries give long, dependable service. The manufacturers have been making quality batteries for over seventeen vairs and enjoy a splendid reputation and nopularity everswhere. A feature of Briglit Star construction is the "Bag Type", cell which lnsures an musmally long output of smooth, quiet ' $B$ ' power. These batteries are made especially and only for Radio work and their perferted construction is the result of years of test, experiment and practical use in thils fleld.

Wo offer the Difint Star lane to our weaters as the most profthble. satisfactory " $B$ " Batteries in the market. They are natonally adrertised and enjoy a quick sale at all thes. Their supreme quality: assures completo satisfaction for your customers. They buitd good will for the store. Their "eye" ralue is big-having beatiful, brillant red cases with black border.

| Cat. No. | Fact. No. |  | of Battery | Shipping wt., lbs. | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | NET Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2B127 | 71-17 | $41 / 2$ | volt | $11 / 2$ | \$0.60 | \$0.39 |
| 2B128 | 15.03 | $221 / 2$ | volt Horizontal | 2 | 1.75 | 1.14 |
| 2B129 | 15.50 | $221 / 2$ | volt Horizontal | $11 / 2$ | 1.50 | . 97 |
| 2B130 | 15.90 | $221 / 2$ | volt Horizontal. | 5t/2 | 2.00 | 1.30 |
| 2B131 | 15.91 | $221 / 2$ | volt Vertical. | 3 | 1.75 | 1.14 |
| 2B132 | 15-95 | 22 1/2 | volt Vertical. | 6 | 2.00 | 1.30 |
| 2B133 | 30.06 | 45 | volt Horizontal. | 101/2 | 3.75 | 2.44 |
| 2B134 | 30.60 | 45 | volt Vertical sup.pr. | $161 / 2$ | 4.75 | 3.09 |
| 2B135 | 30.95 | 45 | volt Vertical | 101/2 | 3.75 | 2.44 |

"A" Battery
Supreme in quality and kervice of or all stamdard |ry cells Itadio "A" use. "lsag type" cell constructon is preatly superior to ordinary methois. मir-
 greater rumperative jus er. Diameter. $21 / 2$ dri. thoight. $6^{1 / 2}$ in. Guaro antwo d shelf life. 12 montlis.
2B|2|(6)-List, 45c.
NET,
EACH.
32c


# nveready <br> 680406 

## Radio Batteries

We carry new, fresh stock of this well-known ruake battery ready ulways for immediate shipment. A long-life, hum-free battery ini all sizes and styles to meet every radio need.



Fety.
No.

| List | Not, Each |
| ---: | ---: |
| $\$ 1.50$ | $\$ 0.99$ |
| 1.75 | 1.19 |
| 2.00 | 1.35 |
| 3.75 | 2.60 |
| 1.75 | 1.18 |
| 3.75 | 2.60 |
| 4.75 | 3.29 |
| 5.00 | 3.45 |
| .60 | .39 |
| .50 | .35 |
| .50 | .35 |
| .85 | .65 |



## Pow-R-Fu

## Reliable Batteries at Amazingly Low Prices

Never in the history of Radio has there been such value in " $B$ " Batteries. Another example of how Barawik helps the lyealer to bigger profits!

Pow-R-Ful batteries are moile from the lest matcrials obtainable amd ar subjected to numerous tests at every stage of their manufacture. matuse of a special muli-ply cox helps to protect the batery from external moigture and also lessens the possibilty of leakage of corrosive fluid which might injure furniture or polished flours.
The cells of each battery are incased in a sollid block of insulating material which thoroughly insulates each cell. thereby preventink internal short circuits.
Pow-li-Ful " 13 " and "C" batteries are guaranteed against defective mit terials. fauky workmanshtp. also kuaranteed to give gatisfactory service whers used with standard Ratio apparatus that is in good working condition. Bat teries are all manufactured by automatic machines, using the best materfals obtainable, producing Latterles of extremely unlform quality.

All dow-R-Ful ruodels are made in the upright or vertical style.
No.
KInd of Battery
List
$\$ 4.50$

45 Volt $2 \mathrm{~B} \mid 24-221 / 2$ v. "B" Standard.
2.00

Net Price
$\$ 2.16$
1.65

HE PAY FREIEYT AS PER OFFER GIVEN OH PAGE 3

 R. F. I. Cone Speakers These speakers reproduce the full deep notes of the bass, the dellate modulation of the viohn and the pinno renistically. R. F. I. docs more than reproduce; It recreates the orieinal speech or musle till it seems that you
sturlio.

The blending of a striking derold with red solt brown of the cone and the che bronze of the mountrg make astrikingly beautifll effec

Hangsirom wall suspended by handsome cord. Cone ditmeter 19 fuches. Decorated in blue and silver. An especially beauthful and popular cone speaker Shippling wt., 12 Shs.
2B5116-
List $\$ 16.50$
Net. . $\$ 9.95$

i

Speaker


## Reproduces

 theentire musteal scale with a uniformity of full, rich, pure tones. Cabinet is only $121 / 4$ Beautifully grained walnut finish and a speaker that his unlimited power of reproduction. Shipping wt.. 15 h hs. 2B5118-Rctall, $\$ 22.50$.\$13.23

## Symphonic Globe Speaker



A new and unique design of a speaker. It is a beautiful accurate library glone that should be a part of your home furnishinss -and of your education. By simply ralsing upper half of globe (as shown in smaller illustration) it becomes a speaker of unusual merit. Globe turns freely ot ts axis, is clearly marked, beautifutly colored and can be easily cleaned with at damp cloth. The purity of tone, the perfect reproduction of the full ranke of sound will amaze you. The tone may be modulated oy openink feature found in no other speaker. Comes complete with 20 feet of cord. Shippling wt., 25 lbs.
285177-Retall prlce,
\$35.00.
Your cost....
\$20.58

## The Burns Horn <br> An "Old Reliable" <br> Of generous proportlon, gracefully shaped and de signed along scientifle ines. The flarelsof handsomely handsomely polished black pyraln: practucally unbreakable. Adjustable 181 bs . 2B5101I. ist price, $\$ 22.50$. <br> $\$ 13.23$ <br> 

## The New R. F. I. Disc Speakers

Exceptionally pleasing in tone, covering with excellent vol ume the entire musical scale, these Disc Speakers represent a vilue which we believe is equalled by none

full mellowness of thelow frequencies ls cm phaslzed phasized instrumentru ments as tyebass $\checkmark 1018$ tubas
tympani andthe andedne hotes of the pipe organ.


## Cabinet Style

A handsome matched walnut cabinet combling the best in acoustlical engineering with splendid decorative taste Equipped with the R. F. I. Seml-Balanced Armature Disc Unit. Over all dimensions: Height, 14 Inches; width, 16 inches; depth. 6 inches. Shlpplag wt., 25 lbs.
2B5140-List, $\$ 25.00$. Net, $\$ 15.00$

## Famous UT (~) ars

## Cone

Contains the famous Utah unit, unt ersally accepted as one of the best. Finest cone paper, with protected edge and foished in a tasteful dealgn. A quality cone at a remarkably reasonable price. Helght, $151 / 2$ inches. shipping weight, 8 2B5125-List, $\$ 10.00$. Nat, $\$ 5.88$

## Utah Cabinet Speaker

## Their

 attractive appear-ancetowith'the wonderful cisrity and fidelity in reproduction makes $t h$ tes speakers 8sea
a d head and bove any other type of speaker. The tab
 genuine walnut veneer beautifully fintshed. They are equipped with 9 foot alr column tone chamber and Utah DeLuxe Unit.

Utah No. 100.
285184 - Sl2e 36 inches high, $271 / 2$ inches wide. 17 inches deep. Weight 100 lbs Llst, $\$ 70.00$. Wholesale.
441.16

Utah No 101.
285185-Size 36 inches high, $271 / 3$ nches deep. Made uo tare Velght, 100 lbs. List, $\$ 75.00$. Wholesale.
$\$ 44.10$

## New Utah Super Flex



Tones come out of base instead of top; very mellow and harmonious. Good volume. Height about 9 in. Can be used in many portable sets. Large DeLux 2B5182-List, 588 285182 -List, $\$ 5.88$
$\$ 10.00$. Net. . . . 8.8


2851 28-List, \$22.60.
$\$ 13.23$

- Net


Utah Drum Speaker No. 16
One of the most strikingly beautiful drum speakers made. Fitted with famous Tiah Unit, generally considered the best. Soft brown tialsh. Helght $16 y / 12$ in. width 14 in ., depth 44 in . Shipping wt. 11 lbe.
285183-Retail, $\$ 16.00$. . $\$ 9.40$


## Utah Screen Speaker

Represents beautiful fire place screen. Has horn with 84-inch alr column equlpped with Utah DeLuxe Unitunsurparsed for tonal qualities. Matle from 5-ply American Wainut, besutls Helaht 40 in., width 28 in., depth overall 17 in . Shipping wt., 30 lbe 2B5157-Retall, $\$ 100.00$.
$\$ 58.80$


## Utah No. "30" Cone

Carved with peacock grille design. leep resonant tones. New design. Fery attractive appearance. Natural finlsh walnut. One of the moat beautiful us well as effcient cone speakers ever made. Height, 18 linches. shipping wt., 15 lbs .



## The QUAM Loud Speaker



Employs a new principle-the "stretched reed," just like a human vocal cord. Gives much wider range of accurate tone reproduction-covers the entire musical scale like no other speaker. Free from blasting, matehless in its beautiful re-
creation of the laighest violin tones to the deeaton of the highest violin tones Height, 14 in., width 13 in. Rich bronze finish, with wire net grille. Shipping wt., 11 lbs.



Pacent Cone
The Pacent Cone Speaker is correct from efery en$\begin{array}{llll}\mathrm{g} & 1 & n & e \\ \text { int } & \mathrm{e} & \mathrm{r} \\ \text { stamigo }\end{array}$ with a balanced armature. $17-\ln$. double Coue and specially selected browis grained prepared paper. Rigidly constructed and so diesigned as to take extreme nower amplified signals and yet be sensitive enough to respond to tifully proportioned, presenting a harmonious, blending appearance wherever monious, plending appearance whereser
placed. Plug included. ship. pt., 15 place
$2 \mathrm{Z6} 5 \mathrm{It}$-List price, $\$ 22.50$. $\$ 13.39$ NET

This magnificent speaker is of advanced type, employing new principles of reproduction. The tones are low pitched, soft, round, meloarc low pitched, soft, round, melo-
dious, full and natural regardless of the anount of nolume. The horn, which lhas a tone travel of fulty 54 Inches, is scientifically scaled to produce proper amplification and perfect flow of natural tonal waves. The throat is bell shaped which is recognized by musical authorities as being lical. The Trutone is also a beautiful plece of furniture, chaste in design with dull natural walnut in dexign with dua hatural wainut ture type giant unit. Front is covered with gold cloth mesh. Height, 151/2 inches: widul, 12 inches: depth, $57 / 8$ inches, A sure sale with every demonstration. Shippling wt., 18 Ibs.
2B516I-List, \$25.00. NET..



Entirely new and better! $41 / 2$ Foot Air Column! Reproduces with a faithfulness and fulluess that is a revelation. Fitted with Baldwin balanced armature unit, picks up and amplifies the weakest simat to full and natural strength. Misses nothing from the falntest whisper to an entire oreheatra. Tone chamber is of a new composition substance securely bound Shipuing wt., 20 and 26 lbs .
$286329-13 \cdot$ Inch Drum. $\$ 17.05$ 286330 -i8.1neh Drum. \$2852
List, $\$ 48.50$. NET......... $\$ 28.4$

Equipped with Genuine New-combe-Hawley ORTHO-TYPE 86-Inch Travel Tone Chamber SYMPHONIC CONSOLE
Newcombe-Hawley Reproducers have a nationwide reputation as being the very finest, most hishly developed radio

## The Cantata Console

Large enough top to provide space for almost any table radio set. Anple room for batteries and units. It contains the remarkable 86 inch tone travel New-combe-Erawley chamber with latest nacelled Nor banutiful faltiful revrooxcelled or beautiful, Calthul reprom duction. Helght, 34 in.: width, $361 / 2$
in.: depth, $16 \%$ in. Shipplng wt., 90 in.
ins.
lis
 NET

reproducers made. They are perbans the only radio speakers that the notes of the scale with absolute fidelity. Thls console incorporates tho N-H. 86 fuch tone chamber complete with Balduin C. G. unit. Made from finest walnut in rich antique lacquer finish. Thís for $7 \times 21$ Inch or smaller panel size ratio set with all batteries, ete. Height, $441 / 8$ in. : width, $361 / 2$ in. ; depth, $16 \frac{5}{3}$ in. Shipping wt. 100 lbs.

 (1....................


## ORTHO-TYPE SPEAKER

Beautlful cabinet in authentic Duncan Plufe period design of cholce mahogany in rich Adam brown finish. Houses famous Newcombe-Hawley Orthotype Speaker and powered by Nathaniel Baldwin untt. This wonderful speaker stands in service in our wonderful speaker stands in service in amazes all who hear its ifestore and amazes all who hear its lifeinches; height, 30 inches: depth, is inches. Space beside horn ( 16 inches deep) provides space for batteries, etc. SHIpping wi.. 85 lus.
25 lbs. 73 -List, $\$ 65.00$. NET.
$\$ 3822$


## AMPLION-World's Foremost Speaker Line

Here is perhaps the most clist inctive and beautiful speaker ever made. New process embossed walnut paneling, attrartively curved, combining grillefront and back. Heimht. 22 inches. Cone. $16 \frac{1}{2}$ inches. New balanced armature unit with stralght bar marnets of finest Enclish Tungsten steel. A real masterplece. Shipping wit., 2B5 179 -List, $\$ 67.50 . \$ 39.69$


## AMPLION PATRICIAN Cabinet Speaker

Assembles $n$ remarkable 48-inch alr column, with standard AMPLION unit. In a richly carved mahogany cablnet- 18 in . x 12 in. $x 9$ in.-of softened contours and graceful old-world beauty that harmonize perfectly with modern luxurious home appointments. The Patrician is non-directional; to the famous AMPLION sensitivity and clarity, it brings a new softly diffused mellowness of tone that makes this instrument the cholce of the connoisseur Wherever heurd. shippi $\underset{\text { Net.. }}{2}$

AMPLION Cabinel Cone


The result of newrly two years deliberate, intensive experimentlus. Totally ditterentin appearance. construction and resultsloud. clear. sensitive and renlistic in tone- com = plete in musCase in two-tone mahogany: 14 ln . x 14 n. $\times 9$ In. Shipping uit., 15 lb . $285162-A m p l i o n ~ C o n e . ~$ 520.58

## AMPLION Dragon Speaker

An old-time favorite One of themos efficlent horns over made. Beautiful mahorany paneled bell. $201 / 2 \mathrm{in}$. high diametcr Crystaline enameled. isi-polar type unitatjustable Whipplng
wit. 16 lbs. 285180 List. 542.60. $\$ 24.99$


## AMPLION Lion Model

 volous new Inches dlameter mounted inch sound bonrd including handsome base, $20 \frac{1}{2}$ fnches New bal-
a armature Fililish Tungsten steel. Shipplog wt., $201 \mathrm{ll} \mathrm{S}_{\mathrm{s}}$ 2 Z 5181 -List, 525.00 . \$14.70

## The CELLO Talker



## $\$ 27.50$ Value <br> Amazing Bargain!

Gives the truo orthophonic effect. The combination of splendidily balanced unit with long tone travel chamber and acoustic amplifer gives a powerful reproduction of striking naturalness. The deep low notes of the organ and bass as well us the highest soprano voral notes are faithfulty reproduced. Each and overy instrument in band and orches distinctly. Case is of mahogany in dull rich dark natural finish. Only a fortunate arrangement permits us to offer this $\$ 27.50$ retall value Cello speaker at such an amazingly low price. Shipping wt., 15 lbs .
2B5170-List. \$27.50. Net wholesale...


Buit on the balanced armature principle, it is particularly well adapted for operation with power tubes and wil take higher voltages and maximum aratake higher voltages and maximum anaThe exlae is fully protected
285104 - Nodel 38 Concerto Grand. 285104 -Nodel 38 Concerto Grand Dinmeter Cone. 17 inches. Shipping
Dlam Dlameter Cone. 17 inches. Shlppind
Wit., 14 lus. List, $\$ 16.00$. 2B5 i 19 -niodel 2 s Concerto. Diameter Cone. 14 inrhes. shipping wit. 11 lbs. List. $\$ 10.00$.
\$5.88

## Concert

 Model 80For clearness. diatinetiveness and perfect harmonious blending of tonal values, Trimm Cuntert has never been suryassed. Adjustment controls tone and 22 juches hich. 15 minch bell. Trimm No. 30 Ginnt Unit. Finished in Black. Slifp. vrt.. 12 lbs.
$285106-L i s t, \$ 25.00$.
\$14.70

## Model 90

Extra large daphragm, fuil range of tone with fidellty and oenuty. Stan ls has is inch bell has 12 inch bell and Trimm adJustment feature for tone and vol-
ume. Shipplng ume. Shipp
wt. 10 hs.
$285107-$

## $285107-$

 Lif t price,$\$ 17.60$. Net cost
Your Net cost
$\mathbf{\$ 1 0 . 2 9}$
 Entettainer



## Balsa Wood Reproducer Make It Yourself

Nature's Sounding Board. The most dical development in loud speakers-one if the finest reproducers of volce and nedium is made of a thin board of Late 3alsa Wood-a product pecularly adapted 3alsa wood-a product peculiarly adapted
o thls purpose. Its natural period of ifibratlon Is negligible which means that only he fundamaental wave train is reproduce t so perfect in this respert other speaker s so perfect in this respert. It reproduces
requencles lower and higher than are sudille requencles lower and higher than are audible o the human ear. All purts except nnit re meluded in kit. Ansemhly is eisy. urface can be decoraterl if devirel. 'ian le hung on wall, used as a screen, etc lhipping wt., 5 lbs.
:B5163-13x24 inrhes, I.list. 8.00 Net.
:B5 164-21x36 Inches.
!B5 166-Baluheed armatur
$\$ 5.10$
\$6.37
nit. List, $\$ 8.00$. Net.
\$5.10
suild It

## ENSCO

 four self nd full instructions included brackets uild. Shipplug wt., 5 lbs. B6328-List, $\$ 11.00$. Ne
## 3-Foot Cone

## Build It Yourself

Outfit consists of two glieets Alhampaper palr
Raper, pair Back Spectal Ambrold Cement and Peno Cone Speaker Unlt with necessary boits and washers. Thls unlt ts of a boits and washers. This unit ts of a most ade tanced, periected type, any set output. Extremely justable zo any set output. Extremely
sensitive and of unusual power. With the complete instructlons, it is easy to bulld. Endorsed by such distinguished technical editors as Cockaday. Gurney, IIurd, Casey and others. Shipping wt., 5 lbs.
2B5155-Outfit com- $\$ 8.22$


Smootb beaded circular trame, 22 Inchea in diameter, finished in hundrutbed Jawper brown mahogany, frmply holds the correctly designed sounding board. The famous stevens Armature l:nit. assister by a hlyh quality output transformier, constitutes the electrical equipment of thls sueaker. Nilik pleture ford with rosette und tasgel. Also long ittachment cord shippins wit 18 lbs $2 \mathrm{VE} 575-1 \mathrm{dst}, \$ 45.00$. \$26.46

## Thorola New Model Cone

## Protected Dual Diaphragm



The low ones resuluate clearly from the flat surlace of the diaphragm: the center cone reproduces the himb and middle tones with marvelous purity and distinction. Here is a cual sound wave. Gives the finest radiu ever kñown with cone speakers. The graceful krille with Florentine surfuce charms and resta the eye. A beautiful work of art harmonlzes with any purnishings. Rich walnut and old gold finish. Shlpping wt. 16 lbs.



## TIMMONS Eccentric Cone

This speaker utilizes to the fullest ex. tent, the lifgh power outjut of modern receirers. Si•ientifically correct in shape and principle, for the natural undistorted reproduction of the entire range of tone frequenctes, it will liandle the maximun output of any receiver inclefinitely. At tractirely decurated. Oterall-size is 285 $2 \pm i z$ inches. This one moncl is atlaptable for elther table or wall with no addethonal equipment. Shipping weight. 15 ,


## Temple Comparator

Invaluable for demonstratIng Loud Speakers, comparatively. ky turis of knou it switchles from one horn to anno incy a note, thus

a note, thus ustin comparative tone in a definite practical manner. Capacity four speakers. About $3 \frac{1,2}{2}$ inches high and in diameter. Shipping weirit, 802. 282553-List, \$3.50.
NET, EACH
$\$ 2.06$

## Victor Horn

A beautiful loud speaker in the $n \in W$ speaker in the ne $\begin{aligned} & \text { n } \\ & \text { crackled } \\ & \text { finish. Extra }\end{aligned}$ large slize, adjustable unit. Gives rolume and
tone equal to tone equal to many speak-
ers sclilm at double the jorice. Bell 1a meter, $131 / 2$ inches Height,

## In

2B5146-

| Retall |
| :--- |
| $\$ 20,00$ |
|  |

NET.. \$6,95
2B5152Smaller size, retall value
$\$ 12.50$ $\$ 12.50$.
$\$ 5.65$


## Genuine BALDWIN Speakers

385129-Con. cert Standard modol. List $\$ 25.00$.
\$14.70 ЗЕТБі 30 - Con. cert Grand. List,
$\$ 35.00$. NET inini $\$ 20.58$ . weloht. 10 Ius. One of the fincst speakers made. Rullt on a patented urincipipe whice inures
 chattering. fompositiou.


King of the cones. A large, full size, 18 -inch cone. with free eiges, creates unusual rolume witli absolute fldelity of usual rolume wtit absolute fidelity of reproduction. Recisters the deep, round
notes of the bass in perfect proportion to notes of the bass in perfect proportion to
the luglier notes. in instrument or voice. No more rain barrel effect on voice re* production. Clear, natural, 1 ull—the ideal cone for broadcast recention. Beautiful. Can be set on table or huthg on wall.
2B5156-List, $\$ 12.50$.
NET
$\$ 6.95$


## The New R. F. I.

 Cone SpeakersThe new R. F. I. Cone Speakers represent the inal development in cone speakers. The data from years of research has been consolldated into the tesign of these fine sueakers. Their reproduction is truly something to marrel about. Nut all of the fine qualt thes $h$ ite beun concentrated in the unit. The cone itself is berutifully designed and will mateh the finest surroundings. The cone is of the free edige type bound to another cone which forms the back of the sueaker. The cone is of the proper desistl and projortions to repruduce the jerfect vibrallons arising in tho unlt. All notes are reproduced with the same fldelity giring rich, warn and lifelike tones. To aili in naking the speaker fit all To aid in naking the speaker fit all means of a small knurled screw at the back. Mounted on bearatiful cast bronze base.

L'se one of these cones on your old set and make a new one of it or use it with yuur new set and make it still better. Wlll increase the value and enjoyment from any radio set. A speaker which you may truly be proud 2 26486-20 Inch R. F. I. Cone Speaker. List, \$18.50.
 Speaker. List, \$12.50. \$7,38

## Claravox Speaker

one of the finest cones made. Clear rich, full reproduction as you have never Accepts extra oltage of nower tube operation without distortion. out distortion. mulasting. Orerall height.
 Orerall height, CEARATOX $191 / 2$ in. diameter, $161 / 2$ in. glack and gold crackle flinish. Shipping weight, 10 lbs.
2B5096-List, \$35.00.
NET
$\$ 20.75$

## Make Old Console Receivers Up to Date With this Barawik Special Console Cone <br> The ideal cone for building into console and an amaz－

 ing value at this special Barawik price．Made especially for us by the world＇s most famous speaker manufacturer． This fine speaker incorporates many pew reflnements Al－ though compact it produces tremendous volume ind ive igrge powerral periected ual hanuly all the poing 1t．The reproduction is delightiuly smooth．veing bo balanced as to glve fullest value to the low frequencie as well as the hlgh．Has 10 －inch Burtex Cone with bound free edge thoroughly protected by the mounting board．Both cone and unit are securely ancbored to hiss board．making a most rugged construction．Dimensions overall： $12 \times 13$ in．；depth， 7 in ．Adjustment wing nut on back．

This wonderful cone will be a revelation to those who now have indif＇erent siveakers in their consoles．Most consoles make a splendid a right console cone speaker and this monel Nill operate jersing brackets．Shipping wit pleto
8 lbs
2B5 198 －List，$\$ 12.00$ ．NET．EACH


## Barawik Special Moulded Horns

The material used is a pecial fiber that is practlcally vibrationleas and is very durable．Arranged to take practically all standard units，Nicely finished． Mechanical Construction－All horns are uniform，light in welght，will withstand 11 ordnary abuse without damage，pleasing in appearance，easily mounted，interior of horn smooth，long air column in compact design．

Acoustically－All horns dive uniform performance，deslaned on an exponential arye advocated by acoustic experts．are built not only to take low notes but bigh notes as well kith gll orpriones．Fich Individual noti la clearly and distinctly amplified．There is an entire ainsence of muffed or jumbled tones，There is nu distortion．Tones are smooth and round，covering the complete true musical ranise．
Superphonic Horn Type A．S．


This horn is de－ simned to rive the
tcnal reproduction qualittes of the new＂orthophonic
tyive．it ean be limeit plthor with ： radio set or phono－ gambl and repro－ duces faithfully the entire audilile scible of tones with a swrity rarely at． tained．For or chestra music and
singing it is su－ perior to all other types
382 \＆ $50-80$－inch air column．overall size， 12 inches round， 10 \＆ 8 \＆ $382|5|-84$－inch air column．Overat size．I4 inches round，io \＄7．95 incemes deep．EACH．

## Compact Ortho－Type

While very

compact it hat lonk air column． G1res astonisi－ cxitllent tone exuylity．A 1, colum，${ }_{10} \mathrm{in}$ round．Depth， 8 inches．Depth，

2 E2 152
$\$ 3.95$
3.95

## Compact Cabinet Horn

A very compact horn designed es peoinlly for use in standard size cah－ inets．Required nanel space only 7 inches wide and ？ Inches high with clepth of butt $\delta^{1 / 2}$ inches Miade of Indestruetible flher． Tabes practically all standard units． Acoustically cor－ rect and delivers
 pure full iones 3B2250－ EACH

Giant Ortho－Type O．B．
A very popular horn for this sea－
an．Exactly same an．Exactly same as used in speak． selling un to \＄201． The bighnes dinvel yment yet at． tained in musleal reproduction
$385193-A$ ir column， 96 Inches． Dept $181 /$ inches．
KACH,

## $\$ 10.58$

$3 B 5194$－Air column， 92 inches． Depth， $131 / 2$ Inches．
EACH............


Bell， $18 \times 18$ inches 43.01 BBI $95-A i r$ column 84 inches．Boll 4x2l inches．Depth， 14
\＄7．30

## Console Symphonic

Designed especially


High Boy Model Horn

This horn
acoustically and
It delivers pure full tones
It delivers pure full tones
without distortion or vilra－
Without Intended especially for use in consoles and cablnet speakers．Bell size 5 Inches wide． 12 inches long．Heitht orerall， 14 Inches Made of lons grain wood fiber．Prac－ ticalls Indestructible．Metal ferrule fits practicalls any etandard unit．$\$ 2.85$

Console Grand Concentrated Cone
 filter a in dada
special metal sound clamuber，it reproduces the human volce and all musical instruments nat－ trally and clearly．Very sengitive，its unform action reaches from full rolumo to a whisper．Free from inherent pitch， there is no＂rain barrel＂or twammy nasal tonal effects．Mounting front SxS inclies； depth oqerall only $51 / 2$ Inches．Sbipulug 2BB｜BS—LIst，\＄35．00． $\$ 14.75$ NE＇T，EACH
$\$ 11.75$
2B5154—List，$\$ 30.00$ ．
NET，EACH

## Low Boy Model Horn



A very compact horn requiring space only 13 inches wide． 6 inches bigh and i）Inches deep Fery strons and curable Made of moulded ther．Has excellent tone quality．Fitting takes moxt stadiard makes of units，Can be used in calinets or consoles．
3B2550－NET，EACH．．．． 4.45

## Snail Shell Loud Speaker

For use in．
slule of cani． net or console． One of the finest repro． ducers on tle market．Iset
a $s$ ntandurd equipment 011 spuakers stel lny at $\$ 25.00$. essed wood flber weatly
 thished in duces wondelful deep，rich tones．Re－ quires space of $71 / \mathrm{m}$ inches high， 11 inches whe． 8 inclus deep．
3 B2 $450-W$ ithout Unit．．．．． ${ }^{382451-\text { With Baldwin } \quad 6.95}$
${ }_{\text {Rnnal }}$ Unit

## Speaker Tube

 mits of best results with specially built woiden horns．Length． 7 in No unit 3B2153－EACH

We Pay Freight on orders for $\$ 50$ or More－See Page 3．

# Improve Any Speaker With These Wonderful New Tone Filters 

## Muter Clarifier and Tone Filter

# Sterling Tone Filter 



Eliminates tube noises a $n$ d improves tone quality of speaker when connected between radio set and speaker. Absolutely prevents overload of direct current from 1 ining speaker. The high voltages now delivered from "B" ellminators make it necessary to protect the radio loud spenker from damage. Attach in two minutes-lasts forever. 3B778-List, s5.00. Net, \$2.94

## Amsco Orthophone

Placed between any loud speaker and set. will greatly 1 m prove recep-
tion. It ellmmates t h e direct plate current from speaker wind-
ings, thereby increasing volume, yet ings, thereby incroasing volume, yet
preventing distortion. It increnses frequency range of speaker, especially bringing out iull rounduess of lower frequencles. Attached in hait minute. Case is $45 / 8 \times 21 / 2 \mathrm{x}$ 23 inches brown crystal finish. $\$ 3.48$
$385190-L i s t, ~ \$ 6.00$. Net. 4.4


Easily attached in a few seconds without disturbing set. Improves tone, quallity and volume by protecting speaker colls from hlgh B voltage and preventing paralyzation oit apeaker unit. Enflnished enameled contalner $W 1 t h$ nlekeled binding phone cord. Size 4 in. bigh, 3yin. iong, 2 5/8 in wide.
3B779-List, \$5.00.
Net....................... $\rightarrow$ * $* 4$


Frost Headsets


Known for years for their splendid quality. Fully guaranteed.
28721 -Frost 174. 2000 ohm headset. Aluminum shell. List. s3.00.
Net.. $28720-$ Frost 175 , 3000 ohm headset. Aluminum shell.
I Ist. $\mathbf{\$ 3 . 5 0 .}$
INst.
2B719-7rost i72, 3200 ohm neadset. Bakelite shell. List, $\$ 6.00$. \$3. 53
Net............................... 3.

## Sprague Tone Control

Anentirely new principle of tone and volum。 modulation. Glves tone flexibility to set and speaker and greater Volume. Absoribs static and tube possible full bene fits of the new
 power tube by matching its lmpedance to the speaker. No changes in set wiring are necessary.
$382045-L i s t ~ p r i c e, ~ \$ 3.60 ~$
each. Net...................... 2.10

## Phone and Speaker Cord

Fine quality cords designed for long gervice. Covered with firm glossy black brald.
3 B737-5-foot double cord. Spade tips Lise end, stralght tips on other. Net................ List, 55c. Net..
$38738-5-100 t$ double cord. . Straisht tips on both ends. List, 65c. 30 C $38739-5$-ioot single cord. . . . straight tips on both ends. List, 36e. 21 .

## Cord Tips



| 2B726 <br> Standard | 2B727 <br> Sist, <br> 20. |
| :---: | :---: |
| Leparable |  | List, 20.

Doz.


35c List, 60 55 c

## Phone Cushions

 28736 -List, 60 e .$\qquad$
Net ............... 33 er Made of soft
Fits any phones.

## Extension Cord Sets



Complete with cord and connector. Loud speaker can be moved any distance away without moving set.

List, each Net

| $38781-20 \mathrm{ft}$ | $\$ 1.00$ | $\$ 0.54$ |
| :--- | :--- | ---: |
| $38782-30 \mathrm{ft}$ | 1.40 | 1.84 |
| $38784-50 \mathrm{ft}$. | 2.20 |  |

## Extension Cords

Extension cords only. Without plug or extender jack. Allows extension of head set or loud speaker.
381538-10-ft. Each
38
38
381
3


## Extension Connector

3B1521-...21C
Connects speaker cord with extension cord so speaker can be from set.

## Carter Flat Plug

Provides quick means for inserting and removing cord tips. Tips completely concealed.
3B1513-List, 76c.
Net.


Net............


## De Jur Plug

The cord
tips are firmly
clutched an d

nickeled stem assures a good contact with the fack. Has all the features of a serviceable plug. It is a real value. $381508-$ Net, each................. 15 5

## Great Head Set Offer

## Unusual Value

Here is a headset known to reproduce radio broadcast absolutely true and clear. Actually equal in tone and volume to many Well known brands that sell at much hlgher prices. Recelver cases and caps are fine polished finish. Covered head bands, easily adjusted to comfortably fit the head. Only high grade materials used. You Will be well pleased with their performance. Complete with 5 -foot cord. 3 B717-List price, s4.00.
NB7, 1 -List price, $\$ 4.00$.
Net price. . .


E-Z Improved Radio Plug

Cord is easily and quickly connected. Ttps cannot pall out yet can be removed In instant. Fine polished black moulded grip. 3Bi512-List, 360. Net.

21c

## Pacent Auto Plug

A press on the buttons at sldes instantly releases cord, yet no amount of pulling will
release cord unless but-
tons are pressed. Attractive bakelite shell with nickeled stem. No chance for shock 381507 -List, 60c. Net.

35 C
Frost Plug


An automatic plug that EIT holds two sets of cords. Cords snapinto place and can
belnstantly released by a press on the hutton release.
3B1514-List, 76c. Net.
45

## Duplex TwoCord Plug



Unbreakable fler barrel; black satin finish. Accurately fitting metyl parts. Takes two sets of cords. 3 B 1569 -List, 60 c . Net

30 c

## Multiple Plug

Fits any standard jack. Takes number of phones and speakers to four. Cords attached by Inserting tips into slots. 3B1516 Each....56c ,
$\qquad$

NET
$\$ 130$
3B1569-List, 60a. Net.........30C



## New R. F. I. Super Power Loudspeaker Unit

The R. F. I. people ware pioneers in fine unit construction. Fears of test and experiment and thousands of dollars were spent to perfect this wondedful unlt which would perfectly lit the rtemanuls of faultiess radio reproduction under all conditions. It is truly a scientlically correct device-the product of the study and work of acoustical, elpetrical and radio enfineers, Extremely sensitive, it reproduces with uncanny faithfulnegs all the frequencies encountered in music and speech. Yet it is 80 perfectly halanced that no point in the seale is elther sligbted or farored. The result, therefore, is that this unit is readily adaptable to any type of speaker or reproducing derice and its performance a marvel in uniformity. There is nositively no distortion at any points but a liquid, sweet, nafural flow of the radio broadcast that is $g$ delight to even the most critical listener. for use with power tutes and speedal amplifiers. it excels all others. It will carry more volume, without hint of distartion. than any unit of which wo know. Eren tho largest power get will not break it down. It will hanile up to 700 volts without danger of turn out. The magnets are of tungsten steel. The entire unft is rustpronf and tightly sealed. Will give lifelong service in any atmosphere-eren in salt air.

Shipping weight. 3 lbs .
236490 -List. $\$ 6,00$. NET
\$324


The Poly-Claro Plug out bass and high tones. Adds body letail and deinition to the tone. i9P
$2 \mathrm{~B} 259-L i s t, \$ 1.50$. NET...

## Central Modulator Plus

Bakelite base and knob. Shipplng wt. 282538 -For sets with jacks.


## Baldwin Rival Unit

Although fower In price, this splendld unit has all the quality of construction and fine repraducing qualities which distinguish the famous Baldwin line. Ideal for all console horns. Nipple is $\%$ in. long, $7 / 9$ in. diameter and has threads per
ping wt. 1
$1 b$
282554 -List, $\$ 7.00$. NET EACH




## Adjustable Unit

Floating armature typo, xtra large permanent magnet of fine F rade magnet steel. Long cord With phone tips. shippling wit. 134 lhs.


## Utah Units

 Long famed for thetr erfect yerformance in all types of horns and reproducers. ExtremeIy sensitise, yet powerful, covering the entformity a a d fidelits that is a delikht 10 the most critical. Poltshed aluminum shetl complefely seals magnets and arnmature Standard nipples 5 foot, cord with tivs. List 550 NET KACH 2B2563-Utah "KingDeLuxe." List, \$8.50. NET.. 4.99

## Balanced Armature Unif

New and Improved method of balancing armature so as to cover complete tone r ange withour adjustment. Large magnets of finest Spol allo pheor contcal diaphragm, conical and ribbed. Aluminum case. Threads $7 / 8 \mathrm{O}$ D.i 18 thread stand-
 ard Cord with tips. Shpge wt. 2 lbs 282559 -List, $\$ 5.00$. $\qquad$ \$2.55 NET, EACH.

## Cone Unit

## Floating armature

 type. Latwe permanent fine steel magnets. Spectal conical alloy diaphragm. Strong. rigid con-struction-will withstand hard usage and great voluine. Gives unlform, perfect re- production over the entirs range of tohe. long cord with tips.
2B2E61-List. \$5.00.
$\$ 3.00$
Nep i’age lO6 for Wiostern Eieutrie l'nit.

## Ekko Phonograph Adapters

 Four styles to fit $98 \%$ of all phonographs, shipping wit. 6 oz. Ekko Connector No. 1-Tu cunnect for EAlson phonograph.$2 \mathrm{B729}$-No. 1. 2B729-No. ${ }^{1}$

176


Connector No. 3, for Columhis. Pathe, Vocallun and those having Jewell (cld style) tone arns.
$28730-N o .3$.
List, 20c NET.......... (45
Connector No. 4. for Brunswirk. List 30c NET

206

## List. 30c. NET.

5, for Blandtn,
Conneetor No. 5, for blandin,
Klmball, Orthophomic Victrola and Brunswick Prismatone phonorraphs.
$28732-N o .5$.
List, 25c. NET,

## Phonograph Units Ampilon Uniles

The unlt that has made the Amplion Speaker ?umous ly of-
fired for phonofered for phonoa ole speaker use. linsurransed ofr pine wrering the on tire musical acale with fatthPul and it 11 rounded reproducticn. The hasses and undertones, as well as the truble are perfectly roproluced. Shiphnis Welcht. 2 lis. 2B2552-List, \$12.00. ©T.05


Utah Unit
The extra large
Utah unit, the same as used in the renowned Utah sjuakers. T la o diaghragu is corrugated and luntanced and the extra large makmet able it to repruduce the entire musical scale with fidelity and volume. Furnisheti with base as illustrated.
28807 -List price, $\$ 10.00$. \$5.88


## Raldwin Phono

 Make a loud speaker of your phonopraph. Attach to tone arm of phonoarapli, in palace of a reproducer. Hit Vietor, Nohora, Sllvertone an a other phonographs having same slze then arm. Fit other phonographs with adil of adapters sbown $28805-$ Shipping weipht. 2 lbs. 2B805-Baldwin Phono. List. \$9.00. NET.$\$ 4.71$

## Dulce-Tone

## Radio Phonograph Speaker

Place phonograph needle in DuletTone's grooved reer and plus into railio sot. No spectal connections needelt, yets power direet from "B" battery circuit and is used same as ear phones or II 11 sensrate rucom from
set if
desluxd. AdJustable for
volume. For all makes of phonographs.
Praduces a clear. rich tone using the phonugraph sound chanhers. 5 -foot curd incluuled. Shipping weight, 2 llus. 2B810-List, $\$ 10.00$. NET

# Coutpon radio <br> SONATRONTUBES 

## For Distance and Volume Type 200-A Power Detector

Forgreater volume, for distant stations, use this Power Detector in the cletertor socket, only. of storage battery sets. No rewiring is necessary on either old or new sets. Fil. volts 5 ; Fil amps. .25: Plate volts (min.) $22 \frac{1}{2} ;$ Plate volts (max.) 45 .
28908 - List ,
$\$ 4.00$.
${ }_{\text {ca }}^{\text {s.int. }}$. $\$ 1.95$
We Pay Freight-See Page 3

| Typower Amplifier | Type 171-A Amplifier |
| :---: | :---: |
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|  | thls tube ily |
| with he |  |
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| drid |  |
| ${ }_{\text {kith }}$ | tin |
|  | same sperin |
| $2 \mathrm{2B9}$ | 289 |
| Net: d2.20 | S2 |



Type 112-A

## Power Amp/fier

The adapter base of this tube provides eonnections for adding addltional B and (; voltage to your set withit can be used as a Power Amplifier. volume greater distance. volits 5 : 1 rll. amps. 5 : plate volts 22.5 to 1.57: "C" Batto 10.5 .
$2 B 913-$
Net, 5245

Type 210 Osc/l/ator and Ampl/fier

## llecom

 mended for heavyduty loud speakers, with plate voltages ranging up to 425 volts. Can be used for amateur transmission. As Amplifier; Fil. volts, 6 to 7.5; Fil. amps. 1.25; Platevolts (max,) 425; Neg. "C" battery 4.5 to $3 \overline{\text { an }}$. As Oseillator: Fil. volts 7.5; Fil. amps. 1.25; Plite amps. $06 ;$ Plate volts 350 .


## DRY CELL TUBES



## The New A-C Tubes

Type 225 A-C
Acts as a R. F. amplilier, detector, A. F. anlpllfer and osclilator. Fil. voltage 3: Fil. amps. 1.05; Plate voltage 12 to 135 : "C" voltage 3 to 9 281028 LLst, $\$ 5.00$

Type X-226 A-C Amplifier
For use in radio or trans. coupled A. $1^{2}$ amplitication. Should not be used In detector or last audio. amps. 1.05 ; plate voltage ${ }_{90} \mathrm{am}_{10} 1 \times 0 \mathrm{D}-\mathrm{C}$. 2B 1029 -List, $\$ 3.00$

## Type Y-227 A-C

## Datector and

 Amplifier(Fits new 5 prong socket only.) May be used as detector or audio and R. F. Heater voltage 2.5; heater amperes 1.4 S ; plate voltare 281030 . C


2B1030- Net. \$3_45


Type199 AmpIIfier and Detector
 amps $06: \quad$ Plate
voltage $22 \%$ to $90:$ "C". Battery volts 1.5 to 4.5 . Short prongs.
$281003-1.18 t$ Type X-199 This type of tube has the same spectbut it has the new base (long prongs) 2B1004-1.1st
$\$ 2.25$
et, each....\$1.10
Type 199-A
Power Amplifier Identleal sjuedilcttions as Type 109. but equipped with the standard base. $\$ 2.25$.

# Buy SONATRON Tubes in Matched Sets <br> <br> The Right Way to Purchase Tubes 

 <br> <br> The Right Way to Purchase Tubes}

Every tubs matched on meter board, according to mutual conductance. This is a guarantee that a set will give better results and show better tone quality.

Neutrodyne, tuned radio frecuency and superlets need matelied tubes for perfect operation and for volume on distance.

Use SONATION Matehed Tubes for demonstrating sets because of tone quality and volunie. Cnmatched tubes cause many sets to tune very broad.

## 5 TUBE COMBINATIONS

Combination S-I-For New Sets 3X-201-A Amplifier Tubes; 1 200-A Power Detector; 171 Power Amp. with Standard Base.


## Combination S-2-For Old Sets

3X-201-A Amplifier Tubes; 1 200-1 Power Detector; 1 171-A Iower Amplifier with Adapter Base; no rewiring necessary


## 6 TUBE COMBINATIONS

Combination S-3-For New Sets
4 X-201-A Amplifler Tubes; 1 200-A Power Detector; 1 171

Power Amp. with Standard Base. 2B!009—Complete. List ©TGTG
Value. Si5.50. NET....

## Combination S-4-For Old Sets

4 X-201-A Anyplffer Tubes; 1 200-A. Power Detector; 1 171-A Power Amplifier with Adapter Base; no rewiring necessary.
$2 B 955-C o m p l e t e . ~ L i s t ~$
Value. 516.00 . NET.... 11

## 7 TUBE COMBINATIONS

Combination S-6-For New Sets 5 X-201-A Amplifter Tubes; 1 200-A Iower Detector; 1171 Power Amp, with Standard Base. 2BIOI2-Complete. List $8: 89$
Value. $\$ 17.25$. NET....


Combination S-6-For Old Sets
5 X-201-A Amplifier Tubes; 1 200-A Power Detector; 1 171-A Power Amplifier with Adapter Base; no rewiring necessary. 2B957-Complete. Value, $\$ 17.75$. NET.... 898

## 8 TUBE COMBINATIONS

Combination S-7-For New Sets
G X-201-A Anplifier Tubes; 1 200-A Power Detector; 1 171 Power Amp. with Standurd Base. $2 B i 036-C o m p l e t e . ~ L i s t ~$
Value, $\$ 19.00$. NET....

Combination S-8-For Old Sats
6 X-201-A Amplifier Tubes; 1 200-A Power Detector; 1 171-1 Power Amplifier witl Adapter Base; no rewiring necessars



So remarkable is the tone quality and volume of this Amplitter that aftur sulling several thousand-we dreibled to offer a real "money-back suarantec"- if sou are not satisiled with the somatron Amplither. This "harantee is fubes are not burnued onst or Aniplitier broken when rereived by us. We also gharantee tone equal to a syno.0f set. The Ampllifer will hot ehange the thating of any set $\rightarrow-\infty$ ant the volume and tone. An opnortunity to brime old sets up to flate at smane. An opportunity to brimp old moulded bakelle. Very best grade resistors ailld condensers used.

THREE AUDIO STAGES RESISTANCE COUPLED $28950-C o m p l e t e ~ w i t h ~ t h r e e ~$
6
2
2 volt rubes.


## Hi-Mu 6 Volt Tubes

The newest, and best in power amplitication for resistance or inipedarice coupled sets.
or inmedarice colupled sets. stage excent last).
2R9 15-MU-X-20 (any stage except last).
2 B9 © $6-M U-X-6$ (for last or output stage).J
List, $\$ 4.00$. NET.
set of 3 in sperial Display Box.
2B926-List value. $\$ 12.00$.
NET. BOX.
HI-Mu Dry Cell Tubes
$28917-1 \mathrm{IC}^{*}-2-2 y$ tiaj stige except last) 289|8-MI-N-19 (any stiage excejt lust). $28919-31-\lambda-0$ (for last or mitput stanc) List, $\$ 4.00$. NET.
28994 Set of 3 in Snuedal Display Box.
2B924-List Value, $\$ 12.00$.
NET, BOX..
$\$ 2.00$ $\$ 6.00$
$\$ 6.00$



## Were $\$ 1.75$ Now Only 400

201A Type Your Net Cost

The Continental Tube is of standard quality and standard mete test and fuily guaranted-volume production makes this price possible The greatest and most sensational price reduction ever offered Wgh quallty standarit meter test guaranteed radio tubes. No job If or old style base tubes but genuine Continental tubes, "firsts" of th very best grade. Increased production and large volume business en ahles us to offer Continental quallty tubes at the now established stand ard retall price of only $\$ 1.00$ for the 201 A type.

Nerer before has a standard quality radio tube been offered at thit low price. Each tube packed in individual hox, carefully tested un unconditionally guaranteed. The 201 A type shows an emission read firg of $55-60$ at 45 volts or $65-70$ at 90 Folts and in the 199 type reading of 20-25. That's real qualits! Other types are of correspond Ingly good performance.

Continental Tubes are guaranteed by the maker to be equal in ever respect to most tubes selling for much higher prices. These tubes be quickly and stay sold. The best engineering skill, experience an knowledge gained from years of specialiation are incorporated in thei manufacture.

Every Continental Tube is absolutely guaranteed against all defert -no argunients-no reservations. Defective tubes are replaced whou charge.

Note: Don't class the Continental Tube with the ordinary dolla tuhe which is usually a factory second or reject. Continental Tube are a distinctly quality product.

## Look at These New Low Prices

| Article Number | Type | Retall Price | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 28850 28866 28852 28853 28854 | $\begin{aligned} & 201 \mathrm{~A} \\ & 199 \\ & 200 \mathrm{~A} \\ & 171 \\ & 112 \\ & \hline \end{aligned}$ | $\begin{array}{r} \$ 1.00 \\ 1.25 \\ 22.50 \\ 2.50 \\ 2.50 \end{array}$ |  |

## $\mathbb{C a n t e r t}$ 鳰agtry

## Copper

 Shielded
## Radio Tubes

## No Howls, Squeals or Micro-

 phone NoisesThey are new! Clearer, stronger volume! A completely shifided tube in a nure copper case. This insures sharper tuning. greater clarity. Increased volume and distance, and ad ded protection against handing and breakage. The agatnst handing and breakage.
silicld being grounded to the negative " $A$ " torminal gives complete elimination of stray capacities, sharper tuning. and saves "A" battery curtent. The interior soft cushion, with no period of vibration, makes thls tube practically air-suspended and definitely eliminates squeals, howls. and definiteiy eiminates squeais, how of and microphonic noises. Master Shielded Tubes are a necessity. They improve any set.

Concert Master Tubes are thoroughly and rigidly constructed. They contain a thorium impremated fllament, enabling their withstanding re-activation any time loss of efficlency 18 gighted.

Concert Master Tubes, to be passed as perfect. must show an emission reading In the 201-A type of $55-60$ at 45 volts or 65-70 at 90 volts and the 199 20-25 and together with their other fine characterlatics Concert Master Tubes will insure perfect performance orer a longer period than the average radio tubo.

period than the averace radio tube.
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## D GENUINE Rectifier Raytheon Tubes

The Raytheon tube has revolutionized the 8 -eliminator.

Long life. No filament. Greater economy and reserve power enough to run a 10 -tube set. Uninterrupted service. No liquids. So developed that a single tube utilizes b
of the alternating current for rectifiction. A dependable rectifying tube-the talk of the radio world.


No. Type Output List Net $2 \mathrm{B6507} \quad \mathrm{~B} \quad 60 \mathrm{Mils} . \$ 4.50 \mathrm{\$ 2.65}$ 2 B 331 BH 125 mils. $4.50 \quad 2.65$

## Raytheon Rectifying Cartridge

Type A. Compact, simple, reliable. Contains no liquid or filaments. Most efficient for battory chargers or A power units. Low operating cost. Guaranteed for 750 hours' service. Rating $21 / 2 \mathrm{amps}$.
2B6509-List, $\$ 4.50$. NET........ $\$ 2.65$


## Q. R. S. Rectifying Tubes

Full wave gaseous rectifier tubes that serve efficiently for all " $B$ " Eliminators. 2B65 I I-85 MIlliamp. List, $\$ 4.50$. NET....... $\qquad$ $\$ 2.65$
2B6512-400 Milliamp.
List, \$7.00. NET.
4.12

## Na-Ald Power Tube Adapters "Connectoralds" <br>  <br> Permit the use of the new power tubes in any set without alteration of wiring. Two "B" and two "C' battery leads are provided so that the sdi- tonal B and $C$ batteries are connected in the dlrtonal B and <br> $38828-\mathrm{Na}$-Aid No. 120-Adapts UX120 and simliar tubes to standard base sockets. List, $\$ 1.25$. NET. <br> 81 c <br> $3 B 829-N a-A l d$ No. 112 . Permits use of UXI12. t'x171 and similar power tubes in standard 98 E sets. List, $\$ 1.50$. NET. <br> Tube Adapters <br> 3B8 14-To adapt UV199 or C299 tubes to 280 standard base sockets. NET.. 3B8I5-To adapt WD11 or C11 tubes to standard base sockets. NET... 3B8 16 -To adapt UX199 tubes to standard ITE base sockets. NET........................................... $42 c$ <br> 

## Quietron Tube Cap



The Dyal Quistron is a dome of nickered brass. slotted and fitted with felt washers to give it a firm grip of the tube. Simply place a Quietron on any ringling, howling detector or amplifier. and the noise stops at once. How? In the weight of the Qufetron. Microphonic noises are started by mechanical vibratons which shake the tube. The Dyal Qutetron so weights the top of the tube that it does not-cannot vibrate in response to outside 11.fluences. Simple-nothing to wear out or hreak-has no electrical function or effect-handsome-and remarkably low priced. 33 ? 2 B8i7 -List Price, 50e. NET...

## McDonald Howl Arrester STOPS THE HOWLS

Here is a positive remedy for one of the biggest litthe annoyances of the radio industry -that nervewracking howling of tubes caused by microphionic niorations!
See that rubber jacket about to descend on the "howler"? Once this "howl absorber" slips over a tube the howl stops for once and all.
No more ruIned reception. The thick shield of use rubber effectually saks up the troublo-making vibration.
it comes in sizes to fit every size tube. 2B842-For 201A size tubes.
2B843-For 199 size tubes. Retail price, asch. 750. YOUR NET COST, EACH..


## CARTER Adapters

Carter adapters are in general use and provide a simple means for using tho now tubes in many of the older receivers.


## Type 3A Adapter

For adapting $U X$ and $C X$ tubes for W.D. 11 sockets. List, 50c. 3B65 I 4 -NET

30c

## Type UX2 Adapter

For adapting UXI99, UX201A or any TV X tulle to old style LV199 type socket. List, 75 c . 3B65i5-NET.

450

## Type 171 Adapter

For adapting UXII2 or UXI7I power tubes old type 201a or navy type base. Furnished with leads to provide additional! $B$ and $C$ voltage to power tubes without altering the wiring of
tho set in any way.
3 B65 | 6 -List, $\$ 1.00$. NET.
Tubas are the most important part of your radio set. Without good tubes your set is worthless. It takes many years of research and requires much skis that is produced a really good radioluers in the country who have spent years in the development of good radio tubes. In this sears is concentrated the knowledge gained by research and experience.
Microphonic noises have been completely eliminated by the unusual construction used in the vitavox tubes. The most important of the many improvements is the glass bridge feature. This bridge works on the same principle as a tuning fork which is deadened by holding the prongs. Tho plate, grid and filament are welded into their proper positions and are then insulated from each other by the class bridge or bond-a perfect insulator. This bridge then holds the elements 80 that they cannot vibrate and cause microphonic noises. This point is very important for a microphonio tube will do nothing but cause continuous howling and ruin the entire program. Nothing is worse. You are absolutely assured of getting only high grade tubes when you buy Vitavox tubes. Each tube is passed thru ry exacting tests before it is allowed to leave the factory. It is but so sturdily that when you pet it the jolts and in ss of slipping have not affected it in any way. Put a解 immediately The stations will come in more clearly. they will y. in fact hey nil have more volume than er in new sets jour set will sound he a new on i for volume and lack and you will never be troubled witty. They are unquestionably one of the best tubes on the market of the world today.

Our great buying power allows us to offer these tubes at a low price so that every one can become acquainted with ,u the very best radio reception.
Patented thoriated tungsten filament assures long life and better service. The filament voltage necessary is volts. Filament current .25 amperes. Plate voltage 22 to 10 volts, depending upon the use to which the goa 18 for detectors
$2 \mathrm{B65}$ i 8-Vitavox Radio Tube Type
201-A, List Price, $\$ 1.75$. EACH............ $®$ C Ten lots. EACH, 53c. Fifty lots. EACH.......50c



## We supply either R. C. A. or <br> Detectors

Radiotron and Cunningham Tubes
TUBE PRICES-Our selling prices are based on st andard dealers' discounts of $30 \%$ from list prices. Should list prices or discounts decine, our selling prices will be lowered on a proportionate basis.

The standard tubes wherever radto is known. Filament requires current of 5 volls, $1 / 2$ ampere. t:sed with a 6 -volt buttery, a 10 -ohm rheostat is required. Highly efficient as radio or audio reMuency amplifiers and as detectors. Fit $2 \mathrm{B9} 21-$ Radiotron UX201A. 28931 -Cunningham CX30ia L.st,
L.
S. NET
$\$ 1.20$

## UX200 Detector

in certaln circuits far surpasses any ofler typu of tube as a detector and in rirommended in those circuits in sitte of high current consumition, whimh is
 nhout 1 ampere at 5.4 rolts on thament.
'Sate roltage varies from 18 to $2=81 / 2$ blate
volis.
2B1016-Radiotron U $\times 200$.
\$1.23
List. \$1.75. NET.

## UX112-CX112

Storage battery power amplifier tube for inisovement of quality and rolume. i'late roltage $13 \%$ v., ETid bias $9 \mathrm{v} . \mathrm{witl}$ I万A volt plate voltage ruaximum. Fila nent 5 volts 0.5 anmperes. Has new $X$ type untrersal buse.

## $281017-U \times 112$

$281037-\mathrm{CXIV}$.
\$3.08

## U×210-CX310

New super-power amplifying tube de. shened for use in $A$. C. operated nower amplitiers. lelate voltase 425 v. ruaximumi grid blas 3.5 s. at 7.5 v. on thaHent. Normal plate voltage 135 Y., bias
 $\therefore$ type unlversal base.
$281018-4 \times 210$.
$281038-\mathrm{CX} 310$.
$28 \mid 038-C X 310$
List. 80.00 NET.
$\$ 6.18$

## UX171-CX2_1

A power amplifier of extremely low out. mut impifdance for use in last audio stage caly. Operates on 5 -volt inlament voltage culy. Operates on 5-volt nlament roltage usiof 0.5 ampere. The volume oblantiable with this tube, exen with
2B1022-Radiotron UX171.
$2 \mathrm{BiO32}$-Cunningham CX27I.
List price, $\$ 4.50$.
NET
\$3.08
UX213-CXa1ı-Full Wave Rectifier A full wave rectifler. Has output of ©is milliamperes it a maxlmum vollage 6.5 milliamperes at
$2 B 1023-U X 213$.
$2 B 1033-C X 313$.
List, $\$ 5.00$. NET.
\$3.43

## C299, CX2j9, UV199, UX199 Dry Cell Tubes

Built for use with dry batterles. Bring In distant statious with loud speaker rul. ume in clear. natural tones. I'se only . 04 ampere at 3 voits. Work equally weil as detertors or ampliflers. Fit all 190 and new $X$ universal mokkets. $28922-R a d i o t r e n ~ U V 199$.
$28920-R a d i c t r o n ~ U X 199$.
$28932-C u n n i n g h a m ~ C 299 . ~$
28930 -Cunningham CX299
List, $\$ 225$. NET.
$\$ 1.54$

## UX120-CX220

Dry battery power amplifier tube which. when connected to last audio stage of a dry battery ojerated recelver, provides volume double that obtainable whit 190 tules. Mate voltage 135 V. Grid bias us © : Filument optrates at 3 volts. $0.1 \geqslant \bar{j}$ ampere. Has new $x$ tyre universal base. $28928-U \times 120$.
$2 B 938-C \times 220$.
$2 \mathrm{B9} 38-\mathrm{C} \times 220$.
List, $\$ 2$ 50. NET
$\$ 1.71$

## C377

Protective Tube. Eliminates the pos. Ribility of aceldental burning ont of tubes duo to short circuit. Special double contact bayonet base.
2B6362-List. \$1.75.
NET

Equally effcient as detectors and amplttiers Use 1.1 volt $\%$ ampere flament current so that an ordinary single dry cell will operate them. Plate voltase 222 to $45 \nabla$. for detector; 45 to $90 \quad \nabla$. for ampllifer.
2B1Oi 9-Radiotron WD12, WX12, fits standard base and new $X$ universal sockets.
List, \$2.50. NE
...........
\$1.71
2B1020-CII, WDII, requires specia type socket.
 2B1039-Cunnlngham $\mathrm{C} 12, \mathrm{CX} 12$. List. $\$ 2.50$.
$\$ 1.71$

## UX3U0A-CX300A

The most senstive and enfient de tector. Very stable; not (ritical to the atljustruent of the plate voltaxe. Will hovluce, on distant signals. udititional sensitisity and volume approximately equal sensitisity and volume approximately equal to that which would be olitained by the
addition of one stage of radio frequenery amplitication. No changes in the set reruired to use thls tube. Filament current s rolts 0.25 ampere. Blate voltab yi. volts naximum.
$281031-C u n n i n g h a m$ CX300A List, $\$ 4,00$. Radiotron $U \times 200 \mathrm{~A}$. $\$ 2.74$

## UX216B-CX316B

A half-wave rectifier used to supply midirectional current. from an alternating current source. Outjat 65 milllamperes at a maximum impressel voltage of 550 A C. Has long life. Two of these tubes may be connected to rive full wave rectibeation with an outjult of 130 raillam peres.
2 Z 2 $024-\mathrm{UX} 216 \mathrm{~B}$.
2 BIO 4 - CX 316 B .
List, $\$ 7.50$. NET.
$\$ 5.15$

## UX874-CX874

A voltage regulator tube deslgned to maintain constant voltage of "B" eijm-$28933-4 \times 874$ currcnt
2B934-C $\times 874$ Cunningham
List, $\$ 5.50$. NET.
$\$ 3.11$

## UX240-CX340 Hi-Mu Amplifier

Has an amplification constant of 30 . Espectally aclapted to resistance coupled and imperlance ampliticrs. Gives splendil results in untuneri anteluna couplim: stage. When used with resular A. ${ }^{*}$ trathformers they neak sharfly at 1,000
crelos which characteristic produces uncesclos Which chararteristic brounces unlusually great volume in cone work but production with tratsiformers. Filament viltage 5 volts; current $\begin{gathered}\text { v.0. } \\ \text { amperes }\end{gathered}$ 28937 -U C 240 Radiotron.
28937 - $6 \times 340$ Radiotron.
List, $\$ 2.25$. NET
\$1.54
UX280-CX380 Full Wave Rectifier
New type oxide coated ribbon filament. very sturily with hifle umbaion at lower imput. Hedures fewer condensers it rectifying anul tilterink eircuits. Have lower surwe juaks. Drowide auiet steady buerathon. Interchangeable with Ux91: $1^{2}$ N3LS. Filancets Voltage 5 volts; curicht. 2.0 amperes: A. (\% Plate roltage (maxiniuns) aiof volts: It, C. cutput cur reln (max.) I*5 milliamperes.
$28940-4 \times 280$ Radiotron.
$2894-C \times 380$ Cunningham.
$\$ 3.17$
UX281-CX381 Half Wave Rectifier
Now type oxide coated ribbon flament. very sturdy with hiell emission at Iowel input. Requires fower condetisers it rectlfylag and fllterfag circuits. Hav lower surge peaks. I'roride quift steal riferation. Interchandeable with LX:IbI:

 (Max.) 7 :n volts: $\mathbf{D}$. C. output (Max. 114 millyauperes.
28938
$28938-U \times 28 i$ Radiotron.
$28936-\mathrm{CX} 381$ Cunningham
List, \$9.50. NET........

An A.C. Ballast Tube to regulato In: put voltage across the primary of "B" eliminator transformers with special primpnent designed for ft . Witl hold the ormary voltages constant regardless of variations in the A: C. house liglitlug


## The New AC Tubes

 UY227-CY327 A. C. DetectorA detector tube containing a heater element ojerating from altermating cur risit. Intended for use with [ixeso tyjr amplifier tubes. Heater voltago ars volts; heater current 1.75 amperes; $D$. C. Plate voltage $45-90$ rolts. Has speolal 5 prong base.
28942 -UY227 Radiotron.
2 B 943 -CY 327 Cunningham
List, $\$$ E.00.
NET
$\$ 4.12$

## UX226-CX326 A. C. Ampilifier

An amplifier tube: the flament being operatect from aliteratting current. Foi it. F. amplifacation or transtormer roupled A. F. amplification, not suitible for dotection. I'ilament voltake 1.5 volts: current 1.05 anmperts; D. ulate rolinge $10-80$.
$28944-U \times 226$ Radiotron.
$28945-\mathrm{CX} 326$ Cunnlngham
NET
\$2.05

## The New DAVEN AC Tubes

After many montis of scientiflc resturch, the Daren Eirgineers have wrfected a complete line of $A-1$; tubes. They have four prongs to tht any etamdard socket. One ontstanding rellnement is the use of a syechally coated l'latjoum ita*
nuent whing is instrumental in climlnating tube noists and prolougs life. This inmerases the cost of maturficture considerabis: but is the reuson why the life of these tubes is greatly ineroased.

AC. I-Radjo I'requency Tube. This tube should be used in all radio freguency sockets and in the first audio frequency socket where trinsfolmers ure used.
28650 |-List, $\$ 5.00$.
NET
AC-[5- 《nerial Tuhe lurreases distatue Amplifier and clarity. Also shoulil be used int audio sockets of resistance and infledance coupled systems. AmMincutign Constant 1.

$\$ 4.20$
AC.DI-sinclal jefurtor $T$ it be. "uitable for use in all circuits. Whe to filament eotsstruction, current in flament is so distrlbuted is to reduce $A-($ ) hum to minimum
 NET
AC. 10 - Power Tulse. A real power
tube deslgned to operate on 400 volts of "13" batters. Should be used in last aumo state onls. Fr centionally loty Iffe.
286504 -List, $\$ 10,00$ NET
$\$ 7.00$

## Daven Rectifier Tube

AC-RI-Hectitier Tube. A single wive rectifter which has exceptions ally long life. Permits the fulle -
fing of a "is" elfminator when operates from the same line as the


Jefferson Tube Rejuvenator

## Doubles and Trebles Tube UsefuIness

At its small cost the Jefferson Tube Rejuvenator soon lrays for itself many times
over in its saring of tubes ober $\ln$ its saring of tubes
ancl batieries. This device will keep tubes at full eff3 BI 710 all times. tubes. For use on all to y pa Retail price, $\$ 4.50$. $\$ 2.65$ NET PRICE


## Will charge all types of <br> Jefferson Tube Charger

 3B:748-List. \$4.50. NET.
## Sterling B-Eliminator Voltage Tester


meter accurate high resistance voit. circuit up to 300 volts. Any serste mall or set owner can get the actual output of any "B" eliminator in a quick and spectfic manner. Set owners use it to get the ripht sockel hefore has suct set operation. Neres tester been arailable at this remurkatly low price scale $0-300$ roles Sizo, $3 \times 5 \times 13 / 4 \mathrm{in}$. long. Shipping

A precision volt am meter D'Arsonval Type Resistanee 70 ohms im volt. Combines al dio testing- $0-15$ M. A. $0-75 \mathrm{M} . \mathrm{A} . ; 0^{-7.5} \mathrm{Amps}$. $0-75$ vults; $0-1.50$ Folts Can be used in circuit centinuously. Jyy tuming meter any scale can he used without breakin Mounter on a meantifully nolished mahogany base All scales are calibratei by hand in comparlson with stanclard lithoratory meter. Quantities as small as $1 / 4$ M.A. or $1 / 8$ volt eastly read. 3BI 922-List. $\$ 24.00$.

## Jewell Radio Service Set



The Jewell Portable Radio Service set meets every (lemand of ratio servicing. In its neat, compact cast is every instrument and levice retubes, batteries, $B$ eliminators ant charsers. There are two meters; : voltmeter with four different ranges from zero to $7,70,140$ and 250 volts for testiug a bittery. B batterles and $\mathbb{C}$ battery or 13 eliminator: combination meter with rumbo fol total filament current or chargin: rate, of zero to 7 amberes zero to 14 millianperes for tupe teating and zero to 70 milliamperes for total plate current or 15 eliminator outcut Also cheostut sud tuhe sockiet int provided and are ariunged to test uny tspe of tuble.
A bitters compartment is provider to hold four vo ment is provider smanl $22^{1} \frac{1}{2}$ volt B batteries and thre $7 \underline{2}$ volt $C$ batterles. Connections are arranged so that cur $0^{1 / 2}, 9,2 n y$ of the following voltages is obtalnable: $4 \frac{1,2}{}, 6$ In addition there is a comrartm
In addition there is a compartment to hold wire leads.
tools, etc. The whole set is made as compact and licht as tools, etc. The whole set is made as compact and light as practical. The case is of best reinforced three ply construc
tion and ts coverad with durable black mitation leather tion and is covered with durable black imitation leather.
A good service nan with this test set will more than way - for overy service call he makes. Not only will he render - efficient and satisfactory service, but if he has sales ability he will plek up profitable orders for extra parts, such as in-
struments for testing batteries and tubes, B eliminators, chargers, lightning arresters, loud speakers, etc. Shippins wt., ${ }^{25} 7{ }^{2}$ lbs.


## New World's Record Super Ten

 THE MOST POWERFUL RECEIVER IN RADIO

## As Specified by Citizens Radio Call Book Holds All Principal World's Long Distance Records

DISTANCE-Here is the receiver for the man who wants the most powerful and sensitive set it is posstble to build. Many clalm to have recedved cortaln stations once or twice, but the Word's Recorl Sluper proved its claim to consistent range hy bringing in stations distant 6,000 miles or more, night after night. Below are a few of the principal records made by this remarkable recelver:
(1) Worle's Record for the greatest distance voice has been heard with a receiver using INOP aerial only. WCLb wias hearid at Tasman. New Zealand-on ain line distance of 8,3 ā mlles on March 17 th.
(2) Worki's Record for the greatest number of stations heard which are distant 6,000 miles or more. A total of 19 stations wero brought in.
(3) World's Record for the greatest number of broadeasting stat lons distant 6,000 miles or mort. that have ever been losiged on any ono evenlag. six forcign statious were logged in two hours and a quarter.
(4) Durlige a period of three months a total of 117 programs were leard ald lowged, all stations being $6,000 \mathrm{miles}$ or more distant.

All these records are fully rerifled and attested. A leaffet telling the story of the remarkable achievements in detall, together with the proofs of reception whll be malled on refiuest. KEEN, NON CRITICAL SELE 'TIVITY - Consistent. Iong distane rempion ts only onif of the attributes of the World"s Recorl suser 10. The amazing sensitivity of this remarkable radio, naking possible these astounding feats of long cilstance reception is further whanced hy keen, non-critical selectifity. The World's Hecord super io tunes through the local stations with ease and simplifity, and brincs in distant stations only a few meters apart. Hero is a super radio designed to accommodate the conditions of the present day.

## Tremendous Undistorted Volume

The ien tinbes, used in the World's Record Super 10 are all connertel in a circult that has as Iis basio purpose the fintercention and amplification of distant stgnals, and this ultimate marmes is so exiertly mohieved that the reception actually improves the timbra anil quality of tho splections that are received. A Radio, to bo entertainmg, must be pleasant to listen to. The Wold's Hecord sumer in is more than a pleasure-it is a revelation in toual qualthes

## Easy to Assemble

Complete builaling instructions and full sized working blue prints show exactly where to place rach part. and how to exerale raph ouration of assembly so that you cannot go urone. These grints aro so easils followed that anyone without privious exprybure ran wate un FAXICT DMIIICATL of this unaralIpled rinio, amit be the prond owner of the finest and most Iowerful radio asailable today.

## This Newest Model

Tho New Worlits Remord Super 10, the latest design by Mr. Srotit. Is the culmination of all the rirtups of its predectesors. together with all the latest refinements of proven merit, and the latest discoveriss of the extensive research laboratories wherefn the Worli's Record Super 10 was developed. In sharp contrast to other receisers of this type and previous moidels, the Super 10 is desimmed for antenna operation. This makes it

## Front View of World's Record Super 10


possible to incormorate the adrantages of two stages of tuned 14 ahead of the detector in connection with a short antenna of from 20 to 30 fect, conseniently placed around a maulding or other inconspicuous place. This new departure proviles sensitivity and selectivity heretofore never possible with a loop siciup arrangement.
The set has only two non-eritical tunfig controls that aro actively used, an ingenions gang control arrangement ohriating the necessity of the constant adjustments usual with other receivers.

In appearance, this receicer has no peer or equal. It has that intriguing qualtey of mechanien intilcacy which commands the attention and admiration of the most sophisticated engineer-and yet is so iseautiful from the mectanical and artistle standipoint that the most diseriminating will readily recohnize it as the most outstanding receiver of the season.
This receiver uses 201-A type tubes in all excmit the last stanc. A 210 or 310 tyne tuhe is used in the last stige, so that the great volume is handled with no distortion, producing those pure life-like tones so necessary to good radio reproduction.

## List of Parts

1 Formlea Panel 26x7x $3 / 18$ Dr. and Engr., 86.70 ; 1 Formica sub-nanel $25 \times 10 x^{3 / 16}$ Dr., $\$ 7.00$; I Remler 3 in, Line Conil. No. 633, 000035 mf ., $\$ 15.00$; 1 Remler Cond. . $00035 \mathrm{mf} ., \$ 5.00$; 1 Remiler 110L Drum itials, \$4.50; 1 Remler IIOR Drum Dial, \$4.50; 2 Remler Choke Coils (9) 90c, \$1.80; 2 Thordarson 1200 Audio Trans. ( $\AA$ ) $\$ 8.00, \$ 16.00$; 1 Thordarson No. 76 Output Trans., $\$ 6.00$; 3 Selectone L. W. Trans. No. B-500 (@) \$6.00, $\$ 13.00 ; 2$ Selectone L. W. Trans. No. B-510 @ $\$ 6,00$, $\$ 12.00$; 2 Splectone R. F. Trans No. B-5\%0@ $\$ 5.00$, $\$ 10.00$; Selectone Ant. Coupler, $\$ 5.00$; 1 Selectone Osc. Coupler, $\$ 5.00 ; 10$ Benjamin Sockets. $\$ 5.00$; 1 palr Benjamin Brackets, Tsc; 1
 Rheo. 30 ohms, $\$ 1.00: 1$ Carter Power Rheo. MW-1 ohmp 1 Carter lmp. l'at. Ir-400 ohms, $\$ 1.25$; 1 Carter 00025 mf . lic. Cond. with clirs, 50c; 1 Carter 002 mf Fix. .ond. 1 pair Carter No. 10 Pin Jacks, 20c: 1 SM No. 3.0 Midget Cond., \$1.50; 1 Jewell Voltrieter, 0-8 volts, Pat. 135, \$7.00; + Tobe 1 nuf, By-1’ass Condensers mi $\$ 1.25$, $\$ 5.00$; 1 Tobe Grid Leak, 3 mey fioc, 1 Jones 10 Contact Plug and Cable, tyro 13M, $\$ 3.50$; Mlscellaneous Screws, Lugs, Nuts, ete., 65c; 1 ${ }^{3} \mathrm{~kg}$, Belden Colorubber Wire, 40 c ; Blue Prints. 25 c 38390 -Complete set of parts.
List. S139.35.
NET.
$\$ 8575$
Shlpping weight, 25 lbs

## Matched Selectone Units for Sub-Panel Mounting

3B425 i-No. B-500 Intermediate Transformer. List. \$6.00. NET3252-No. B-510 Tuned Fiter. List, 56.00. NET
384283 No. B. 520 Radio Frequency Transformer 3.81 $354263-$ No. B. 520 Radio Frequency Transformer. 3 . 8 $384254-$ No. B-530 Antenna Coupling Unit. List, $\$ 5.00$. NET 3B4255-No. B-540 Oscillator Unit. Lift, $\$ 5.00$. NET
3.18

The widely known accuracy of design and preclsion of manufacture represented in all Scott produets is embodied in each of these witits, whish arg essontial the the construction of the new World's Record Super Ten. May be used in practically any circuit. Housed in a highly polished Bakelite case with all terminals plainly marked, Shipping wt., 1 lb .


## The World's Record Super 8

## A World-Wide Favorite <br> $\$ 5195$ <br> The superheterodyne is

 acknowledged by leading radio engineers the most selective and poweriul recelver it is possible to build. The circuit used in the Vorld's Record Super 8 is practically the same as thrat used in the famous set that estabilshed the four worldis recorits for long distance receptlon, aldd is one of the niost efficlent sujers ever devaloped.The Selectone Transformers used in the I. F. stages sre supplied in perfectly matched sots consisting or and two sharply tuned filter transformers, and fives
the set hair-line selectivity,
making it particularly suitable for use in locations where a number of powerful broadcasting stations make it difficult fer an ordinary receiver to cut though. These transformers In auldition to befing tested and matched with the finest pre-
cision laboratory testing equipment are given o final test in LIST OF PARTS
2 Remler Condensers No. 649.0005 mf. © $\$ 5.00, \$ 10.00$; 1 IJammarlund Miclget cond, 00005, \$1.80: 2 Selectone transformers R400 @ $\$ 6.00, \$ 12.00 ; 1$ Selectone Oscillator Coupler


 $90 \mathrm{c}, \$ 1 . \mathrm{So;} 1$ Carter . 002 mf . Fix. Conl. $50 \mathrm{c} ; 1$ Carter Hi-0hm. 500,000 ohms, $\$ 2.00: 1$ Carter Imp. Rheo 30 olims, $\$ 1.00$; 1 Carter $1 / 3$ ohm Flxed Res., 2.c: 1 Carter Imp. Rheo. wit? sw. 6 olms, $\$ 1.50: 3$ Carter Tip Jacks No. 10 @ 10c, 30c: 1 Carter Jack No. 1, 25e: 3 XL Bluding Posts, 45c: 2 KirzKaseh Dials 360 derrees (e) $\$ 2.00$. $\$ 4.00: 1$ Bakelite I'anel $7 x^{*} 4 x^{3 \prime} \mathbf{t}_{6} \mathrm{in}_{\text {. }}$, 6.00 : 1 Wooten Baseboard $9 \times 23$ in.. $\$ 1.00$; Mis7xilaneous Lugs. Serews, etc., $50 \mathrm{c}: 20 \mathrm{ft}$. bus bar No. 14, 25c: Blue Print, 50 c : Joncs Multiplug BM, $\$ 2.50$. 3 B352-complete set of parts. List Price. \$84.10. NET.

Shfpplng woight, 25 ibs.
$\$ 5195$
a special testing receiver, making sura that every set of transformers wili operate perfectly when built into a recelver. It brings in distant stations any night in tie week with give it exceptional tone quality.

## Scott Selectone Transformers for Baseboard Mounting

These are transformers which made the World's Record Super Nine so gool. Iype R400 is an intormediato transformer with closed iron core. Peak frequency of 45 K . C . Type REJO is a tuned stage transformer of the fraction of 1 per cent, assuring perfect results fraction of 1 per cent, assuring perfect resuits A trie lahoratory proluct.
$384210-S e l e c t o n e ~ R 400 . ~$ 384210 -Selectone R400.
List $\$ 6.00$ NET.............. $\$ 3.90$ 3B4211-Selectone R410. 3.90

List, \$6.00. Selectone Oscillator Coupler.


3B4256-Selecto
List, $\$ 3.50$. NET.
\$2,33

## New Selectone Two Stage RF Super Amplifier

This unit uses the new Selectone R. F. transformers and is gnecially desisned for addition to existing supers, enablilng then to obtain loug speaker volunie on disitant stations that metiously wero hard to get on phones. dite reason for this is simply explatuen. The ordhary sumer can only amplify the slatals detected by the 1st detector. This now amplitier adids two stazes of tumed 18. F. AILEAD of the lat detcetor which pieks un and amplifies sighals that meviously were too fatnt to le pirdeed un by the 1 it detector alone.
in mblition to increasing ranke, this unit. will increase the general selectivity considerably and rednce the number uf harmonics or rewat points on strong local stations. Fuld-sized blue grints and wiring diagram are loideked witlo each kit alld sliow exartly how to adil to your present sumer
This unit nay also be uset with a fectector and andio unit to make a very effedent tuned radio frequelley reseiver. It is very well adapted for this purghese aht will atalite the bither range and selectivity.

## LIST OF PARTS

1 Remler two gang cond. . 00035 nif. $\$ 12.00: 1$ Kurz-K゙asch Vornier Dial. \$2.0n : Sclect onte R. F. Transfornurs. B3 590
 ter Rheo IR-15 ohms, $\$ 1.00 ;$ Benjamin Sockets (unmed. $\}$,



in., 33.00 : 1 Bakellte Subranel $7 \times 10 \times 1 / 10, \$ 2.60$; I Jones Multiplus Typo BM. \$2.5n; 1 Miscellancous fugs 3 B353-Complete set of parts. List price. $\$ 40.75$. NET.

## B Supply Unit for New World's Record Super Ten <br> The Werld's Record Supor 10 Is a powerfil set and requires more $B$ ctirrent to run it than

 the ordinary receiver. The writer has versoually tested most of the pording commercial eliminators on todiy's market but could find none that would satisfactorily onerate of 180 rolts. Practically ali of them are designed to operate a 171 power sule with maxthe 210 power tute While the 171 is very fine it cannot begin to give the restes serurect of a 171 at 180 volts is used in woild's Record super 10. The maximum undistorted outnut of a 700 mlinwatis. The maximum undistorted out nut of the 210 nower tube at than Twice 1,540 milliwatis, This siniply nieanthe unilistorted outnut of the 171 .
This power unit will not only supnly all the $B$ current required hut also lights the filament and movides the C bias for the 210 perwer tube. It requires less than two hours to build.

## The Following Parts Are Supplied:

[^0] NET

(f)

# The New Improved 9-in-Line Makes Greater DX Records 

## As Specified by Citizens' Radio Call Book

## Easiest to <br> Build



## Unsurpassed for DX <br> Net $\$ 7495$

There are thousands of experienced set users in this country Who insist upon a tatho rereiver that reaches everything in the air. breaks through the nust tangled Interference and produces houso-tilline volume at all times. To them, the Nine-inotinn is recommended. Its record of populatity here in Chteago-perlaips the most ditheult reception spot in Anuerica-ls eloguent proof of its ethiclency.
As an example. whilo 13 local (mostly super power) stations wero broadcasting, it was a simple matter to tune in on a sente of long distance stations on a midsummer night. In broad dayight, stations 600 miles distant were recelved with full loud speaker volunte. Seldom if ever has surh extreme selectivity and superior tepratuction been accomplished.
This ideally balanced clrcuit employs four stages of R. F. Iont wave amplifteation bringing power for reaching great dlstaner under any and all ronditions. Tendency of highly amplified intermediate frecuancy simals to feed back into the audio system has been entlrely overcome by the use of a special audio frequeney transformer system.

## No Other Super as Easy to Build

One look at the fllustration above shows you how very simple sitie construction of the Nine-in-line. lt can be built much more quicky than fle averake four or tlve tube jobs, a notable feature of the H. F. I. layout is that there are no plate and grid leyds, the lues on the transformers fastoning diectly to tha tub sockets 111 wiring is nluceal unaler the sub-ianel with mintmun ockets. al wiring is piaced under the sub-inanel, with minimur ingeth leads. Not a complicated part

## Costs Little to Operate

Due to its all aroumd effliciencs, the Nine--In- H ine takes a minn mum toll on both "A"* athi "is" thattertes. The filament control is extremely sensitise. the tubes funstioning perfectly on 0 roltages.

## Wonderful Tonal Quality

The fully balanced system assures an extremely qulet opera On. There are no regeneratire howls or osrillations. It glide ato statlon after statlon with unconny smonthmess. The sweet ness, purity and fajthfulness of reproduction of voice, instru. ment. high and low tones, is a delight to the moot critical listener

## A Favorite with Set Builders

Set bitilders could make no better selection of a super for thelr trafle. It is quickly built. It preselts s fite sppearance. its nerformance satisfles. Housed in one of the the consoles aborn on 1,ages 107-115, it makes a receiver tht for the finest home

## List of Parts

3 HFL Transformers No, 11210 © $\$ 8.00$. $\$ 24.00: 2 \mathrm{MFL}$, Transormers No. H2l: (a \&s.00,
 Transfcrmer No. Le ciso, \$5.50: 1 HFL Ouf put Transformer, \$8,00 * Benjamin Sockets No. 9044 (a) 500 , $\$ 1.50$; 2 Benjamin Brack uts No. 86:29. $700^{\circ} 1$ Kemler Drim 1)tal one rielt, $5450^{\circ}$ 1 18 cm et 1)tum Dial, 110L $\$ 4.50$; 2 liemler 0005 MF Varable Con lensers No. 649, $\$ 10.00$; 1 Silver-Marshall No. 340 . 00002 Iidget rondenser, \$1.50; ; Siver-Marshall No, 340 . 00002 $\$ 1.25 .32 .50 ; 1$ Tobe $0005 \mathrm{MF}^{2} \mathrm{~F}$. Fixed Condenser, $35 \mathrm{se}, 2$ Tolic my Mis Fixed Cobdensers ow Fixed Condenser, 30e: 2 Toh at, \$1.00: 1 Carter 6 ohn (re $40 \mathrm{c}_{,} 80 \mathrm{e}$ : 1 Carter 6 ohm 18lueo stat, W1.00; 1 Carter 6 ohm Rheostat with switel, $\$ 1.00: 8$ Car ter Cord Tip, Jarks, 80c: 1 Carter 200,000 olim variable resistance s.2.25: 1 Daren $2 / 18$ amp. ballast resistor with mounting, \$1.00
 and engraved front. pauel. \$6.50; 1 Celeron $7 x^{2} 4 x^{3}$ (n 1 Drille sub-wanet. $\$ 5.00$; 1 package Acme colatsite Wire, Noc; 1 1'ke.

3B365-Complete set of Parts. List Prive $\$ 130.85 . \$ 7495$
Shipping welght, 25 lbs


New H. F. L. Audio
The H. F. L. C-I6 is one of the most eff clent Audio Transfornters hullt. ronstiucter to matell dietfectly the iwo elrcuits betweern which it is phared. (arrles signals Ht higli. est voltume without blasting or diveloping harmonis's. Intplifles all frevuencies equally. sipucjully treated silison steel alloy core. Witl groper gapping anti right density. aturation is impossible.
The correct size of wire and correct pri maty turus have been determinell so that the mpedanere will be cortect for the distlne anmplifation of low frequencies. Wlil opcrate with all power and standard tyme tule -will sork in any circuit and will improve any set. Shinnine wt. 4 lbs.
384366 -List Prico, $\$ 8.00$. NET
$\$ 4.70$

## New H. F. L. Output Transformer

C-25 Output Transformer-same peneral design as atudio trans former. Protects loud speaker, prevents distortion and hlasting
3 B4367-L ist Price, \$8.00. NET.

## Famous H. F. L. Units

Designed for base board or invisible (bel notinting Ellolosed and sealed in iritorm size genilite bakelite nuountm. anolutely कuarantex agalnst mechanical ofectrical defects.
II-210-Iror core transformet with litgh amplification factor. lange 32 to 42 kilo-

## cyctes. <br> 3R4338-Llst prite, s8.00. <br> $\$ 4.70$


II-215 Air core Trabsformer.
mum 2 (f)

## 384339-List Price, $\$ 8.00$, NET

## H. F. L. Push-Pull Transformers

Push.Pull Transformer C-167, C-168-The ultimate in quality. Cancels evell harmonics. matched jrimaty and secondary. 3 34368-C.197 (Innut). i List, \$9.00. NET....... $\$ 5.29$

## The Camfield Super-Selective Nine

## Sensitive, Splestlve!

Th. -ircuit usid Mit mitiv, fi.it.d


As Specified by Citizens' Radio Call Book

The Camfield Duoformer Seven Receiver As Specified in Cirlzens" $\$ 8295$
Radio Call Book
$\qquad$


## The Improved REMLER 45 K. C. Super

## As Specified in Citizens \$ $\boldsymbol{\$} 75$ Radio Call Book



LIST OF PARTS
2 Camfleld . $0005 \mathrm{~m} . \mathrm{f}$. Var. Cond. (a) 55.00 , $\$ 10.00$; 2 Remler Transformers No. 610 © $\$ 1.00$, sio.00; 2 Remler Transformers No. 600 (G. $\$ 6.00, \$ 12.00 ; 1$ Ihubilier . 006 m . f .

 1 m . P. By-Fass Cond., pew; 1 Dubliler 5 m . f. By-Pass
 Leak Mres., $35 \mathrm{e}: 1$ Sliver-Marshall .00002i Midget Var. Cond. \$1.50: 1 Camfold Ose. Coupler, $\$ 3.50$ : 1 Frost 10 ohni Rheo., 750; 1 Frost 30 ohm Hhpo., 7icc; 1 lrost 25 ohm Rheo., $75 \mathrm{c}^{-}$ 1 Carter Jack, 60c; 1 Carter Jack, 80c; 8 Frost Sub-Pancl Sockets (o 40c. $\$ 3.20$; Benjamin $X$ socket, 75 c ; amperise Ap. ta, $\$ 1.10$; Amperite No. 1A, $\$ 1.10$; Eby Eng. Bind.

oxcellent set which rreceled it, both in tone nuality and in distance. Its seloctivity is proverbial and no difficulty will be had in using it in the most congested broadcast areas. The set is very easy to bulld when
following the complete instructions furnishod. The wiring is simple.

Push-Pull Trans., $\$ 10.00$ : Tyrman Output Transformer, $\$ 10.00$ Set Karas Brackets. 70 © Micarta $7 \times 20 x^{3} 16$ in, Dr. and Eugr. Panel, $\$ 6.00 ;$ Micarta $10 \times 25 x^{3 / 1} \mathrm{in}$ in $1 \mathrm{r}_{\text {. S }}$ Sub-Panel, $\$ 6.40$; Pkg. Kester Solder. 25c: Miscellaneous Lugs, Screws, Nuts. etc. $\$ 1.65$ : Pkg. Acme Celatsite Wire. $\$ 1.80$; Blueprints, $\$ 1.50$.
 Price, $\$ 110.45$. NET, N. ..............................

## Remler Condensers



Dial rotates through full 360 degrees, giving greater separation of stations. Special adjustment permits variation of car paolty at zero dial setting, allowing compensation for differences in coll construction, matehing tuned cfrcuits very az curately. Both sets of plates rotate. Driven hy Bakelite gears no borly capkelty. Shlpping weight, 2 to 5 bs 3B4i53-Singlo Dereription 3B4/53-Single SLLF...00テ35 MF.


 384157 Single SLW., . 0005 MF \begin{tabular}{l|l}
384 \& $57-$ Sinkle <br>
384 \& $68-$ ouble

 SLSW., .0005 MF. 

SLF., .00035 MF. <br>
SLF. 00035 MF <br>
\hline

 

384 <br>
3 B 4 \& $64-3$-Gang sLLF., .0003.3 MF... <br>
SLLW., 00035 MF.
\end{tabular} $3 B 4164$-3-Gang

## Remler-Type 600 Intermediate

 mos
## Frequency Transformer

For 45000 cycle inter tube coupling where Imn core transformer insures high voltage step up ratio and uniform primary impeclance over efficient frenuency range. Bakelite case, highls polished. Terminals marked plitnly. Shippine weight, 10 oz .
3B4i28-List, \$6.00. NET
$\$ 3.53$

## Remler Choke Coil



No. 35 Choke Coll used for controlling path of radio frequency cultrent to prevent seneration of parasitic high Irequencies. Used to advantage in any radio recelver. Case of moulded Bakelite: Size 1 inch diameter, 1 Inch deep. Shipping weight. 6 oz . 3B4/65-No. 35 Choke Coll. List, 90a NET, EACH


## Remler Drum Dial

Unquestionably the finest dial on the market. Smoothest running dial we hare seen. Spiral gear drive culet in opera tion. No back lash. vernier tuning to a halr's breadth. 15 inch dial space divicled Into 200 divisions. Emborsed dial indicator. Callbration strips on dial for logiting, 6 vglt tamo and Ennlagt for Illumination, Easily mounted. Will drife any standard condenser, slngle or it gangs." Template furnlshed. Shjping
 side.

3B4167-Condenser Mounts on Right Side. List, each, \$4.50. NET. EACH..
\$2,65


## Remler Standard Dial

The well-known dial made of aluminum. Bakelite knob. Fits any $1 / 4$ Inch shaft. For 3 f0 degree condenser. Cardboard dials for logging. Shipuing weight, 4 oz.
$384168-$ No. 636 Remler Dial. 398 List, $\$ 1.00$. NET.

## Remler-Type 610 Tuned Stage Transformer



An air core transformer for the tuned stage. Used between last interraedjate frequency tuhe and detector tube. Fixed tunlng condenser cljps on secondary terminals to tune to 45,000 cycles. Bakelite case with plainly marked $3 B 412 \mathrm{o}$. Shipping weight, 10 oz . $3 \mathrm{B4}$ 1 2 9-List. \$5.00. NET
$\$ 2.94$

## Remler Improved Socket

Universal X type socket of mouliced Bakelite. Very efficient contact spring, giving contact whole length of tube pln. Contacts self. cleaning. Screws and solder lugs on spring 3B4624-LIst NET, EACH

## The New 1928 Remler DX Infradyne



## Cabinet

The cabinet problem solved by a beaut fully enbossed copper cabinet finlshed 10 baked crystallire of a neutral shade Iergth over all only 26 inches You ㅍill spres with us that it is the fllest kit you have ever seen. you have have changed. Home bullt radio is now a head of the factory built set. In this set, will metel construction -lluminated drum control, compiete shieling, and the couping-conceried wring hal moke it the best set on the fnest tone quallty obtainable, make it American market

A screw driver and solder iron are the only tools needed to assemble this set in an eventng's time. You may have 5 or tubes at will by throwing a switch which is mounted on thepanel.

## LIST OF PARTS

1 Remler Infradyne Foundation Kit Includes panels, rheostats, dials, diagrams, jacks, switches, steel chasss, chokes, special coil, resistances, cables, nuts, screws, Remier $\mathrm{R}_{\mathrm{R}} \mathrm{F}$. Ampinier, shieided with Antenna Compensator

## REMLER Radio Frequency Amplifier



No. 710 R. F. Amplifer incorporates two stages of R. F. ampllacatinn gild a detector. Entirely enanced in a safet coppur sabo uhirh gives complete eiectruinagnotic shielding. Destizned for use rith Romler Drum Dial or ordinary 3 comdezree dial. An antenma colfes the sator is supplied, whe antenna on the detuning effect of the ante is a true. first amplifter. single control ampliffer. A switch is provided for selective or nonselective tuning. It is used may be used model Infradyne or it may be used With any audio unit to make an emfient tuned radio frequency recelver. It includes solenold colls. Remier 3 gang condenser. Remler sockets and spectange and selectivity. Ship. wt., 15 lbs . 3B5774-Complete witi An- $\$ 3$
Lemna tenna
$\$ 55.00$. Net.

## Infradyne Cabinet and Base

Cabinet is pure sheet copper embossed in two tone bronze crystal lacquer with decorated wood base. Size $11 \times 26$ inches. (Sce llustrat on anove.) Fornis ${ }^{\mathrm{a}}$ shleld 10 r the set. $\mathbf{3 B 5 7 5 9 - L i s t , ~} \mathbf{1 5 . 0 0 .}$ Net


As Specifiled in Citizens Call Book and Radio
1 Remler Infradyne Cabinet and base.
1 Jewell 0-5 volt meter No. 135.
Remler Iniradyne Amplifer..
Silver-Marshall 220 Audlo..
1 Sllver-Marshall 221 Output Trans.

3B355-Complete. citice 10575 REMLER Infradyne Amplifier


The famous 86 meter intermediate amplifer, besides meeting the requirements of the Sargent Circuit, makes a very efficlent 3-stage radio frequency ampllfier in connection with all standard tuned radio frequency or neutrodyne sets. Makes a marked mprovement in selectivity and sensitivity of any set. Instrument control of bakellte and nickel-plated brass on polished Bakelite panel. Shielded In a lacquered copper $\$$ a 7 case. Shipping wt., 5 lbs
3B5795-List, \$27.50. Net, each. . . . ... . .

## Infradyne Foundation Unit

Kit containing all parts needed for the construction of the model DX Infradyne recelver except the radio frequency ampHfier, cabinet, Infradyne amplifier. voltmeter, and audio transformers. Included panels, rheostats, dials, dlagram, jacks, switches, rholies, speral coll, resistance cables, nuts, screws, steel chassls, etc. Shipplag wt., 30 lbs.
3B5773-IIst, \$52.00.
Net.
\$30 58

## The Remler Improved Infradyne Receiver

Ten tuhes with simplifed Contol-Two States R. First Ampincar 3 , Stares of 95 Dioter a mpilifrytion. Second Detector, and fwo seiges of Audio Ampllfication. Only two tuning controls, R. F. betwo tuning by triple gang condenscr tine dobllator by a dusle mindenser simplified Sonsan rombleporssible tirourh use of lemuler Iriftarly no amuse of kember inmelent device, pimer, at very ompher frequencimps yet preserving the origcles, yet preserv. inal done quality. dertgned inal tone quanty station comes in at that each station comes dial. Oniy onse sitht diaturit feanntion and remarkalhy clear reproand rion are the outstanding duction are
features of the set.
All parts supplled were care the bulder should have and the buirer sowng the inno trouble in making a duplleate of the laboratory moder. LIST OF PARTS
$17 \times 28 \mathrm{in}$. Dr. and Enc. Formica Panel $57.00 ; 183 / 4 \times 27 \times 3$ in Dr. Formica Sub-I'anel. $\$ 8.00$; 1 Remler Type 700 Amplifler, Dr. Formica well .00035 3-Gang Variable Cond., $\$ 12.00$ i 2 Sliver-Marshall 25 minid Mldget Cond. (1) $\$ 1.50, \$ 3.00$; 1 Veston Model 506 . 25 minic Midget Cond. 19 - 1 Pair Karas Sub-Panel Brackets. $0-7-140$ Yoltmeter, 59.00 Rheo., $\$ 2.70$; 1 Electrad 500,000 ohm 70c; 2 Yaxley 30 ohm Rheo.i Slectrad 300,000 ohm Varlable Varable Resistance, $\$ 2.00$; Electrad Clrcult Gem Jac.; 50 c ; Resistance, ${ }^{1}$ Frost Closed Circuit Gem Jac., 45e; 1 Carter Fil. Switchi. 65e; $\frac{1}{6}$ Frost Closed Circuit Gem ac., 45c; $\$ 2.40$; 1 Jones Multiplus 6 Frost Type 530 UX Sockets 19 ace Luxe 1st Stage Trans.,
 510.00; 1 American De Luxe 2nd Stage Trans., $\$ 10.00$; Type| 38354 Complete Set of Parts..

112 Amperite. 51.10 ; 1 Lynch Grid Lk. Mount, 35c; 1 Lynch 1 megohm Gricl Leak, 50c; 1 I,ynch 2 megohm Grid Leak, 50 c ; 1 Sangamo .0001 MF Fixed Condenser, $40 \mathrm{c} ; 2$ Sangano 000
 Cond. G. S., $50 \mathrm{c} ; 2$ Tobe 1 MFd By-Pass Cond. © Si.25, $\$ 2$ 1 set Camneld Type 22 K Duoformers, $\$ 10,00$; 1 Sphee Aristnerit lator Coupler-Canineld, $\$ 1.25$ K Kurz-kasch Aristncrat Yernier Dlals \& $\$ 2.00, \$ 4.00 ; 5$ Eby Engraved Binding Posts $@_{15} 15,75 \mathrm{c} ;$ Screws and Nuts; 100 Tinned Sold. Lugs, ${ }^{40 c}$ 50 Feet No. 14 Gauge Tinned Solder, 25c; 1 Set Blue Prints and Instrust


## As Specified by Citizens' Radio Call Book

 List of Parts3 Aero R. F. Transformers © $\$ 4.00$, \$12.00: 1 Aero R. F. Choke Coll $\$ 1.50$; 1 Ansseo 0000 , Three gang variable ruin: denser S. F. L. \$11.25: 6 Amsco Nockets ( $e^{5} 50 \mathrm{c}, \$ 3.00 ; 1$ Amsco Floating Socket \$1.00; 1 Ansso 5 Meyohm Gril Gate Soc; 1 Amsen Kes. Mounting 30c: I Amsen $K \quad C-1$ Resistor Counier Kit \$7.00; 1 S'lver-Marshall Drum-Dial $\$ 3.00: 2$ Silwer-Marshall Brackets 70c; 1 Carter 6 ohm Rheostat, Midiget $50 \mathrm{c}: 1$ Carter 200 ohm l'utentiometer. Midget 75 c ; 1 Carter 8/10 ohm Fixed Resistance 25c: 1 Carter 1000 ohm Fired Resistance 30c; 1 Carter Filament Switch 6.5 : 2 Carter 5 Me Isy-I'ass Condensers 00 : 1 (arter 001 MF $50 \mathrm{c} ; 1$ Carter .00025 MF . Fixed Condenser 40 c ; 10 XL Jet tered Binding l'osts $\$ 1.50$; 1 Aero Sesen Foundation r'nit $\$ 12.00 ; 1$ Pkg. Acme Celatsite Wire $80 \mathrm{c} ;$ Miscellaneous Luss.
Iolts. Nuts, Etc. $55 c$.

## AERO-SVEE

## 10 Kilocycle Selectivity

## True Single Control

R. A. now and unique hookup. Inoorporates 3 stages of ane conpling stase. The new 240 tubes (Hithed $R$. F. and in R. F., detectnr, and one audio tubes (High-Mu) are used 201-i and one 240 in audicio audio statse. One 171 and vile Girand one 240 in aullo.
he dives without welte selertastity-a station for each point of $2-10$ tuhes having amp:ification Pretur of 30 volunio with tyne Low loss throughont ication factor of 30 .
fisy to buid throughotit. l'erfect single control matching. used are mate. Popular-priced. Ranke $200-550$ meters. Call ased are matched at lroth high and low ware-lengths. El treniely sharp velectivity. Panel size is $7 \times 24$ inches.
3B367-Com.
plote set of parts. Lst PrIce. \$59.05. N E T.
$\$ 3-38$
Shipping weight. 18 tbs.


Panel Vlew of Aero-Seven

## The Improved Aero-Six Receiver

The Aerodyne Six is a set with a national reputation for performance. Consists of 3 states tuned railo frefionny amplifltatlon, atlector and two stases of audio frefuency. By the use of the new atro universal colls shielding is entirely unnecessary. Very selective because of the tirre low loss R. F. stages yet hroad enough to pass the necessary harmonics to give nerfect reproduction. Only apparatus of proven merit and of nationally known manufacturers are used in the set. Actual size bilueprints are included in the foumtation unit, consisting of sub-pancl and front-panel. 1'anel 7.24 inches. Set employs two dial tuning; uses five UX-201A tubes and one CX-171 tube.

## List of Parts

Ils Aero-Dyne Foundation Unit $\$ 12.50: 1$ Aero U-16 Kit of Marshall type 220 Audios $\$ 16$ Dil Drum Dials $\$ 6.00 ; 2$ Silverdensers $\$ 22.00$ I Audios $\$ 16.00 ; 4$ Hammarlund .0005 Con* Marshall No. 511 Sockets So Socket. No. 304075 c ; 5 Silver$\$ 1.80$; 1 Carter ${ }^{511}$ Sockets $\$ 2.50$; 2 Tobe 1 MFD. Condensers 50c: 1 Tube 2 Meg. Grid Leak, Carter Grid Cond, with ellps 50c: 1 Tube 2 Meg. Grid Leak, Tlpon 50c; 1 Carter with clips


Yondenser 50c: 1 Yaxley Switch Rheostat, 6 olm $\$ 1.75: 1$ ristance, 1 olum 15r: ${ }^{200}$ ohm $\$ 1.75$ : 1 Yaxley lixided Jle${ }_{11}$ Nistance, Binding lise: 1 Polymet E-7 Grid Leak MTG. 50t: Lencths bus bar 25 c . $\$ 1.65$; 1 Screw Assortment b5c: 10 $\mathbf{3 B 7 6 8}$ - fimpleto set of parts. List price, \$4795 , 20 lbs

## The Aero-Four The Chicago Daily News Four Tube Receiver $\$ 3235$ Net

A four tube receiver using the famous acro colls. WIII mut through the Chicago stations and hring in DX on any night. This is exceptional performance. Very sonsittuc. plonty of volume. Approved ly many prominent parlio tius i-

The thekler employed gives a mow rind of patilichation tiat ag gimeati dind exill wer the entire diat. Siplectivity a suibent feature. Tone is rich. Ont-preforms many 5 and 6 tubt sets.
Easy to bulld in a rery slont time. Answers the need for an excellent. freximenive kit for the home buibler. Instrue-
tions inclumled.

## List of Parts

8.00 dero Foundation I'nit $55.75 ; 1 \mathbf{U}-95$ Aero Klt (2 coils)

 6 ohm Rleo. \$1.35; 1 Kurz Kasch Knob :00c; 3 S-M 511 Sock-
 1 Tolxe : mu\%. Tijon Gricl Leak noc: with rlips 50r-
 Choke roll \$1.50; 1 Minerllabems surpw: fíve: 10 Lengilis busbar zite.
38369-Complete set of parts. List price $\$$
Nhipsing welght, 20 Jbs

## R. F. Kit for Aero-Six

$K$ it conslsts of 4 twice matrined coils; one Aero untenna inductance with variable mimary ami 3 čuiversal K . F. transfurmers. For use with $201 \mathrm{~A}, 199,112.840$ and A. C.
 proved Aero-Ityne 6. Shipplag welylit, 1 lb . 6 oz .
$381940-U .16$ for . 0005 Condenser 3B1041-U.163 for . 00035 Condensers.

Llst, Set,
$\$ 15.00$.
NET ....
$\$ 882$


NET

## R. F. Mit for Aero-Seven

Kit consists of 3 twlce matched CollsThree Tniversal F . F. transformers. Wound ""t bakrlite skeleton furms. $95 \%$ air dielentric. Insed with 201A. 193. 112,240 and A. C. tubes. Fange 200.550 meters. Lised In Aero-Seren circuit. Shipping welght, I
381042 -No. U-12 for . 0005 Cond. 4ist. each kit, $\$ 12.00$.

## SUPERSENSITIVE <br> INDUCTANCES

Aero Universal Coils aro extremely small in size and oxceptionally practical for all set and circuit. buililinst purposes. Note especially the rertical mounting hase feature on all the new ents.

## Aero Universal 3 Circuit Tuner

Fixed tlakier using 00025 variable condenser for regeneration. Variable primary for Koverning kelectivity. Us od with 201A, 109. I1! or new A. C. tube. Range $200-550$ meters. $3 \mathrm{~B} \mid 046$ - No.

for 0005 Condenser. denser.
$\$ 2,35$
$\frac{\text { List, }}{\text { Aero Universal Antenna } \$ 4.00 \text {. NET... } \$ 2,30}$

## Coupler

Same construction as 3 Circult Tuner. A highly efflclent low-loss antenna coupler, Incorporates the fanous AeroOn en ne 199 . 240 or new whin 201A, $100-550$ meters. shipthing, range 200
3B1048-No. U-96 for . 0005 Condenser: 49 -No. U-963 for . 00035 Condenser.

## List, each. $\$ 4.00$. NET..... $\$ 2.35$

Aero Subpanel Brackets
Heavy gauge metal brackets for mounting sub-panel. Rukfity bullt. Slin. wt., 10 oz-3B6306-Llst NET 42c

## Aero Transmitter Kits <br> Aero Transmitters are shown In the Amateur Section on page 83-85.

## Aero Universal Wave Trap Unit <br> Makes vary efflelent ware lrap or may be hised to make crystal set inore efficient. low distributed capacity a n tnterferace. Fliminates tnecrecence. lraed in Radio News ware tral. Fanger $200-5.50$ meters. Shipping weight.

${ }^{8}$ 3RIO50-No. U.4 for 0005 Condenser. 3 BIO51-No. U-43 for . 00035 Can denser. $\$ 2.35$

## List, $\$ 4.00$. NET

## Aero 3 Circuit Tuner



Built in the famous acro low loss fashion it is the
most efficlent threecircuit toner ever offered. aljarjable
tickler. primary. Ranje 200575 meters with .00035 conalcnser Shuping weight. 1 $\$ 5,50$.
$3 B$
NET


## Aero TRF Coils


buits. 1 ant tenna coll. 2 r. f. transformers. Range tenna concenters. i-ses 00035 condenser. Complete with inounting brackets and instructions. I'se in any 5 tube set. Shliping welght. ${ }^{11 / 2}$ bss.
$383516-L i s t$ Price, per set, \$7. 05 \$12.00. NET.

Aero R. F. Regenerative Kit For Aero 4 An indispensable kit. Aero Cniversal R. F. Tirans former allet not
 Tuner of fixel tiokler typu. Any set of this tyne can be nialle mery efficient with these colls. Na1. 112 in and A.cers tubses Tesed in rhicato Daily News Rioreiver Shipning wight, ${ }^{1} 1 \mathrm{lh}$ densers.
delo45-U-353 for .00035 mif. Con-
densers. List, set, \$8.00. NET..

## Aero Short Wave Kits

and interchangeable colls are shown in the Amateur Section on ран゙еs 83-85.

## Famous Melo-Heald Hot-Spot Fourteen True One Spot Tuning As Specifled by Citizens Radio Call Book <br> A new eircult by Melo. Heald using the famous Melncounters and Meloformers. $1 \cdot \frac{1}{2}$ tulars consisifine of: Osmilitar, pwo Detertors, True Single mediate Stazes and 3 Andio Stakes. Tuning so spot tunint-tio oscilator repersa single stage.  Same mixing system as the transformer elesigned Bleven. Eacl intermetlate rainsir core, neaked, sperifteally fur its purnose- Dir core neaked. wnund and tested at the same point of celofnemers in andio stages cive 3 sitages of faral audio amמilficatinn. renderiug beautiful reproluction with <br> 

 ins listortion. curvent. " gamps.; shate currem.

 wet for use in crowded air distrist.s.
set for uee in crowien air matio it easy to mutd and it is


## so designed that amy LIST OF PARTS

1 Melecoupler No, 120 . $\$:-1 ; 1$ Melecoupler $\sin$. 460,

 Sfi 00: 1 Melocoupler No. 465. sti.60; 1 Melvcoupler No. F6. \$ti no: 1 Melocoupter No. 467. \$6.00; 1 Melocoupler \$0. 468 .
 Sultistane Meloformers (a) $\$ 5.00$, $\$ 15.00: 14$ Benjamin
Sorkets (e) $75 \mathrm{c}, \$ 10.50 ; 1$ Jones Cable Pluc. Type BM, $\$ 2.75$; 3 TL Binding Posts, $\$ 1,20$ : 2 Tobe .006 mip . Fixed Con,
 samamo Glastor, 50r: 1 Taxley 4 ohm rixed Resistance. 35 c : $\frac{1}{6}$ meñ Glastor, 50r. yinm Resisiance, lic ; lyaxtey 400 ohm lotentiometer, \$1.35;




 \$7.0n; 1 Formica $7 \times 0 x^{3}$ in Dr. and Pnip. Knceter Racilo sol--9x!2 in. Wonl Baseloard, \$1.25: 1 Pkf. kester Ract BlueCler. 25 c ; Misc. Nuts. Srews, Lugs, ete., 50c; 1 Set Blueprints and Instructions. \$1.40.
38343-Complete set of parts, LIst \$0 $\$ 90$

## Transformers and Power Equipment

220 Audio Transformer

The finest produced regardiess of price. Provides substantially straighting amnlification from 30 5000 cycles. Falls off at 5uט̃o cycles, compensating against static, squeaks and nolses above tho mu sical range. Turns ratio 3-1. For use with all type tubes. Guaran. teed to give more satislactory cuallty than any other amplifying de vice. Welght. 4 lbs., 6 oz .
384826-List,
$\$ 8.00$, NET.
$\$ 4.70$

## 221 Output Transformer

For uso between last power tube and loud speaker. Prevents blasting or damage to speaker from direct current. Possess uniçue advantage of bringing out absent low notes from inferior amplifiers. or improving the tone quality of the best transformers. Its impedance matches the tuhe and loud speaker giring riaxinam enorgy transfer kind of tubes. Welght, 4 lbs.. 4 oz .
3B4827-List, \$7.50. Net
\$4.41
Type 222-Same as No. 221 except equlpped with four phone tip jacks and a 5 foot heary uluty oxtension eord, instead of four binding posts. Instantly attached to any radio receiver. Wcight, 4 lbs., 5 oz .
$\$ 4.70$ 3B4832-List, \$8.00. NET.

## Push-Pull Transformers

 230 Push-Pull Input TransformerUsed elther for the highest quallty Push Pull Power ampin fier that can be built, or as variable ratio audio transiormer hy rirtue of its center tap, citner 6-1 or 3-1. Weignc. 9 8 oz.
$3 \mathrm{B4833}$-Llst, $\$ 10.00$. NET.
$\$ 5.88$

## 231 Push-Pull Output Transformer

For use in conjunction with No, 230 in push-pull circuits or as an output transformer for, by means of center tarned minary. its impedance may he axljusted to match accurately. 3 B4834-List. $\$ 10.00$.
NET

## Power Transformers <br> 325 Stepdown Transformer

Designed to supply $11 / 2$ and $21 / 2$ volts fllament current required for the operation of all A.C. tubes as well as 5 and $71 / 4$ volts for thie filaments of 112,171 . or 210 power tubes. Capacity 5 or $71 / 2$ volts at 3 ampercs; $1 / 2$ and $21 / 2$ volts at 12 amperes. Provided with clecrostatic shicld and equipped
with cord and plug. Weight. $4 \mathrm{lbs} . .15 \mathrm{oz}$. 3B4835-List, $\$ 8.00$. NET.

## 329-A Super Power Transformer

Used with 313, 380, QRS. or Raytheon rectiflers and in addition to "B" supply, will furnish A and C nower for A.C. and power tubes. Has two 250 Folt, 125 MA secondaries amp. sconulary. For $105-1: 0$ volt 60 cyclo current. Complete with cord and plug. Weight, 5 lbs.
3B4836-List, \$11.00. NET.
, ...................... $\$ 6.47$

## 328 Super Power Transformer

A full wave power transformer. for use with 216 -B or 281 tubes. Contains $2-550$ volt secondaries, rating $110 \mathrm{ma}$. . $2-71 / 2$ volt 2.42 amp., $1-11 / 2$ volt 2.42 anip. Windings and $-110-120$
volt 60 cycle primary. Cord and plug not included. Shipping wt., 8 lhs.
384837 -List. $\$ 18.00$. NET
$\$ 10.80$

## 331 Uni-Choke

A two winding high inductance choke lleensed under the Clough Patent Application. Its tuned section eliminates tho 120 cycle ripple. With only 7 Mfd condenser capacity, it Will outperform two section chokes with $8-12$ mid capacity. Very satisfactory for use in impedance coupled ampliflers. Prisatisiactory for inductance 2 henries, secondary 47 henries at 60 MA mary inductance to prevent saturation. Rated at 85 MA contimious duty. Weight. 4 Ilis., 10 oz .
3B4838-List, $\$ 8,00$. NET.
$\$ 4.70$

## 332 Condenser Bank

A condenser block for "B" ellminator circults where ballast or glow tube is used in conjunction with a filament or thermionic type full wave rectifler tube. Contains 2-1 mid, $2-1 \mathrm{mid}$; $2-2 \mathrm{mfd}$, und $1-4$ mifd filter condensers. Weight, 2 1bs.. 2 oz.
3B4839-List price, $\$ 12.50$. NET.
. 1.30

## S-M Reservoir "B" Power Supply

The Reservoir "B" Power Supply is the only unit avallable on the market with glow tube voltage regulation. Guaranteed absolutely free from hum, motor boating or other troubles whan onerating with any standard receirer. The 90 volt tap furnisles up to 45 MLA with only a varlation of a few per cent. 45 volt tap has negligible variation up to 10 MA. Will opere ate 371 or other type power tube. Guarto ten tubes. Has
 329 a power transformer which also supples $A$ and $C$ power for the new A.C. tuhes. Weight. $13 \mathrm{lbs} . .14 \mathrm{oz}$.
$385663-652 A$ completo (no tubes Included). \$21.46 LIst, \$36,50, NET.

## 656A Wired Reservoir "B" Supply

3B5664-656A Reservolr B Assembled and wired by the Siiver-Marshall factory. No tubes Included. $\$ 23,80$ List price, $\$ 40.50$. NET $\qquad$

The S.M $660-210 \mathrm{~A}$ Untnac $n$ nd the
$600-171 A$ T'ni-660-171A T「ni-
nac aro the pac arco the
poors of all poor. 8 of all thelr respective fields, yet tho prices aro yory 10 w They incorporate the sreat
adrantages of are "universal" in appica-push-pull power amplification and are "universal" in appiteaton as phonograrh anmbifiers, two-stage anuplifiers, receiver using the nev $\mathbf{A C}$ tubes.

## 660-210A Unipac

The S.M 660-210A Unipac ls tho finest power pack obtain. able on the market. Ctillizes two CX316 rectificr. a CX374 glow tube for "B" voltago regulation and two CX310 tubes in a push-pull ampilfier. Proviles unequalled bass note reproduction and undistorted colume. Uses tho 328 transformer so that it will supply 1.5 and 2.5 to 3 volts for receirey $A$ so ther when A-C tubes are used. Supplied complete in a sealed $\mathrm{S}-\mathrm{M}$ kit. Shipping wt., 35 li s.
3B5659-Compiete (no tubes included).
\$48.93

## 666A Wired Unipac

$3 B 5660-666 A$ The 600-210 Unipac completely assembled and wired (tubis not included) by the S. M. \$54.83 factory. List price, $\$ 93.25$. NET.

## 660-171A Unipac

The SM No. 660-171A Push-Pull Unlpao provides a power pack rastly superior to ans other 171 power pack on the marliet. Though the voltago amplification is 9 (with 171 tubes) as compared to 21 in tho $600-210$, tho volume is amply surfc:ent for ordinary linme reproduction, and the handing capacity is considerably greater than most 21 pow complete two an extra tube socke so or as a phonograph amplifier by the adddtion of a CX326 tulse. Contains 329A transformer and will supply, $A B$ and $C$ voltage to sets using $A C$ tubes. Shipping weight, 40 ibs.
3B566 (-Complete (no tubes Included).
List, $\$ 66.00$. NET.
$\$ 38,85$

## 667 Wired Unipac

3B5662-657-The 663.171A Unipac completely assemb'ed and wired by Silver Marshall (tubes not Included). \$44,65 List. $\$ 76.00$. NET.


The S-M No. 440 Time Sional Ampllfier is a three-stage tuned R. F. amplifler, and detector. consisting of four extralarge size tuned air-core transformers und four tube sockels, properly by-passed, all wired up and sealed in a conper anif brass catacomb, size $15 x i x 3$ inches, and tuned exactly to 112 K. C., the 2677 meter wave length of the $I T$. S. Naral Observatory Station at Arlington (NAA). Each of the four stages of the Amplifer is indicidually shiched. The selectivity of this unit is so great that interference from other waveleugtls is impossible. With its large low resistance tuned air cooro transformers, hernutically sealed. the ansplitication is tremen-dous-higher than that of any 3 -stage long wave amplitier that can be constructed from standard parts today.

Jewelers wishing to set their clocks and watches accurately from the time signals transmitted direct from Arlington at iv neon and 10 P . M. datly need only to connect up the Ampititer as shown by the instructlons provided.

The S-M No. 440 Time Signal Amplifier is sold only in completely wired form, factory, sealed, laboratory tuned and callpleteted for Arlington (112 K. C.). It is guaranteed for nosiifreaccuracy of peaking. and any unit will be repaired at the fretory, free of charge (provided the seals have not been broken) at any time withln one year after purchase should it prove unsatisfactory. L'ses 201A type tubes throughout Overall size, 15x5x3 inches. Welght, packed, 5 lbs.
3B330-List Price, $\$ 35.00$. NET.
\$20.58

## S-M Long Wave Transformers

The 8-M 210 and 211 long wave trans. inrmers with thelr black Bakelite cases (size gas inches long, $17 / 8$ inches wide. $11 / 2$ inches to require no introduction


## 210 Intermediate Transformer

An iron core transformer of exceptlonal ampilfication sup. plied at any desired peak froquency from $50 \cdot 60 \mathrm{~K}$. C. for 201. type tubes, or from 60-70 K.C. for 109 tubes. Weight, $41 / 2 \mathrm{oz}$. 3B4820-List Price, $\mathbf{5 6 . 0 0}$.
NET.
\$3.53

## 211 Tuned Stage Transformer

A sharply tuned alr core transformer. Suppied tuned with fixed primary capacity, at any desired peak frequency from 50 fich primary capacity, at any desired peak frequency from $50-70 \mathrm{~K}$ K.C.
Welght, 6 oz.
Welght, ${ }^{6}$ oz.
$\mathbf{3} 482$ ist Price, $\mathbf{5 6 . 0 0}$. NET. .
$.43,53$


## Type 101-B Coupling Unit

Consists of bakellte stator fube having two 28 turn windiness, and an adjustable rotor with a single 28 turn winding. Winding termingtes at six solder lugs. An ideal oschlator for all circults using . 0005 mf . condensers. Kange 150 to 550 neters. Weipht, 5 oz. 3 . 4822 -List Price. 3.50

## S-M R. F. Chokes

275-For short waves up to 600 meters. Im pregiated winding encased in liakelite housing. Inductance. $2 \frac{1}{2}$ millilithries. shlphing welght. 4 oz.
$384829-L i s t . ~ \$ 0.90 . ~ N E T . . . . ~ \& ~$ 384829 -List. \$0.90. NET......Uses 276-Same as 275 for use above 600 meters. Inductance, 10 mlli ihanies. shipring weight. 4 ounces.
in ounces.
3 B4830-List, $\$ 1.00$. NET. .
\$0.59

## 540 Sub-Panel Brackets

Nickel flnished steel. 6 inches long. I $1 / 4$ Inches high, $1 /$ inch wide. Shipping weight. 7 uz .
$384803-L i s t ~ p e r ~ p a i r, ~ \$ 0.70 . ~ . ~$
NET......................................... 4.24
S-M SHORT WAVE KIT, Page 83

## S-M Interchangeable Plug-In Coils



These coils have attained a justly deserved porition of leadership. Contineal magnetic Hela, extreme uniformity, mosit eftrient low-loss design, suitable for ill eircuits. Made for all ranges from it to 3000 meters. Sphice wulise unt milbed Dakelite tubing having $s$ is thereaded rlakes, proviling practically air sup. port. Rintors are of green silk wire on stuall bakelite forms. ('oncentrated primary windings on some types are slot wound at the bottom end of the grid Winding. Very good for single control work sinice all coils of one type are exactly alike, all colls are for use with . 00035 ml . variable condensers.
Type $110-$ Stator consists of 2 equal windings and an adjustable rotor.
384814 -Tyre A. 190 -ino meters.

List, $\$ 2.50$. NET. $\qquad$
384831 -Type D. 500-1500 meters.
3B4845-TYpe E, 1100-3000 nuters.
List. \$5.00, NET.
Type 111 .Stator consists of slngle winding, concentrated slot primary and adjustable rotor.
384807 -Type A. 190 - Fin meters.
384808 -Type $13,70-211$ meters.
3B4809-Type c. 30.75 meters.
List, \$2.50. NET.
...................
384810 -Type D, $\quad 500-1500$ meters.
3 B4846-Type E, $1100-3000$ meters.
846-Iype E, 1100-3000 meters.
List, \$5.00. NET.
Shipping weight, 110 and III coils, average 5 oz
3B4815-Unwound Bakelite form with hardware ©0. 74 and rotor. Welght, 3 oz. List, $\$ 1.25$. NET.

## 515 Coil Socket

Moulded Bakelite ring with 6 contacts to take all S. M plug In coils. $21 / 2$ inches diameter, $1 / 2$ inch thick. Shlpping welght, 3 ounces.
3B48i6-List, \$1.00. NET.
$\$ 0.59$

## Type 316A Variable Condenser

Designed to provide the ejectrical uni. formity and mechanical rigldity necessary tor unit control circuits. Nodifted stralght-line frequenty typo providing equal spacing of stations orer entire dial. 1lates of soldered brass plate assemblies swung in a rigid metal frame designed for base or panel mounting. Rotor and stator plates are lacquered and are adjustable as sre both front and rear bearings. Slade of nickel plated brass. Held together by steel tie rods. Capaclty nicke plated brass. 000007 to .00035 mf . Welght, 1 lb .
3B4905-List, $\$ 4.50$. NET.


## Type 316 B Condenser

Same as 316 A, except provided with extra long shaft. Welght, 1 lb .
3B4906-List Price, $\$ 4.50$. NET.
.42 .65

## Type 317 Condenser

Simillar to 316 A, excent capacity is .000005 to .00014 mfd . thipping welght. 1 lb .
3B4907-List Price, \$4.50. NET.
3849 :5-SM--320 Condenser-00035 Similar except lighter construction. 3 in . deep by 3 in square ping weiglit, 24 oz.
List, $\$ 3.25$ NET
$\$ 1.95$
Type 340 Condenser
A small .000025 mfd adjustable con: denser, designed for compensating. balancing or antenna coupling. Brass plates, mounted on bakelite end plate. 1 inch Hite, 1 inch deen. 142 inches high. SlnComplete with knob. Velght, 6 oz.
3B4852-Llst, \$1.50.
NET.
. . . . . . . . . . . . . . . . . . . . . . . . . . . . .
\$0.88

## Type 342 Condenser

Same as 340, except capacity is .000075 mf . Shipaing wht. 6 ounces.
6 ounces.
$3 \mathrm{B48O}$
I-List. $\$ 1.50 . ~ N E T . ~$

## 8 Tube Strobodyne <br> A Great New Circult by <br> Radio News Laboratories <br> A new elrcult-not an adapiation of an old type. Deatenad hy Jacien Ghusilen, sponsmod in America by R. E. Lacault and KAUIU NHWF. Suparhaterodyne type with entirely now frequency changer, oprating on a new irluefcle. Unexcellen ior distaine, with grant selectivify. Outperiornis best sulierielervisio or in at one point of tlle 1vity. Stations come in aith no pistorton tio dials. Tremendous volume. with no distortion With thils set, WGY heard in France on boon an-

tenna one foot square DX of 1.500 to 2.000 miles obtained consistently from the heart of New York"s broadcast
area. Fading and interference unknown quantilies with this area
set.
Easily constructed by following drectlons included with kit, and the home-bullder can easily duplicate the results cited here.

PARTS SUPPLIED
3 Hammarlund Midline Condensers .00035 mp . © $\$ 5.25$, $\$ 15.75$; 1 Set Hammarlund Strobodyne Coils © $\$ 3.50, \$ 10.00$; Shields e $\$ 2,00, \$ 4.00 ; 2$ 1iammarlund Fquallaing Condeasers

 Nymphonto Transformers © Choke, $\$ 2.00 ; 4$ Lsalt Type F. R. F. Units (as $\$ 4.50$, K. F. Choke, \$2.00; ${ }^{4}$ Lacault Thye Fondensers.
 \$6.50; 1 Micarta $12 \times 251 / x^{1 / 4}$ in. Drilled Sub-Panel, $\$ 13.50$;


## LIST OF PART8

3 Hammarlund 00035 Condensers, $\$ 15.75$; 1 Hammarlund RF coll-No. RE-17, \$2.50; 1 Hammarluna RF coil-No. RE18, $\$ 2.50$; 1 Hammarlund Auto-Couple coil, $\$ 3.50$; 2 Hammarlund 50 mmf. equalizing con. @ $50 \mathrm{c}, \$ 1.00: 6$ Tobe .5 mf . Hxed cond., $\$ 5.40 ; 1$ Tobe 1 mf . flxed cond., $\$ 1.25 ; 3.005 \mathrm{mf}$. tixed cond. Tobe © 45c, $\$ 1.35 ; 2.001 \mathrm{mf}$. fixed con. Tobe (e) $40 \mathrm{c} ; 80 \mathrm{c} ; \mathrm{i} .00025 \mathrm{mf}$. fixed cond. Tobe, $35 \mathrm{c} ; 2 \mathrm{AF}$ transformer Thordarson @ $\$ 8.00, \$ 16.00$; 9 Benjamin Sockets © 75 c , $\$ 6.75$; 2 Marco Vernler Dlals (3) $\$ 2.00, \$ 4.00$; 2 Yaxley 20 ohm Rheos ( 3$) \$ 1.35, \$ 2.70 ; 1$ Yaxley 400 ohm. potentiometer, $\$ 1.75: 4$ Amperite No. 1 A, $\$ 4.40: 2$ Amperite, $1 / 2 \mathrm{amp} ., \$ 1.10$; 9 Binding Posts-Eby. $\$ 1.35$; 4 Madison Multichokes © 9 Binding Posis-Eby cuit, fle control Jack, 70 c ; 1 Yaxley switch with pilot jlght,

 Tinned Copper Bus Wire, 50c; 10 Lengths ${ }^{\text {Heg }}$ Sphetti. $\$ 1.00$.

1 Interstate Output Filter, \$8.50: 1 Cardwell Balanced Type 618-A 000035 mf ., $\$ 2.25$; 3 Carter M-20, 20 ohm Rheostats ( m 50c, \$1.50: 1 Carter M-400, 400 ohm Midget Potentiometer, Tje; 1 Carter No. 1 Open Circult Short Jack, 250; Carter No. 2A Short Jack Closed Circult, 30c; 1 Carter lmp. Battery Switch, 65e; 4 Dubiller .5 mf . By-1'ass Condensers No. 907 ( m $75 \mathrm{c}, \$ 3.00$; 1 Dubller .002 mf . Fixed Condenser No. 601, 40c: 8 Benjamin No. 9040 Sockets @ 75c, $\$ 6.00: 1$ Electrad TyTe $B$ Royalty Varlable Resistance, $1150 ; 4$ Amperites Type $1 A$ @ \$1.10, \$4.40; Amperite Type 112, \$1.10: National Type $\frac{1}{3}$ Miscellaneous Lugs, screws, Nuts, 65 c .
38340 -Complete set of parts. List.
\$77응
$\$ 130.55$.
Shlpping welght, 25 lbs.

## The New Shielded Ultradyne

## A Perfected 9 Tube Super as Specified in Radio News

The ultradyne chcuit was one of the earllest and most pop. ular sumerheterodynes. This new shlelded Ultradyne presents some new features and many refnements.
A single stage of completely shielded tuned radio frequency amplification precedes the modulator circuit. Thls stage uses the most sensitive form of input employlng an automatte-constant coupling system wheh prorldes equal transier of energy on all wave lengths. The "Cni-chokes employed as the in -tirmedlate-frequency transformers are very efticient and have a frequency response curve far superior to that of most lons ware transformers. The last stage of audio amplincation em. ploys a power tube. It is capable of producing an undistorted output of great volume. All important circults are by-passed by large fixed condensers.
The complete layout consists of one stage auto-coupled, tuner 5. P. an osclllator: modulator; three stages long wave r. amplification and two stages of tho very best oactllator circults pled amplification. The

Wasy to wiro and coperate. Will give long distance reception with the clearest tones.
3B348-Complete set of parts.
List Price, \$115.61.
\$7795
Shipping welght, 25 ibs,

## New Silver-Marshall 240 Transformer

A now small transformer for replace. ment In present sets. Second only to S-M 220 Stratght line amplification
30 to 5000 cycles then falls off to 30 to 5000 cycles then falls off to compensate for static and regenera$\begin{array}{ll}\text { tion squeals. } & \text { Turns ratio } 3 / 1 . \text { Slize, } \\ 31 / 2 \times 24 \times 21 / 4 . & \text { Weight, } 2 \text { lbs. } 4\end{array}$ ounces.
3BI 3 42-List, $\mathbf{\$ 6 . 0 0 .}$
NET
3B:343-241 Output Filter Unit. List, $\$ 6.00$. NET.

## 805 Vernier Drum Dial

Attractive oxidized brass panel window. Simple to mount. Suitable for any type standard condenser. Universal for etther right or left hand mount. Dial controlled by panal knob, and may be illuminated by the lamp bracket furnished. Sizo, 4x $4 \times 1 / 2$ inches. Shipping weight. 120 oz. 3B4802-List, $\$ 3.00$.
NET.

©1.76

## S-M Link Motions

$180^{\circ}$ mechanical links designed for coupling two or three condensers ( 4 Inches between centers) together for single dial operation. Shlpping weight, 6 ounces.
3B4908-632 Triple for 3 condensers. © 147 List. \$2.50. NET.
\$2.00. NET.

## 631 Stage Shield

An aluminum can with removable top and bottom. $71 / 2 \times 5 \times 3 \%$ inches, plerced coll socket, tube gocket. chroke by-pass condenser and all leads. Welght, 12 ounces.
3B4850-
List. $\$ 2.00$. NET. ${ }^{2} \mid 18$


# THE GREAT TYRMAN TEN Radio's Most Powerful Coast-to-Coast Receiver 


wiring and soldering. It also acts as a condenser between cos season. Described in the September issue of the battery leads and eliminates all by-pass condensera its of eftic Radio Call Book. Each tube functions at full value of eifcrency. 1 his set is destined to put set building far an of the previous stages of development and constitutes Super Sasis ensineering progress.

## Superior Selectivity and Tone

The Tyrman Ten is a receiver of rreat selectlvity and unexcelied tone. The racio frequency transformers are matched more amplification-better selectivit. They are designed for more amplification-better selectivity-stable operation. Trise desion is such separation of stations is maintained yet the design is such that the odd harmonics are all amplified properly. This property makes the reproduction pure and natural. To further the tone qualities, a new audio trangformer has been designed. The propram is amplified to life-like volume -all the notes, round, clear, and full-from the deepest organ bass to highest plecolo note. The amplification curve is Ideal for reproduction no matter what speaker is employed to interpret the output.

## True One Spot Tuning

The long sought advantage of one spot tuning has been ace complished in this receiver. A station is recelved at only one polnt on the diais. No bothersone harmonics and interference. The set is therefore more selectre and is much casfer to operate. One stage of radio frequency anplificacomplish used lisefore the first detector in order to better acsfde antenna. The set can therefore be for use on an outside antenna, The set can therefore be used on an outsiale antenna without teradiation and the radio frequency stage makes it sharper than loop reception.

## Very Simple to Build

Every set bulit is an exact duplicate of the Taboratory model. This is assured by the use of ready drilled and engrared panel and subpancl and by use of a narvelous new pleco of radio engineering. The Kurz-Kascli Capacity Connection. This device eliminatce approximately $80 \%$ of tho


> Tyrman Vernier Drum Dial
An answer to the demand for better appearance plus superior performance. Gives both direct and vernier tuning. Can be used With any standard condensers.
Beautiful escutchenn Beautiful escutcheon plates furnisher. Distinct silver etched graduations. Perfect concentricity of drums and condenser shafts. Absolutcly no back lash. Shipping uty 3B4 179-Singl

List. $\$ 5.00$. NET.............
3B4 180-Two-dial control sets \$2.94 List, $\$ 10,00$. NET. $\$ 5.88$


## Tyrman Shielded Socket

 fluence on the stability of the circuit is very pronouncenThose of the laboratory is assurcd of obtaining results equal to those of the laboratory model.

## Most Sensitive of All Receivers

The Tyrman Ten has been tested under the most sovare conditions, and has Eiven remarkable performances, All iclds are confined with their place of origin. All tubes are
shifelded by the new Tyrman shifided socke intertube couping is eliminated. The shield go that even tubes at the proper operating temperature for greater efficlency. T'nsurpassed in beauty with the new Tymman Drum control and the symmetric layout the set has unsurpasssd The set is you will be proud to exhilitit to your friends. builder can assemble it. Complete instructions inexperienced with the kit.

## List of Parts

2 Tyrman Type 8-70 R, F. Transformers, \$8.00; I Tyrman Type $\begin{gathered}\text { F. Transformers } \\ \text { R. Transformer, } \$ 4.00 \text {; } 4 \text { Tyrman Type } 8-80 ~\end{gathered}$ former, $\$ 8.00$; 1 Tyrnuan Type $3-50$ Input Transformer ${ }^{\text {Sto }}$ Trans1 Tyrman Ty' $3-51$ On Type $3-50$ Input Transiormer, $\$ 10.00$; Vernier Drum, double, 810,00 . \$12.50: 1 Kurz-Kasch Capacity Connector, $\$ 7.50$ : 1 7 $x^{2} 6^{\prime \prime}$ ront panel Formica, and dec., $\$ 6.90$; 1 ix 26 subpanal For mica, 56.20 ; 2 IRenjamin lrackets, 70c: 2 Carter 1 , For cond., $\$ 2.50$; 1 Carter $1 / 2 \mathrm{mfl}$. cond.. $90 \mathrm{c} ; 1$ Carter $000{ }^{2}$ 660 . $40 \mathrm{c}: 1$ Carter .001 Mica cond. 50 c . 1 Yexieg No 50 c ; 1 connector, complett. $\$ 3.00$ : 1 Lynch 3 meg. res. amp., 5 volts, 15 c : 1 Filament Resist. Taxiey. Yarley $11 / 2$ volts, 15 c ; 1 Yaxley 200 Pot, $\$ 1.75$; 1 Yaxley Grid Resistance No. $7: 00$. 200 ohnis. 25 c ; 1 Hanmarlund $\$ 1.75: 1$ Yaxid Resistance condenser, \$1.80: 1 Yasley 25 ohma, Rheostat with Midget $\$ 1.75$; 2 Binding Posts-Eby, 30c; 1 Camfleld 00035 varls able concichser, $\$ 5.75$; 1 Camfleld 00035 Two-gang conflenser. 3 B 376 -Comp set of screws. 60c; 1 Set Blueprints, $\$ 1.50$.


## Tyrman Audio Transformers

and amplify in design, Large, heavy core and amplify uniformig on the lowest audible irenuencies. Perfect tone beyond the $\mathrm{limits}_{3-51}$ hereretofore experted. Trpes 3-50 and CX-171 Stify for use with UX-112 and UX-171. Ship. wt., 3 Jbs.
 3B4186-3-50 Pow
 for second audio stage. LIst, $\$ 10.00$. NET.... $\qquad$ $\$ 5.88$ $384187-3-51$ Power output transformer for second audio stage.
List, $\$ 10.00$. NET..
$\$ 5.88$

## Tyrman Radio Frequency Transformer

A unit of a high standard of excellence and quality. Guaranteed matched to the modate Kurz- acycle. Terminals accomFincased in molded bakelitacity Connector. $4 \mathrm{oz}^{2}$.
384181 -Type 8-70, 200 to 500 中2 38 3R4 і 82-туре 8.71, 160 to $360^{\circ} \$ 938$ meters. List, \$4.00, NET........ ${ }^{2} 4836$ $3,000,000$ cycles. List, $\$ 7.00$. NET44, 12

 price, $\$ 7.50$. NET........................................... $\$ 4.41$

## Hammarlund <br> ROBERTS $\mathrm{HiO}^{\circ}$

The new Hammarlund-Roberts Hi-Q six represents the ultimate In six tube receivers. It incorporates miany new rennements which ha
Three stages of radio frequency amplification are used sliving a very highly amplified signal to the delectur luina Tlio low Jnsis design of the Auto-Couple cotls used increases the efflclency of the set to a remarkable degree. The separate stages are individually ghielded with Hammarlund Aluminum Shields. preventins pick up by the colls and wiring. and completely ellminating interstage coupling with its altendant oscillations. Thus the greatest. cause of broaclaess in tuning is at once alimintel. Howerer, selenifity is not so great as to cause dietortion. ilhe clacult id so deslened that the useful odd harmoniss are amplified so that the musleal note will be pure and undistorted. Many distant sti-
heart of New York's congested broadrast, area, without interheart of vew Yorks rongested
renf 1 mom Hal
 amplitlers. Thus belne neutralized eflelently at one polnt the set is just as etticient at ull other paints. The rolume is therefore pronortional to the strumgth of the stations not to les wavelength.

## A Superior Audio System

To insure the most perfect reproduction attainable, Samion sminhonic transformers are used in the audio stages. Prorislon is also nate for a power tule so that great. rolume rell theobtained without distcrtlon. This, coupled with the well 16 . signed radio tredurn-z anmither. Jrabluces very natura and
 cation of the familiar Nientradyme clrcuit which ls noted for lte tonal qualitles, easy tuning, and wide range.

## Extremely Easy to Tune

Easy tuning is accomplished by employing the new Hammarund Drum Dial and coupling the emplensers tokether. A station is tuned in with the dial and thre are no ther adso ments to make except for volume. The volume may be constrolled at will from a whisser to a roar hy adjusting the volume control.

## Quickly and Easily Built

The construction of the set is very simple. Anyone ran hulld it with no diffeculty. A Van Doorn hent and drilled metal chasais complete with all hardware is supplied. Eresything is huilder to assemble and wire the set.


The only tools nepded are a sctew driver, pliers and a soldering iron. No ditheulty will he experienced by the amatelir set hulder in duplleating the results oltained in the laboratory. The set is rery neat looking with its well balanced Mlicarta Panel and the Mamnarlund Drum Dial. The inside of the sel is partionlarly neat since all viring is beneath Thits set is one whleh you will he proud to exhiblt for your friends' approval. oth in ampearance and in operating qualitles.
('omplete and sinple constructional information and dia. yrams are supplled with the kit.

## List of Parts

n Samson Symphonic Trans. (fe \$9.00, \$18.00; 4 Trammar lund no0: Midilne Condensers (is $\$ 5.50$. $\$ 22.00: 4$ Hanmar lund 1H1-Q SIx Auto Couple coils (HQt4) $\$ 12.00$; 4 Hammarund RFC-85, R.F. Chote colls es $\$ 2.00$, $\$ 8.00: 1$ Hammarlunt
 1 sangamo .00035 mf . fx. cond. With clips, soc: 1 Imr. Hheo, s ohm, \$1.00; 1 Carter Imp. Bat. Sw. with knoh.
 mifi. ronct. (I) $\$ 1.25$. \$2.20: 1 Amperte No. 112. \$1.10: 6 shy Vinjversal Sockets a 10c, se.40:3 Ely engraved Binding posts © 15c 45c: 1 Yaxicy No. 660 cable connector, $\$ 3.00$ : 1 Hammarlund-Roherts ifi-Q Six Foundation fint consists of dr. and ens. manel, eth $\$ 15.50$.
38342-Complete set of parts. List Price.
Shipping weight, 20 lbs.
$\$ 58.25$

## Hilco Transformers

## M. F. Transformer Replacement Kit

A set of four air core trans. formers accurately matrhed for a ireguency fransformers trave the stime reak frequencs. They w-111 materially improse the tone quality of a y superheterorime re-
 cers and 4-00025 mp tixed coners and $2-.00025 \mathrm{mf}$. nxed con-$383637-$ NET... \$8.55


## HilcoOscillator Coupler

Designed as a replacement unlt Wers. Will operate efficlently for all superhetermilye type recelvers. Whll operate efficlently from 100 to 575 meters. Fixid tyix nick wable condenser greatest eflictency. For use with '. 0005 mu . variabie condenser.
$\mathbf{3 8 3 6 3 8}$-List Price, $\$ 3.00$. NET.

## Short Wave Oscillator Coupler

Makes any super recelver a hlghiy efficient short wave set 15 to 200 meters range.
3B3639-List, $\$ 3.00$. NET.

## New Karas Two-Dial Equamatic



## \$5699 <br> Net

## As Specifled in Citizens Radio Call Book

Complotely balanced and perfectly neutralized insuring easy tuning sud simplified control Equal efficiency over entire broancast wave bolume of the the superb tone quality and great colume of the Liaras 3-dial, 5-tube Eanamatir Complote nsutrallzation mukes tuning easy and Fives a turor and rlecher ture.
The variable primaries are set no thot onersy tranasfer to seconilary is constant at maximum, just below the oscillation point. Two condensers tune with one dial with no back-lash. Micrometrle dials allow tuning to
$1 / 1000$ of an inch with the gear ratio of alx hundred thirtyeven to one.
Gives exceptional results under every condition of oneraIton. Its sharpness and selectivity are proverbial; its volume tremendous; its clear, pure tones the wonder of railio. Better results than from most 7 -tube receivers of other desibns.

The nety Karas transformers and tone fliter make the reproduction perfect. No distortion is possible unless used Can be readily buil
can be readily built and operated by the most inexperienced fan by following the simple instructions included with
kit.

## List of Parts

3 Karas .00037 mf Var. Cond. @ $\$ 5.25, \$ 15.75 ; ~ 3 ~ K a r a s ~$
 dulin Transf @ $\$ 8.00, \$ 16.00$ : 2 Karas Mierometric Dials (at) $\$ 3.50, \$ 7.00 ; 1$ Karas Output Filter, $\$ 8.00 ; 3$ Karas Sul,fanel lirackets, 70c; 5 Benjamin No. 9040 Sockets @ 50 c . \$2.50; 1 Carter 10 ohm Rheostat-Imp. (Gold Arrow), $\$ 1.00$; 1 Carter 20 ohm Rhenstat-Imp. (Gold Arrow), \$1.00: Carter 2 ohm F'ixed Resistors (iv 2 jc . $50 \mathrm{c}: 2$ Carter Tip Jacks No. 10 @ $10 \mathrm{c}, 20 \mathrm{c}: 1$ Yax!ev $69-\mathrm{B}$ Two Stage Switel. 11.50 : 1 Yaxley C.alle Connector, $\$ 3.00$; 2 Samson No. 85 R , F : Chokes @ 82.00, \$4.00;2 Samson Bal. Contl. © $\$ 2.25, \$ 4.50$; 1 Karas 2-Dial Control System Complete with extra Shafis


## Karas Equamatic R. F. <br> Transformer

Varlable primary fastens to shaft o condenser and is automaticaliy varied. Improved sensitivity. selectivity and volume. Gives constant coupling on all ware lengths, thus giving volume ${ }^{m o-}$ portional to strength of station-not rave lenuths
381831 -Per set of 3 matched
 List, \$12.00, NET. style Lquamatic sat Shipping or 0.d welght 8 oz, Litt, $\$ 1.00$. NET.
nd Mardware for Complete Sct. $83.00: 2$ Polymet .001 mf Fix. Cond. @ 30c, 60c; 1 Polymiet . 006 mf Fix . Cond. @ 50 c , $50 \mathrm{c} ; \mathrm{F}^{2}$ Sankamo 0001 mf Flxed Conlensers, 40c; 1 Sungamo $\checkmark 02 \mathrm{mf}$ Grid Condensers with Clips. 50c; 1 Daven 2 MegForm Grid Leak, 50c. 1 XL Binding Post. Ant., 15c; I , IVook-Tn Drilied Sub-Panel, \$6.00: I Pkg, Acme Celatsite Ifook-CN Wire, $40 \mathrm{C} ; 1$ Pkg. Kester Solder, 25 c ; 1 Blueprints 3B338-Completo KI
NET …............................................ 99 Shipping welght, 25 ibs.
\$5699


## New Karas Transformer

Marvelous reception secured with the new Karas Type 28 Audio Frequency Trans-

Undistorted amplification of the low notes, as well as perfect reproduction of high notes. Gives tremendous volume. Amplifies the many vital harmonies and rich overtones that combine to form mucal sounits.
Completely shielded and hermetically sealed against climatic conditions. Damp ness, heat or cold will not affect them Completely impregnated. Compound cuar anteed to never leak out.
Provided with extra long lugs. Finished in polished


## New Output Filter

A fitting companion to the new audio transformer. Not only jurevents damaging D. C. currents from entering the louldspeaker but greatly improves the quality of reproduction. Cursists of sjecial luo henry choke and a larfe capactity naper condenser of the finest quality. Shell richly finisheil insulation ts genuine Terminal extra long and plainly marked. 3 B/84 8 - genuine Bakelite. Shipping weight, $1 \mathrm{lh}, 120 \%$ List, $\$ 8.00$
.$\$ 4.71$

## New Karas S. L. F. Condensers

Has same peneral advantages as
Orthometric. Romorable shaft so they

Provides finest tuning with no back-lash. Ratio 63 to 1 , permittling movement of $1 / 1000$ of an inch. Turns easily and smootily. No holes to dirilt. Moulded bakelite. Dlameter $41 / 2$ inches. Fits I/i-inch shaft. Shipping weight, 10 oz .

\section*{| 3 B | $828-180$ | degree counterclockwise |
| :--- | :--- | :--- |} $381829-360$ degree clockwise only

can be stanged easity. Muunting for sub-nanel, baseboard or single hole panel from either slide. Mate to the stantard Naras sjecification and maranteel. Shaft diameter $1 / 4$ inch. Shipming wethat, 1 lls.
$3 \mathrm{~B} / 837$-Туре 11. . 00025 mf . List, 35.00

NET
 $\$ 2.94$ mf . List.
NET
NET © $\quad$ …........................ 38.81
$\$ 5.50$. NET
$\$ 3.09$

## Karas Harmonik Audio Frequency Transformers

Suitable for regeneretive clrcuits, radio frequency sets. sulerhets and reflex cir cuits. Hiph amplification without distor. tion. All stage ratio. Shipping wt.. $3 \mathrm{~B} / 222$-Karas Harmonik.
List, $\$ 5.00$. NET $\qquad$ $\$ 2.94$



## B-T Counterphase Power-Six

The Bromer.Tully Power-Six ofers all of the latest immrorements in rartio. it includes the baste whiperiorty of the original counter-
phase circult with the additional reftnements now possible through rincoyements in pubes resistanees atal other piats. 3 stakes of radio Prequency ampilicution are used whirl greatly extend the range and sclectirity of the set. Jue to the use of the
Torostive colls shtelding is entirely Turostaile colls shelding is entitely munecessary. The new kif is numbly cas ier 10 halance and to operate.
Ail 3 rf. stages are tuned by on's. All 3 r.f. stages are tuned by on'y
two control dials through the use two control diats throunh the use
of B-r nultiple condensprs, tu-W style balameing romdensers are used. whifls twe very norurate huld mike the set balance very easily, A bomes Muitimlug is used to facilltate liattery connections, long wsinare
operation may be ohtalned with only a short indoor nerial, and it whil give super volume with excel lent tone gunity.
Thu construction of the set is very simple and easy by using the wiring harness provherd. This set will make s. The builder witl be well repald for the time and money sumt.

## List of Parts

TA Torostyle Transformer, $\$ 1.00: 3$ TC Torostyle Trans

 31500 ohm resistances (at 500 , $\$ 1.50$; 1 set color charts anit
 1 Wood Baschoard $9: 4 \times 231 / 2$ inches, $\$ 1.25 ; 1$ B.T Euphon:c Trans.

## B-T Power-Six Essential Kit

This kit is made un at the $13-\mathrm{T}$ factory and consists of the B-T essentials used in the kit.
1 rA Torostyle Transformer, $\$ 1.00 ; 3$ TC Torostyll Trans: pormers © $\$ 4.00, \$ 12.00 ; 2$ 1. D-17 B-T Conlensers a


 3B331-Complete Kit. List $\$ 4.0$.

B-T Laboratory Type Condensers
Low loss styif of superior mechanical strength. Straight line ware length change orer entire seale. Low minimum capacits. Panel or base mounting. small amount of insulation plared outshde of electrostatict tield. pigtail rutor condenser. Binding post connertions, gromded frume. Heary aluminum plates. C'ast a humfurm ends finely' tinished. i/i-incly shaft. NET
 ping wt. 11 b .
$\qquad$ $3 \mathrm{~B} 4244-.00025 \mathrm{mfd}$ Price, each. 3 B 4246 -. 0005 mfd . Price, each.

## B-T Straightline Frequency Condensers

A real B.T achievement. Eliminates crowding of stations regardless of their wave iongth. Spares stationg infiommy over dial when used with $\mathrm{B}-\mathrm{T}$ eoils. Shing. Wt.' 1 lb .'n $\mathrm{NET}^{2} \mathrm{O}^{\circ}$
$384305=.00025 \mathrm{mfd}$.
$\$ 5.30 \quad \$ 3.24$
$3 B 4306=.00035 \mathrm{mfd}$.
$3 \mathrm{~B} 4 \times 07-0005 \mathrm{mfd}$.
5.75
6.00

B-T Lifetime Multiple Condensers
For use in circuits designed for shmultancous tuning. same hirn grade construction as the IB-T singhates assure west tuning muler all eoblitions. The rumpinisating of higlt mertit. shiphing $\mathbf{w t}$.

## 3B4242-Type Ld-17, each unit

 .00035 mf . List, $\$ 9.50$. \$5.58 NET


## B-T R. F. Choke Coil

Increases efficiency of circuits by preventing radlo freguency ebrents from entoring the andio circuits. Bank winding for better wenles. Housed in neat bakelite case with binsing ros terminals. 4 moun
3B4308-List, $\$ 0.90$. NET

53c

## B-T Socket

Takes all style of tubes with $X$ hases. Shock absorbing no cushlons needed. Molded bakelite. 8hipping
3B4229-Llst Price, 750.
NET

2 B-T Tunlug Controls (e) $\$ 2.51$, s.5.00; $1-.001 \mathrm{mf}$ Fix. cend. Dubiller, ioc: $1-.00025 \mathrm{inf}$ Fix. cond. Dubller $35 \mathrm{c}: 3$-. On

 1. doulle circuit Jack No. 104 , 80 c ; 1 slingle circuit Jack No. 101 , Circuit mack
 fire; 1 binitne nost- Ehy-engr-Ant jise: 1 one hole mounting virlp, zoc A Innes B. M. Nultiplug set, \& ft. cahle. $\$ 2.75 ; 1$ pkg. Leluen Colorui)ber wire, toc: miscellaneous lugs, $3 \mathrm{BIO} 70-$ Complete Kit. List, $\$ 85.35$. \$a, 50 MET. shipping weight, 25 ibs.

## Metal Panel For Counterphase Power-Six

Bronze panel, olegant walnut finish. Holes punched to talie B-T ipplaratus. Neatly engrat looking panel made apacity, five faze mehs, 3B4227-List, $\$ 6.50$.
NET
Metal Shield For Counterphase and Power-5ix A brass box, $23 \times 93 / 4 \times 67: \mathrm{B}$ inches. Fits in $7 \times 24 \times 7$ inch cab. inet. shilelds set complitely exeent for front punel. 3B4228-List, \$7.50. NET
$\$ 4.50$


B-T Torostyle Transformers
Roduces external fields, eliminates critical atugles, lessens interstate coupIing and pickup by the coils and wirlig. Makes a very sensitive and gelective r.f. amplitier. prame moulded hakelite. 7 binding posts arrnnged for simplitien wiring. Fior use with 00035 mif. condensers. Sisping wh. coupler 3B4232-Type TA Antermedial R, $F$. 3B4234-Type 4A for 4-tube set. Stajes.

List, $\$ 4.00$. NET

## B-T Tuning Control

Combines attractive appearance with the highest slexrer of efticlenrys. 12-1 ratio provides positive control with smonth, rasy flowing action. Works with rither right or left hand romidnistrs. kerersible erasthe dise is mallorated oll one slite in meters inm other shle for tation perters. Black ath Gold flaish. Haturter 4 luches 3B4224-List, $\$ 2.50$.
$\$ 1.47$

## NET

## Euphonlc Transformer

Produces remarkable anplification and tone quabity. biping one of the first constructtonal intin transformer improvements. Can be mountel "ither side ny, in rarious positinns to eliminate all rrossed wires, thus privent-3В4235-Type 210, ratio 2.2-1. \$2,94 list, $\$ 5.00$. NET 3B4236-Type 410 , ratio 4.7 .1 .3 .39 List. \$5.75. NET

## B-T Micro-Mike Condenser

Straight line capacity gives highly ac. cirnte and permanent adjustnulit from 1.30 numf. Indicator shows relative adjustmpit. Irse in any circuit for hal. ancing condenspr. Shipping wt., 1 oz .
3B4238-New Vertical Micro-Mike.
List. $\$ 1.00$.
NET

# The New Victoreen Super 8 



## Great Volume Hair-Sharp Selectivity

 \$689ㅡㅇ Net
## As Specified in Citizens Radlo Call Book

In this recaiver all tedfous and expensive matching and oscilfation suppressing methods have been ellminated, due to the exact design of the transformers. Alt core transformers are used, being sharply peaked at 88 kilomeles or $3+00$ meters. are used, being sharply neaked at 88 kilocycles or 3400 meters. This wave offers the lenst trouble from harmonics. Each
transformer has exactly the same amplifimetion constant and is matcher for wave length to within $1 / 3$ of 1 per contant Thus interstage coupling with attendant oscillations whicla destroys sensilisity and quality of reproduction is climinated.
Circuit contains: Oscillator, first and second detectors, 3 intermedtate frequency anmilifers and two stage audio. The audio stages use the new improved Victoreen 112 tranformer thit which is the highest grado availabie. Glves nerfect reprotuction of all frefuencles. Arranged for power tube in list stage. Switch proviled for use of elther a tapped loop or outside antenna. Very easy to construct. Completo instructions furnhahed.

## LIST OF PARTS

Victoreen Master Control with 2.0005 mf . Var. Cond. $\$ 19.50 ; 4$ Victorcen Inter. Trans. No. $170, \$ 28.00 ; 1$ Victoreen

Audio Control Unit, $\$ 4.50$ : 1 Victoreen 6 ohm Rheo. $\$ 1.20$ Coupler $\$ 3.50$ ohm Rheo., $\$ 1.20: 1$ Victoreen No. 160 Antenna Coupler, $\$ 3.50 ; 1$ Victoreen 400 ohm Pot., $\$ 1.50$; 1 Victoreen $\mathrm{i} \mathrm{i}_{\mathrm{i}} 150 \mathrm{Osc}$ nif. Coupler, $\$ 5.50 ; 1.001 \mathrm{mf}$. Fixed Cond., 40 c , 1 I mif. cond. Dub. No. 907, 90c; 2.00025 mp Grld Comt. With clips (c) 40c Dub., S0c; 2 -Niegohm Grid Leaks (a) 50c, \$1.00: 1 Victoreen Audio Unit type 112, \$22.00; 8 Frost No. 530 Suckets ( $w 40 \mathrm{c}, \$ 3.20$; $17 \times 26 x^{3} 1 \mathrm{in}$ inch Liknole Panel, dec. and dr., \$6.00; 1 Jewell $0-8$ Voltmeter, $\$ 7.00$; 1 Wooden Baschoard, $91 / 2 \times 25 \times 1 / 2$ in. 81.25 ; 1 Formica Strip, $6 x^{3 / 4} x^{21}$ in., $2 \overline{5 c} ; 1$ Formica Strip, $5 x^{3 / 4} x^{3 / 15}$ in., 24c: 1 Carter Fila ment Switch, 65c. 1 Carter 6 Jack Sulteh 10 . ${ }^{\circ}$. Eliy Eing. Bind. Posts, $\$ 1.50$; 1 Jones Type BMi Multiplug. \$2.75; I National Type 13 Dial, \$2.50: 50 ft , immed copper wire, 65c; 1 phg. Kester Solder, 25c; 1 Miscellaneous Nuts Lugs, screws, cte., 50 c : Blueprints.
3B373-Complete set of parts for 201A tubes.
LIst, \$117.99. NET.....................................
$\$ 68.96$
Lkt, \$117.99. NET.

## Victoreen Transformers

## Very sharp resonance point-

 means great seiectivity. Thus an aperiodic primary is used and interstage oscillation is suppressed, making set more stable. Potentiometer used solely as volume control, not as a loiser. Fach transformer tuned to $1 / 3$ of 1 per cent. No mintching of tules, no aljustmeuts to make. Jeak fit 85,000 cycles where there is no interfer-ence from harmonies.

3847 i 8-No. 170 R. F. Transformer for 201A Tubes. List, 57.00 . NET

384710 -No. 171 R. F. Transformer for Dry

384720-No. I60 Antenna Coupler.

## List, \$3.50. NET

## Victoreen Manganin Rheostats and Potentiometers

Wound with genulne Manganin Resistance wire. Many more turns used than usual. glving inher adjustment. Smooth rumning and noiseless. Resistance remains constant, regardless of temperature.
$384722-\%$ olinm Rheostat.
$384723-60 \mathrm{~mm}$ Hheoctat,
$384724-10$ olm Rheostat
$384724-10$ olm Rheostat.
$384726-00$ olum Rhicostat.
384727- 40 olnu Itheostat
List, \$1.20. NET
3B4728-200 onni Potentiometer
384729-400 olnm I'otentioneter
List. \$1.50. NET.



## Victoreen Audio Unit

Answers the need for a transformer unit that will pive wider tonal itwits with exceptional freethom from distortion. Many new measurements used to cheek the manufacture. A laboratory achievement of preciston. withont a peer. 384733-No. IJ2. \$12.94 $3847331 / 2$-No. 115 output Nnit. List. $\$ 10.00$. \$6.00

## New National Equitune Variable Condenser



These condensers incorporate many features not found in any other tyith condenser. An entircly new design of lifht right girder-frame construciton with plates shaped to give moxlified straight line frequency separation over the entire scale. Perfect bearings. May bo corpled in gangs. Efuipred with National type $B$ velvet vernier dial. $386300-.00035 \mathrm{mf}$. List. $\$ 7.25$. NET....
$\$ 4.35$
386301-. 0005 mf .
4.50

## New National Charger

An oxceedingly compact and reasonabiy miced charger for 6 welt batteries. Two trues One usitug two kastheon curtriber and hoving at cipactly of bot nu and 5 amperes: the other using one Raytheon Cartridge and delivering $20^{2}$ aniperes. Absolintely silent in operation. Gives silent in operation. Gives plled without Raytheon plied wit


Cartidges.

## NET.

3B6303-2 $1 / 2 \mathrm{amp}$. Rate. List, $\$ 7.00$. $\$ 6.00$

NET.

# Official Browning-Drake Receiver 

As Specifled by<br>Glenn H. Browning and Dr. F. H. Drake

Featured by Popular Radio

## $\$ 37 \frac{35}{w i t}$

Without Tone Filter
This is the fnal and official Browning-Drake circuit as develoned by G. H." Brownitug and 11r. F. H. Drake. The original circuit which has heen used for several years is the basis of this kit. It is noted for its sensitiveness, selectivity, volume and tone quallty. It has the highest radio frequency stage gain of any receirer on the market. This is due the
design of the transformers, the bunched primary tertiary coll being very closely coupled to the tuned coil or secondary.

The new Browning-Drake has the same distance getting ahility which made a transcontinental reception record of Loy Angeleg from Boston for sevett consecutive nights. it is extremely selective and is highy recommentied for the most congested locations,

In addition to retalning thls excellent selectivity and range, there is added a much improved audlo frequency amplifier using a combination of the famous National impeda-formers and resistances for coupling. The first and third stages are inpedance coupled, the second resistance coupled. Thits ampllfler has the advantage of amplifying all frequencles as bay varlous notes are retained and the result is pure undistorted music. Impedance coupled aniplification is becoming more mojulur with the constructors of recelvers, due to lts superlority in tonal color and musleal rante. In all tests with this set the cone speakers gave tho best reproduction.

The set is very easy to hulld and to opierate. Eserything is all worked out in tho laborutory so that the constructor

## National Impedaformers

For verfect reproduotion, the method of coupling by Impedance is recosnized now as the best. This method has the adrantage of reproduclug every note in the musical scale with extreme ficielity. The amplification per stage is high
compared to resistance methods. Due to the use of the compared to resistance methods. Due to the use of the Imjedance colls Instead of resistance, the full plate voltage reaches the tuhe at all eimes. All frequenclas as low as 25 cycies are amplified alike. Thus, the mellow. harmonious, background of the contra basses and cellos is not lost.


## Type "B"

This type impedaformer embodies a 100 henry choke coll, a .1 m . $f$. condenser and a stid leak in a single unit. Facllitates the assembly of the amplifler and saves space. The firet stage unit contains also an H . F. choke roit for the detector plate clicuit. ships. wt., $1^{1 / 2}$ lbs.
384 l 69-ist Stage with Choke. $3 B 4170-2 n d$ or 3 d d Stage without choke. $\begin{aligned} & \text { List. } \$ 5.50 \text {. NET, EACH... }\end{aligned}$
$\$ 3.30$

## Type "A"

This type consists of a 100 henry choke coil in a metal case. No stid leak or condenser. First stage unit includes an R. F. choko coll. Shpg. wt., 1 lb .
3B4:71-ist stage with R. F. Choke. 3 B4i72-2nd or 3rd stage without choke.
List, $\$ 4.00$. NET, EACH.
$\$ 2.40$


## National Tone Filter

Designed for use with power tubes to prevent the high plate voltage from damaging the loud speaker. Contains an lin* pedance of the correct ralue and a Tone Filter Condenser. No D. C. the speaker. Chattering, distortion and burn-outs are therefore prevented. Attractive metal case with tip jack connections. 5 foot phone cord included. Shlpping

## welght, $21 / 2$ lbs.

384173-List
$\$ 4,80$

#  

## Great Selectivity and Power with Five Tubes

## As Specifled by Citizen's Radio Call Book

A very efficient set, capable of wonderful tone reproduction. R. F. cir cult, well-known T, C., where one stage tuned neutralized R., F. precedes $^{\text {F }}$ regenerative detector. Variable coup ling is provided between the M. F. and detector for most efficient operation. Vinusually large condensers used in the amplifiers to insure reproduction of low notes. The well-kpown Samson Dual Impedances are used and the re pruduction is nearly perfect. The innpedance leak affords a greater amount of amplification and permits a very high quality of reproduction. Full size wiring diagram included. Panel size is $01 / 2 \times 24$ inches: depth 10 inches.
 Thinamin UX Cushion Snckets @ 75c, $\$ 3.75$; 1 Samson Coupler, $\$ 500: 2$ Samson Type 67, 500 mmf Variable Condensers @ 85.50, \$11.00; 2 Samson Tyje 85 Hadlo Frequency Chokes @ \$2.00, \$4.00: 3 Sanison ग'yıe 3 Audio Frecuency Chokes @ 83.25, 59.75; 1 Samson Type 61 Neutralizing Con denser $\$ 2.00 ; 3$ Samson Type $P$ Plate Impedances @ $\$ 4.50$ \$13.50: 1 Samson Typo $G$ Grid Impedance $\$ 4.50$. 1 Samson Type 0 Output imper G Gria mpedance, Type ${ }^{0}$ Output Impedance, $\$ 5.00:$. Samson Tyne ${ }^{\circ} \mathrm{Cn}$. rersal


## Samson Impedances and Transformers



Helically wound, gives superlor results In ail circuits. Especially recommendel adinetr woncterfui uno gitality by all eading engineors. Shippling weight, $13 / 4$ $384384-$ Standard Transformer (Type HW-A2). Ratlo 3-I. Llst, \$4.00. 384322 - Standard Transiormer (Type HET-A3). Ratio 3-I. List, \$5.00, 19
 HW-A3). Ratfo 2-1. List, $\$ 5.00$
 $38435 \overline{5}$ Standard Transformor (Typo HW-A3). Ratio 6-1. List. \$5.00. NET............................................. 3.19 $3 \mathrm{B4} 323$-Symphonlo Transformer. Wist, \$io. 00. NET ..................................... 73 384366 -Push-Puii input Transformer (Tyo Xi) Lst 550 NET H.........................................................3. 3 3P4324-Plate Impedance (Type P). List, $\$ 4.50$ $3843 \mathbf{2} 6$ G̈rid impedance (Type Gi). "List, $\$ 4,50$

 NET 328 -0utput impedance (Typa 0 ). "List, $\$ 5.00$
 \$5.00. NET (Type 2). List,
 former. List, $\$ 14.00$. NET...................................... \$8.92

## Samson R. F. Choke Coils

Hellcally wound radlo frequency choke colis. Very efficient in keeping R. F. current from

 NET 3 3 $360-250$ Milihenry. Mist. $\$ 2.25$.



## Samson Audio Frequency Chokes



Helloally wound A. F. Chokes for use in $A$. $F$. " $B$ "' battery fonde to hoen tho stages lsolated. Shtprin
$3 \mathrm{B436} \mathrm{NET}^{31 / 2}$ Henrles List, $\$ 3.25$ NET, ............is2. I 3R4362-30 Henrles (for power supply use)... List $\$ 5.00$.

## Samson Book on Amplification

Expialns all systems used, lliustrates them thoroughly, shows all of thelr good and bad points. A real text-book of audioamplification. Shipping wetght, 4 oz .
384333 -List, 25 c . NET.
.... 17 c

Sangamo Grid Leak Clips, 10c; 15 megohm Grid Leak, Lynch, 50c; 1 . 25 megolın Grid Leak, Lynch, 50c: 5 Tobe 4 mf By-Pass Condensers © $\$ 3.50$, $\$ 17.50$; 1 Tobe 2 m By-Pass Condenser, $\$ 1.75$; 1 Tohe 1 mf By-Pass Condenser 00c; 1 palr Yaxleg Pup Iacks, 30c; I Yaxley Filament Switch 50c; 11 Ehy Engraved Binding Posts, $\$ 1.65$; 1 CRL 500.000 ohm Variahle Resistance, \$2.00: 3 Type 3 Elkat Equalizers with Mounting (0) 75c \$2.25. 2 Type 4 Elkgy Equalizers with Mountor (10 750 M1.80; Blueprints and Instructions
38370 - Complete.
List price, \$1li.55.
NET....................................................................

## Samson Uniform Frequency Condensers

## A guaranteed condenser accurat

 within 1 per cent of laboratory fineness and precision. Ruggedly bullt. Will last indefinitely, Very low losses. Shipping weight, 1 lb .| No. M | List | Net |
| :---: | :---: | :---: |
| . 0005 | \$5.50 | \$3.5 |
| 00035 | 5.25 | 3 |
| $84336-.00025$ | 5.00 |  |
| 84363-.000125 | 5.00 |  |
| 84337-.000075 | 5.00 |  |

Samson Double Rotor Coupler Wound with doubio slik-covered wire on Formica tubing. 160-550 meters with 0005 mf . concienser. Rotors may he used as varlable, primary or tickler. etc. Solder lug cunnection. Shipping weight, 14 oz . 3R4329-List, \$7.50.
$\qquad$ ............................ $\$ 4,79$
3B4364-SIngle R ot or Coupler.
List, $\$ 6,00$, NET............. $\$ 3.90$


## Samson Antenna Coil

Used with double rotor coupler In Browning-Drake, T. C. DeLuxe circult, etc. Silk wound on Formica tubing. 160-550 meters with . 0005 condenser. Sifpping welght, $1 / 2 \mathrm{lb}$. 384330-LIst, \$1.85.
NET
. $\$ 1.30$

## Samson Vernier Dial

Universal-for right or left hand ro-tation-and non-microphonic. Adjustable tension. Very close hatr line. No back lash. Will wear indefinitely. For $1 / 4$ inch shaft. For years past one of the most popular vernier dials in tho market. Always firm and steady in operation, it insures the utmost in fine tuning and contrul.

Shipping weight, $3 / 2 \mathrm{lb}$
3B4365-List, \$2.50. NET


## Samson Neutralizing Condenser

For neutralization of radlo frequency amplifiers. Minl mum capacity, 00002 mf . Maximum capacity, 00015 mf .


OTHER SAMSON PARTS LISTED ON PAGE 36

Magnaformer 9.8 Comnnamererim. chie oftrmeAir A New Radio Thrill New and Novel Two Years Ahead in Design $\$ 795$ As Specified in Citizen's Radio Call Book
The new Magnaformer Circult incorporates the most ad raned design in rado cuality and merformance. facs nex Magnaformer Intermediate transformers with self-ehelosed.

tune it. famous Renner Drum lials. Ferranti equal amplificathon huilin transformers. Gutput tone filtur jrevents praker blasting; retalns constant quallty.

## Magnaformer Long Wave Transformer

A different and unusual trans.
 finmer. lermanently tuned ln the laburatory to exarly the same
wase lensth. Alwass rassus fill
 shefe hama. Lncoming siknal re reises donble the usual amount of ampllfirathon in earh R. F. stame. Viry pmerful output-r.cery snund rear and digtin". Yeak at 72
schentifirnlly shtehted. will mot oscillute. Nos fussing, no squeals are fired, sealeal and shieldal sem-

 /2 lb. List, $\$ 6.50$.

1 ses 71 xepl. unmutehed tubes, vixil2 in first sigge. T'X171 in speond stage. Instant chantre from 9 to 8 tubes. very senstive. As many as 43 stations from coast to coast and forcign countries logged in one might in Chicagos congested hroaderst area.

Can be huilt reig prsily by the most inexperienced set muther. Instructions ineluded.

## List of Parts

1 Formica $7 x 26 x^{3}$ in in. T)r, and Eng. Tanel, \$6.50: 1 For-
 Intempliate Trans, (6 $\$ 8.50$. \$12.50 1 Intcoupler. LC No.


 Palr-Beninn'n Bracker, Trans. $\pi$ \$8. 5 , \$17.00, -nmson Ra-in requent More .0nne5 mf. Grid Cond, with Mtes., \$1.00; 1 Tove nuft. By-pasb rond.. Bne: 2 Durlam 2 megohm Gill Leaks (a Sic 1 Frost Brituxe 40 ohro Fotentinneter, $\$ 1.25$; Frnat DeLuxe 10 olim Rheostat with Nwitrh. \$1.35, 1 Frost Delure 10 ohro Rhenstat. \$1.0n: 1 Frost Deluxe 30 ohm Rheostat, ${ }^{\text {an }}$. 112 , (an
 s1.10. \$2.2n: 1 Yaxley Table Con, No. 660, \$3.00: Winale voc, \$1.f0: 1 lackage Kester Rulin Solder, 25c: Mlscellaneous Lugs, Screws, Nuts, etc., 65r; 1 Net Blneprints, $\$ 1.50$. 3B356-Complete set of parts. List Price, \$ $\$$ NET................................... 95 $\$ 131.75$. NET

## The Thompson Super Seven Receiver

The Thompson Super Seven is a highly efficient Super Heteromyne recelrer that wilt satisfy the
 prominent parts manufacturers and incorporates all the latest lieas for a fille recpiver.

In all serch theses are used, hut they all work at maximum efficiency. girfing the elual of a 9 or 10 thibe set of ortinary design. The stages are as fulnos: melllatne, first detector, 2 stages fiter mediate frequenry amplification,
stages of audio frefurney
The famous Hallinrson transformers, noted for

 lornalenst area is areominilished regulariy with this
itue to the unlform desirn all leats are ghort and the set is rery simple and ehay to laidi. This is the of hast moditum sriced. Wifgh quality, pasy to milld, supers on the market.

## List of Parts

2 Iralldorson Iron Core No. 510 Trams, ${ }^{(a}$ tin.00, \$12.nn: Halldorson So. 541 Filter Trans.. 88.00 : 2 11alldorsnn Overtune Audio Trans. (a) $\$ 6.00$. $\$ 12.00 ; 1$ Halldorson Overtone Output Trans. \$8.n0: 2 Slleer-Marshall Irim Dials No. 805 (a- $\$ 3$ no. \$f.ón: 1 Lilis Oscillator Coupler. \$8.no; a SitrprMarshall Tuhe Surkete (a 50 r . 83.00 ; 1 IRenimin X Sorket, 75 c ; 1 Silrer-Marshall No. 340 Mielpet Conelenser. $\$ 1.50$; 2 (amfield . 0005 mf . Conts. m \$ $\$ 60, \$ 12.00: 1$ Yaxley Filament Sisitel 50, 3 Yaxley Tuy Jacks, $\because 5 \mathrm{c}$; 1 Tuhe 006 Condenser, siviteh. Tobe 1 mf . 'onclenser. $\$ 1.55 ; 1$ Tole .002 ('nndenser

## Halldorson Transformers

The result of many years of research in transfornier destipn anm acousties. Practically straight line where it drops rapldis, preventing tuthe inise and aulio frecuren's res the mise and aldio freduen'y reReneration. Amplifies ow notid ami nerennes. Beautiful brown nolislied bakellte case. One type for all circuits and all tubes. Ship3B1232, former. List, $\$ 6.00$. Audio Trans.

## NET

 3Bi233-ouvertone output Transformer. iist, $\$ 6.00$3R123̈4OPrecision Filter Transformer ilist, $\$ 6.00$ 3B1234-Precision Filer Transtorme................... $\mathbf{N . 6 0}$ 3B1235-Precision Intermediate Long Wave Transformers. List, $\$ 6.00$. NET

flin: 1 Yaxley 2L resistance. 15c; 1 Yaxley 3L resistance, 15 c ; 1 Yaxley 30 ohm Rheo.. \$1.35: 1 Nicarta $7 \times 21$ Panel Dr. and Fing. $\$ 3.40$; Micaria $3 \times 20$ Subsanel Dr. and Eug. $\$ 4.95 ; 1$ Lunch 3 meg. ETld leak, $50 \mathrm{c} ; 1$ Lynch Mountine Sisr: 1 Tohe 0025 Conilenser, $40 \mathrm{c}: 1$ Tobe .001 Condenser, 40 c ; 1 nikg. Relien Cnlorubber Wire, $40 \mathrm{c} ; 10 \mathrm{XL}$ Spring Binding Posis. $\$ 1.50:$ I Miscellanenus Luss, Screws, etc.. 65 c . \$79.30. NET.


## Ellis "D" Coils

Air insulation and spaced winding. tre sumprior because they bave suppr (1) 1 ml e; no interstage chupling mutchinss tone; freedinm from plek-un: unexcelied selectivity; low radio frequabicy reslatance. 10 w distributeli calurity. Sumports of bakelite. Fackerl in kits of 3.4 or 5 colls, as desired, at a list price of $\$ 2.50$ per coll.
3B3626-For . 00035 Condenser.
List price, per Coll, \$1.47


3B3627-For . 0005 Condenser. List, per Coli, \$2.50, NET 3B3628-Osclllator Coll for Supers for 0003 m . Con. denser. List, $\$ 3.00$. NET.

# The Best-Lincoln Super Receiver 



## As Specified In Citizens Radio Call Book

## List of Parts

3 Remler . 0005 mf . Var. Condl. No. 649 @ $\$ 5.00 . \$ 10.00$ 9 Benjamin Suckets 9040 @ 75c, \$6.75: 2 Carter Midiset 20 ohm Rheo. (a) 50c, $\$ 1.00 ; 1$ Carter Midget 3 olint Rheo. 50 c ; 1 CRL 50,000 olm Var. Res., $\$ 200 ; 1$ Yaxley closed circuit Jack, 600: 1 Yaxley open circutt Jack, $50 \mathrm{c} ; 1$ Yaxley filament Siritch. 50c; 1 Jewell 0.50 Millammeter-T'at-135. \$7.00; 9 Kury-Kasch Aristorrat Dials-wa'nut (a) \$2.00, $\$ 4.00$ : 1 Jones B. M. Multiplug, \$2.75; 1 Lincoln Oscillator Coupler-5 I.Inmf. fixed
 Leak Clips, 10 c ; 8 Ely Enkraved Binding Posts, $\$ 1.20 ; 2$ Thprdarson R-en0 Audio Transformers. $\$ 16.50 ; 1$ Thaorilarson R-76 Output Transformer, \$6.00; 1 Hammariund Midget Contl., \$1.80: 1 Micarta 7x:4xáif inch Dr. ancl Engr. Panel, \$5.60: 1 3x23x $1 / 2$ Whod Baselnard, 80c: 1 pkg. Kester, Radio Solder,
 Sirin ( 3 lole), $25 \mathrm{c}, 1$ 21 $1 / 2 x^{3 / 4} x^{3 / 2 n}$ Terminal Strip ( 2 bole), S3c: $13 \times 3 / 4 x^{39}$ Terminal Strip ( 4 hole). $25 r=13$ mesohm Grid Leak-Tobe. 50c; 2112 Ainperites © $\$ 1.10, \$ 2.20 ; 1$ Set

## 

## As Specified by Citizens Radio Call Book

An Innovation for the set builder. With this kit all of tho thrilis of bufliting your own receiver are experfenced, yet you have a factory-built and balanced receiver.
The Eight-in-Line unit consists of all narts excent those which go on the nanel. T"nit is all wired, ready to put the panel on. Only a few adritional parts are necessary. May pane onnected in a rery short time. Will outdenonstiate most sets now on the market-irnin connpetitive tests. May be


## Llst of Parts

1 Elght-fn-Ting TYit, $\$ 105.00 ; 1$ Limole Trilled and lennFaved Panel, 85.50 ; Frost 10 olim Rheostat No. 210.75 c Carter lilament Switch, 65 c ; 1 IIammarlund .000045 nif. Mid-

上et Varlable Condenser. \$1.80: 2 Kurz-Kasch Aristocrat Ver nier-Dials. Walnut Finish, $\$ 4.00$; 1 Yaxley 1 ohm Resistance
 silu Wire, sīe.
38337 -Completa set of parts. List
Price, $\$ 126.10$.
NET
..........
$\$ 7380$

Blueprints and Instructions, \$1.40; 1 Miscellaneous lugs, nuts, screws, etc., 50 c .
3B357-Complete set of parts. List
Price S12600 NET

$\$ 7650$

## Lincoin Transformers

The construction of these transformers makes a set operate with a peculiar efficient pera different its own. Each stage nperates at a dircerent harmonic of the fundamental freGnency, making the intermediate ampllfier its own fitter. This with the air core pives a high degree of selectivity. No stray fieldsno squeals or noises.
3B $1238-N i n e$ Ensemble- 5 Transformers and Coupler. List, \$42.00.

3B I $239-$ Eight Ensemble-4"Transformers and Coupler
$\qquad$



A nina tube set of very high quallty, Inter-
mediate transforniers are ions-svase low resistance air core transformers that are free from interstage oscillations without shielding. Thus when tuning there are no squeals or adius. sidies into simal and volume is only interferent needed. Selectivity is perfect. No station is from adjoining channel even thoirin of Thordarson R-200 transformers assures perfect reproduction of all frequencles in the audio stages.
Very easy to bulld by following instructions incluted in kit. Anyono can buld it with the precty marchert parts supp.ied $\$ 17.66$

Bodine Twin-Eight Six Tube Receiver.

## \$4495 Net

Using Bodine Twin-Eight Colle, a gang oondenser and phasatruis. combines the desirable features of superheterodyn and tumed r. f. sets. Knife-edge selectirity. Phenomenal ristance getting ahillty.

## Parts Supplied

3 Borline Twin-Eifht Coils F-135 @ \$2.00, \$6.00: 1 Bodine Twin-Fisht Coll T-35, $\$ 2.00 ;{ }^{3}$ Electrail Phasatrols (ie \$2.75. \$8.25; 6 Silver-Marshall 511 Tuire Sockets, \$n.00: 2 S-II 220 Transformers (ai) $\$ 8.00, \$ 16.00 ; 1$ S-MI 2,1 Output Transformer, $\$ 7.50$; 1 Grid Leak Mounifng, 3.ic: 1 AllenIsratley 3 meñ. Grid Leak. 60c; 1 Pair Silver-Marsha!l 540 Brackets. 70c: 1 Ansco 3-Gans Conclenser . 00035 . No. 1518. $\$ 9.75: 1$ Anisco Single Condenser 00035 , No. 518 . $\$ 3.25$; 2 Allen-Mradley Bradleystats e $\$ 1.85$. \$3.70;1 MF By-1'ass (onclenser. $\$ 1.00 ; 1.001$ Condenser. $40 \mathrm{c} ; 1$ :0005 Condenser,
 Front Panel. $\$ 5.50 ; 1$ 91/2x.50 inch Sub-Panel. $\$ 6.00 ; 1$ Coll Belden Colorubher Wire (Red), 40c; 1 Cnll Belden Colorubber Wire (Blue). $50 \mathrm{c} ; 1$ Coll Belden Colorubber Wire (Green),


Operates on efther loon or outside antenna, cutting through orals easily. Has excited tho wonder and respect of Chicago -xicrts.
Contains 3 stazes radio frequency which are very easy to huild and halance with phasatrols. Easy to build, simple to tune, cost is not prohibitive.

50c; 1 Coil Belden Colorubber Wire (Naturall, 50c: 24 inch Black Dials (Kurz-Kasch) (a) 85c, \$1.70: 1 Relden 5-1Vire Cable, 75e; 6 Binding Posts, Fhy, 90c: 1 Miscellanemis Serews Nuts, Lugs, etc., 65e: 1 Blueprints and Instructfons, $\$ 1.85$.
3B3 36 -Complete set of parts.

\$4495
THE M-S 8 PORTABLE SUPER

## Marvelous Power and Selectivity Most Efficient Portable Ever Designed


Thls view shows how the exrellent portable cabinet appears When ready to move. mall loon fits into it. The total assembly complete with hatteries watche nnly in Jis.
Thero is a gruat rempa ior portable set now and the bealer will thml a ready market for all he constructs.

## LIST OF PARTS

1 Panel drilled and engraved, \$8.00; 1 Raso Panel. drillest. \$.00: 2 Selectone Trans. R100. $\$ 12.00$ : 2 Sclectone Trans. H110 12.00 ; 1 Thor Coupler type 460. 3.50 ; 8 Parent Fickets. 5. 20 ; 1 Titordaidul A. $33 / 2-1, \$ 4.00: 1$ Thordarson a. Filuid MC-5, \$1.40; 1 , Jewell Voltmeter 0.5 V. 87.00 ; 1 Carter Rheo. M1-6. 50c; 1 Carter

 Cond. .0005. 40c; 1 Sangamo Conct. 3 -meg. Durham, 50 c ; 3
 Yaxley Mideet Jacks @ 30c, 90c: 16 pes. 10 pcs., $25 c$; 7 \$2.40; Miscellaneous screws, G6e; Rus wire, $\$ 0$ per. 3 B359-Completo set of parts. List,
\$82.50. NET..
Shipping xt., 20 lhs.

## St. James Upright Eight Receiver

The new Upright Elght, as specified in Citizens Radio Call Book, was deslgned for mounting in an allcomobile. It is an ideal set for the motorist, for it is always with him, ready 20 entertain at the turn of a switch. The pight tube circult, using St. James transformers in the radio frequency gtages and Silver Marshall in the audio end, is very efficient and will give distant reception on a small loobs. even under adverye innditions. I'erfect rejroluction and extreme selectivity combined.
Can bo assembled by anyone in a short time. Fxtremely slmaple when following the instrumions and blueprints included with kit. Shipping weight. 20 lbs .
38341 -Complets, as specified in CIt-\$49.25
tizen's Call Book. List, $\$ 82,91$. NET.... \$4.
The it 88 super is an 8-tube portable set of very great nower. using the famous Scoit Selectone transformers. It is the most stlective and most powerful port. able that can be built in a con venlent form. Its selectivity has an uin domannofafor in tuhbig in in the epening throusl the pow erful Chicago local stations with reat volume and with no buck eroulud of nearby locnl statlons In its cabinet it is very easily In laile and 15 easily nounds. The size is only $12 \times 1714 \mathrm{x}$ is inches. Everything is rediured excejt the efficlency and nower On a etandard size loop you mas expect the efflefency and resu equal to those obtained from
any super. The blue prints and instructions furnished simpilfy the assembly untll the most inexperienced builder can assemble and wire the complete outhit in only a few hours.
3 B6340-Portable case as illustrated above with built-li Speaker. Iess unit and loop. Shpg. wt., 15 lbs 910.50 List, $\$ 15.00$. NET
.....................
3Bi670-Junior Loop lhs. Llst, $\$ 5.00$. NET.

## St. James Transformers

The st. James transformers are sealed in a vacuum in a glass bulb, so that the atmosphere cannot affect them in any way. They have been tested by Captain Adams of the U. S. Sipnal Corps in all climates and adverse conditions. surh as in the tropics and aboard ships. The report is outstanding performanico in distancegetting qualitics and the ability to go through static ennditions. Their true form inductances are loss frec, and of very small size, preventing mierstage ooupling and outside pock-up. They operate on 240 kiloycles, giving nure r.f. amplification and a mindmum of repeats. Matched so acurately and tuned so sharply no filter stago
382729-Intermedlate Frequency Transformer. List, $\$ 7.50$. NET.

Lkt, \$7.50. NET........................... $\$ 5.00$. NET.
ET.
38273 i-Choke Coil. List, $\$ 1.50$. NET..


## Madison-Moore 8 Tube Super

As Specifed in Citizen's Radio CaII Book
The Madison-Moore incorporates the latest dovelopment in Super-Heterodyne circuits. It is built around the new transformers which are more wonderful than the previous MadisonMoore's. They give positive selectivity at any polnt on the dial and in addition higher quality and greater distance. Thins the frefuent occurrence of the high beat of one local station interforing with another station is elinllnated. No harmooroof any kind. Renosned for extremo clarity and lone.

Very easy to wire and assemblo by the most inexperienced constructor. it is very simple to properly balance the loop and oscillator circuits so that high selectivity and easy tuning aro obtained.

## LIST OF PARTS

1 Set of 5 Madison-Moore Uinits. 85,$00 ; 1$ Karas .0005 nif.
 Trans. (\&) $\$ 5.00, \$ 10.00 ; 1$ Frost 10 ohm Rheo, 75 c ; 1 Frost 20 Trans. 3 , 75 c : 1 Frost Filament switch, 300; 4 type 4 Eakay Equalizers with mtg., 75 c ; 1 type \& Elkay Equalizers with Equalizers with 75 c (ype 4/3 Elkay Equalizer with mts.; 75 c ; 1 Durmam 2 meg. grid leak, 50 c ; 1 Tobe .00025 mf . tix. Cond., 3isc; ${ }_{1}$ Tole 2 meg. grid leak, 005 mf . fx. Cond., $45 \mathrm{c} ; 2$ Tobe 1 mf . By-Pass cold. (1) $90 \mathrm{c}, \$ 1.80$; 1 Grid leak mounting, Daven, 35 c ; 1 Yaxley

Cable Connector, \$3.00; 7 Eby Engrared Bind. Posta 150.
 1)r. and EAg. fr. pan. $\$ 8.00$; 1 Formica Terminal strip. 3 hole. $25 \mathrm{c} ; 2$ Formica Torminal strip. 2 hole, $40 \mathrm{c} ; 11103 / 2 \times 2 \mathrm{xx}$ thonsonlen base board. \$1.00; 1 Set Blueprints and 1 tions. \$1.40; I Miscellane
Tinned Copper Wire. 80c. $\mathbf{3} \mathbf{8 3}$ - Complete. $\$ 113.40$.
NET.
Shlppling wit., 251 lbs.

## New Madison-Moore A. C. Transformers

When announced in the radio magazines we will have in stock the new Madison-Moore AC Transformers of the celebrated One Snot type. Buy them In matehed sets and bulld a batteryless Stuper that will onarate direct from the electric light socket. Same characteristi
Transformers. Shpg. wt., 3 Ibs.
3B324-List, $\$ 55,00$. NET. .
332.34 tonal reproduction. 6 megisters every tone perfecer. Air core
waves from 200 to 600 meters with. 0005 condenser. in sets of type mounted in nekel plated brass case. Hatched
flve transformers. Shpg. wt, 3 lbs.


## Madison-Moore Transformers

Made and tested with great precision. From Canada to Mexico and from the Atlantio to the Pacifle is their unrestricted rance. Extremely selective. No difficulty in tuning out powerful Iocals and bringing in the distant stations. Excellent ful locals and bringing in the distant statons. Degisters every tone perfectly. Covers


## List of Parts

4 Hammarlund Midine .000275 mf var. cond. @ $\$ 5.10$, $\$ 2.40$; 1 Hammarlund Doulile Drum Dial, $\$ 6.00$ : 1 Set Acme-Frecision double solenold col:s, 4 cotis type $4-\mathrm{B}, \$ 12,50$. 3 Samson 250 mh R. F. chokes © $\$ 2.25$, $\$ 0.75$; 1 Samson $\$ 5 \mathrm{mh}$ R. F. choke, $\$ 2.00 ; 3$ Polyniet Conclensers 02 mf @ $\$ 1.50, \$ 4.50 ; 1$ Polymiet conlenser $.00025 \mathrm{mf}, 35 \mathrm{c}: ~ \mathrm{i}$ Folymet condenser $.00075 \mathrm{mf} . \mathrm{m}^{2} 4 \mathrm{c} ; 1$ Yaxley combl), switch and Rheo. 6 ohm, $\$ 1.75$; 4 Carter 4 olim fix. resistance type $\$ 3.00$ @ ${ }^{25 \mathrm{c}, ~ \$ 1.00 ;} 1$ Yaxiey cable connector plug, type 660, $\$ 3.00: 2$ Carter 1 mp . plugs @ 15c, 30c; 1 Carter Tip Jack No. 10, 10c; 1 Carter Tip Jack No. 10 with insulating bushings, $15 \mathrm{c} ; 1$ Carter Imp . Nameplate derial. 5 c ; 1 Carter Imp. Nameplate, Ground, 5c; 6 Benjanin $\mathbf{L}^{\prime} \mathbf{X}$ sockets © 75 c ,

## Popular Radio L. C. 28 Broadcast Receiver

## The New LC-28 Receiver as Featured In Popular Radio

This new circuit is another of Popular Radio's creat features and lives up to their standard of excellence. $A$ six tuhe receiver consisting of 3 stages radio frequency, detector and 2 of audio. It is very selective.
Will bring in distant stations when used in the most congested broadcast arcas. Tlie use of Silver-Marshall transformer assures a quality of reproduction seldom attalned. The balancing is complete. No squeaks or squeals. The best you have ever uscd.
\$4.50; 1 Lynch Single resistance mounting, 35c; 1 Lynch suppressor. 500 olims, $\$ 1.50 ; 1$ Lynch Suppressor, 600 obms $\$ 1.50$; 1 Lunch Suppressor, 700 ohms, $\$ 1.50$; 1 Durham Metal ized Resistor, 6 mes. 50c; 1 Padr Tait brackets, $\$ 2.00$; ${ }^{1} \mathrm{~kg}$. Belden Colorubber wirc, 40 c ; 1 Aluminum chassis \$7.50; 4 Sets spectal aluminum box shields for LC-28 \$2.00, $\$ 8.00$; 1 Aluminum I'anel. 6x26 Inches, $\$ 3.00 ; 110 \frac{1}{4}$ inch extens'on shuft. ©ic: ${ }^{2} \mathbf{S}-\mathbf{M} 220$ Audio Transformers. $\$ 16.00$; Miscellaneous lugs, screws, nuts, etc., 65c: 1 Set Hue prints and instructions, $\$ 1.00$.
$38346-$ Cnmplete set of parts. List
price. $\$ 10670$. NET..................... Shippling welght, 30 ibs.

## Popular Mechanics Economy Nine

A new super by Popular Mechanjes. Resistanco coupled intermediates and S.M audio, make for wonderful tone quallts. This set will enjoy the same popularity the others from Popular Mechanics have. Super selective. Fery economical on batterics. A set well deserving of praise.

## List of Parts

 Pair S-M 540 Sub-Panel brackets, 70e; 2 Remier cond. No. 639.0005 mfd . (ti) $\$ 500, \$ 10.00 ; 2$ Remier dials No. 636 侖 $\$ 1.00, \$ 2.00$; 1 Frost 25 olum rheostat o $75 \mathrm{c}, 75 \mathrm{c} ; 1$ Carter open edrcult jack. short tyne, 25 c ; 1 Carter tilament switch, 65 c 1 S-M 342 midget cond.. \$1.50; 1 Benjamin 9040 spring socket, $70 \mathrm{c} ; 8$ Fkgs. Anicrican $\mathbf{U X}$ prong contacts, Style $A$, 80 c :
 1 S-M coll socket. type 515 , $\$ 1,00$; 1 S-31 2.10 aulio transformer, $8000 ; 1$ S.if 211 tuned-stafe transformer, at 45 to $50 \mathrm{KC}, \$ 6.00$; 1.0005 mfd . wlth gridleak clips, 4 (ic: 4 To',o cond, .0005 mfd . © 35c. $\$ 1.40 \mathrm{i}^{2}$ Tobe conil. . $00^{-5} \mathrm{~m}$ mfi.,
 $45 \mathrm{c} ; 1$ Alcoa aluminum shield $41 / 2 \times 6 \mathrm{in} ., 45 \mathrm{c} ; 1$ Tule 1 nifi. Snrews, etc. 65c: Blueprints, $\$ 1.00$.
38347 Complete set of parts
price, \$61.85. NET................

## The Quadraphase Five

## As Specified by G. M. Best in Radio with Phasatrols and Remler Drum Dial

## Another excellent circult by Mr. G. M. Best using the

 famous Phasatrols for complete neutralization. The set absolutely will not oscillate when properly adjusted. The efficient Quadraformer colls are entirely ahielded. There can be absolutely no plekup due to the colls and wiring. Thercfore the selectivity is very grcat. The colls are all matched at the fartory assuring a very efficient set. Single dial control is nttained by the use of a Remuler 3 gang condenser and Drum Dial.Fasy to operate for there is only one dial and the volume control. polume control perfecty from a whisper to a roar.
Parts Supplied
1 Set Quadraformer colls with sivitch equin.. \$I7.50; 5 Benjamin Cushion Suckets © $7 \mathrm{Tc}, \$ 3.75 ; 1$ Ninerican DeLure Tramsformer (First Stage), $\$ 10.00$; 1 American DeLuxe Transformer (Serond Stage), $\$ 10.00$; i Remler No. 633 capacity unit, $\$ 15.00$; 1 Remiler So. 110, Drubu Dial, \$l.00; 1 Frost No. $700-10$ olm Rheo., 75 c ; 1 Frast No. 203 Pantab Jack, 65c; 1 Yaxley Filament Swltch. $50 \mathrm{c}: 1$ Silver* Marshall No. 340 Mliget cond., \$1.30; 1 Pair BenJanin Brackets. 70c; 1 Electral Phasatrol, \$2.75; 1 XL G-5 ant. serles cond., $\$ 1.50$; 1 Tolse .00025 mf fix. cond., zive:


1 Tobe . 001 mf fix . ond., $40 \mathrm{c}: 2$ Tohe 1 mf bypass cond $\$ 1.80: 2$ No. 1 A Amperites @ \$1.10, \$2.20: 1 No. 112 Anperite, $\$ 1.10$; 1 Amsco Grid Leak Mounting 25 c : 1 Tobe 5 Neg grid leak, 30c; 11 Eloy Binding Posts, \$1.65; 1 BakeIte Panel, $7 \times 21 \times$ i'í inches, $\$ 5.19$ : 1 Bakelle Subanel

38348 Complete set of parts. LIst
price, $\$ 85.25$. NET......................................
Shlpping waight, 18 |bs.


## Embodies the latest prinelples of design to flll the most

 oxacting requirements of the get bullder. The audio amplifipr 18 a conbbintition of resistance coupling designed for powerSintrle control tuning by drum dial, with hrass. compenated condenser ganged in line and jermanently calibrated. The chassis is all aluminum. Panel is bronze with new
It is all ready assembled and wired so that it is only
Supplied either in a cabinet as shown or as a chassis withont cabinct. Fits any staudard $7 \times 18$ inch console or

3B11513-In Console Cabinet 16Bri391 shown on page 121 with ine quality in-buitit speaker, A very beautiful com. binatlon. Shpg. wt., 95 lbs.
LIst. $\$ 97.50$ NET
$\$ 50.55$
3BI 1514 -Chassis Only. Shipping wt., 22 . $\$ 27.61$
and tone quality process wood finish. necessary for the user to connect the batterles. cabinet.

PIERCE
AIRO

## 5 Tube T. R. F. Set

## An Amazing Value $\$ 1320 \mathrm{net}$

Many who bulld their own sets will welcome this Inexpen. sive 5 tube receiver. All parts are of pood quality and they will combine to make a rery high grade recelver, The con densers have an unusually wide tuning range so that selcetivity is assured. The high grate transformers assure excellen reproduction. Can he built by anyone in a few hours' time. Fibll instructions included with kit.

## List of Parts

$7 \times 18 \times 1 / 8$ inch melai panel, wh. and dom. \$7.00. 1
 minal strip ( 2 hole) ${ }^{25 \mathrm{c} ;} \mathrm{l}_{\mathrm{S}}$ Terminald strip wint postormers, \$4.00: 3 . 00035 M. F. var cond. @ \$2.00. $\$ 6.00 ; 231 / 2$ to audio trans.. $\$ 6.00 ; 1$ Polymet ${ }^{2}$ meg. grid leak. 25c; bee. Iur Carter Midget in nilm Rheo., $\$ 1.00$, 1 Battery Switel 50 c : I Carter Midget 10 film Rheo., $\$ 1.00 ; 1$ Battery Sinteci.


Fix. Cond. . 30e: 1 Polymet .00025 mp Fix. Cond. with Chps, $35 \mathrm{c} ; 3$ Bakelite Knobs (a) $45 \mathrm{c}, \$ 1.35 ; 40$ Feet No. 14 tinued 3B332-Complete set of parts. Llst, \$27.25. NET Shipping welght. 15 ibs .

## Hazeltine Neutrodyne

All the parts needed to bulld this clrcult, which has been the leader of all circuits. Tunes shargly through interference. Brines in disiant stations on loud speaker in clear, pure tones with wonderful volume. Stations are rery easy to Ind and may be logred permanently. Esseny wild a il censod under IIazeltine l'atents. You can easily build a high rracle recelver at low cost. quality consldeced, no other set of neutrodyne jarts equals the value offered here.

## LIST OF PARTS

70c: 2 Jrackets @ 5c. 10c; 1 Binding Fosts on Panel Strip. 0.5 M. F. Bypass Condenser, 80c; 1 Battery Switch. 30 ohm Rhenstat. 45 c ; 16 ohm Rhenstat. $45 \mathrm{c}, 5$ DeJur sring Nockets (a 250, \$1.25.
3B333-Complete set of
parts. LIst, \$39.60. NET.

## Sterling Microdenser

HIgh quality adjustable condenser of "micro" size with miaximum eapacity of approximately 5 micrnmicrofarads. The minimum capacity is extremely smali, For neutralizing is explate capacity of tuhey in nell-
grid plate capacity of tuhey in ilell-
irolyne $y$ nd other similar circults. One-plece rotary plate. ironyme and Because of The best grado of clear mica die coldered dlrectly into bus sinall size (1xi/z in.) can he soineren directy
wirlits without ouber support.
3 B4 122 -Capacity .00000025 to .000005 mf .
Llst, $\$ 1.00$. NET.
656
3B4 $\mathbf{3 6}$-Capacity . 0000004 to . 000040 mf .
Llst, \$1 50 , NET.

The Loftin-White Receiver
The first important advance since the neutrodime. A mmbination of inductive and caparltive coupling is used. This means that the solume will be proportional to the power of the station, not to its wavelengtha-no more jwor colume on lone wase statlons.
letel-batis has hrinu robirrly fllpinated- no distortion. Only fwo tuming santros tu make tuning easy. I esignst for greatest possblbe stathon separation. As a result of these new refineluelats this is the most hearly preffert receiver -rer desimed.
All parts suecified have been selwitell as the hest of their kind on the market.

List of Paits
1 Pacent Foundation Thit. $\$ 6.00: 1$ Frost. 10 olm Rherstat, Fic: 5 Jucent No. 83 cushion
 former. \$1500; 1 I'ucent outhut Surpraudion former. \$7.50: 1 Set Hanmarlunil I.. - W'. 'oils, $\$ 10.00$ : 3 Jlammarlund 0005 MF Midiline rimdensery (a $\$ 5.50, \$ 16.50$; 1 Taxley Minket Nat tery Switch. 30 : 1 Yaxley No. 704 Interstage .lr. Tack, $75 \mathrm{c}: 2$ Marco Illum, Dials No. 200-0-100, $\$ 7.00$ : $1:$ Ehy Binding Fosts. Enfraved, \$1.80:2 X-I Variodeneers, G-5 © $\$ 1.50$. $\$ 3.00: 1$ No. 112 Amprite, $\$ 1.10 ; 2$ No. 1A Ampertes, 1 Sangano Kit-Sperial Tested Cond.. $\$ 4,00$ : 1 \# mefolin


## R. F. Essential Kit

Another bargaln to boost your sales, to get fans started
 arcessarles ami supplies. Kit consists of the essentinls froils mounted on straicht line frequenery condensers. A remarkmounted on straight ine formain-a trade-get er,
103B3850-Sot of thres colls and
$5 / 19$
condensers. List, $\$ 10.00$. NET.

## 6 Tube Single Control Kit



One bakelite $7 \times 18$ drilled panel on LIST OF QUALITY triple modified S. L. F. 00035 condenser ind wound low loss colls, three low ratio audio transformers, one Cardwell dual balancet condenser. one Carter Hi-Ohm with switch 200.000 ohnis, two tlp jacks, six hakelite UX sockets, one Micamold .00025 grid condenser, one bakelte binding post

Here le the idgal kit for the fan who has been looking for ${ }^{2}$ hitph crade set at a moderate cost. Many bullders have reported excellent reception from distant stations with full loud speaker volume. With the single control feature anyone can operate it with wonderful results.

## Exceptional Tone Quality

Gives pure natural reproduction with any roond loud spenker hecause it has three stages of low ratio transformer couples amplification that muthe up tho wuk slemils th fulf otrongth
 171 lower tubes.

## High Quality Parts

All parts are of the finest grade. Triple gang condenser of modified line type. Accurath smare whond anjla, «éviute to one liulf of vite pet cent. Dual mideset condenser permits perfect balancing of the B. F. stafics.
A full size layout diagram is furnishod with uach hit. The instructions are so sinple that no experience is necessary to build this splendid 6 tube set.
PARTS FURNISHED
strip. six posts, one bakelite binding, nost strip, two posts. one grid leak 2 meg., one $41 / 2$ volt "c", battery, two brackets, screws, Wire, lusis, miscellaneous. Nothing else to buy except $7 \times 18$ cabinet. Shipping weight, 20 lbs.
$386481-L i s t, \$ 35.00$.
NET

## it

The 7 tube sets are now the most popular devolopment on the market. This kit is destinerl gives perfect ease of of all. One cfficient dial it pes perfect ease of operation. Anyone can tune it. Very efficient space wound coils. Variable resistance oscllation and volume control. The rear panel mounting tuning dial has a translucent scale illuminated by a small 6 volt lamp. Scale is easily read through an attractive panel window. Tho new Knight transformers in the first audio and push-pull stage give wonderful tone quality with the new 112 and 171 tyne tubes This kit has been very carefully selected and the builder will find it very easy to assemble and Wire. COMPLETE LIST OF PARTS

1 Bakelite $7 \times 24$ panel drilled. $19 \times 23$ baseboard, 1 Modified SL.F triple, . 00035 condenser, 1 Illu, minated diAl, 3 space wound $R$. F. coils. I griul
condenser .00025 , 1 grid leak ${ }^{2}$ meg. 1 Single minunt tug. I 1 resistor leak meg.. 1 single with switeh, i Cardweli dual midget condence 200.000 ohm ${ }^{1}$ K200 transformer, 1 Pair Kinicht push pull transformers. UiX sockets, 1 By-pass condenser .5, 1 Binding 7 Bakelito with two posts, 1 Binding post strip with Binding post strip

##  Bulld and Operate


denser, 1200.000 ohm resistance with switch, 3 space wound pull transformeis stages resistance coupling, 1 pair Knight push condensers, 1 . 00025 bakelite grid sockets, 1 mfd . by-pass condensers,
meg. leak, single mounting. 1.1 resistor, 2 tip jacks, 1

## Unitume 2C

This basio instrument consists of two BRUNO . 0005 mfd. Condensers trownted on an aluminum frame, a bronze nanel plate and two cirums, with scale.
$\mathbf{3 B 6 5 2 5}$ Priee, complete. assembled.
. $\$ 6.40$

## Unitune RF

Conslsts of the basic condenser frame, Model 2C. and two Bruno Low LOAS JFF eransformers. This conisination provides two radio frequency stages and covers a Wavelength of 300 to 550 meters.
3B6526-Price, complete assombled......... \$12.00

## Unitune TK

Similar to Model RF except that right hand condenser 386527 holds Threo-Circuit Tuner.
386527 -Price, comploto
$\$ 12.40$
BD UNITUNE-Two condensers and two specially wound colls for use only in the BROWNING-DILAKE Circult. $3 \mathrm{B6528}$ Price

Here is a very powerful modern radlo receiver capable of sensational long distance reception It tunes very sharply through crowded broadcast areas and brings in distant stations with ease llenty of reserve power for coast-to-coast recention. With it the operator does not need be content with local statlons. He can reach out and fet some real DX. The set contains two stage resistance coupled audio stagen and a naw pughintill stage witch reproduce the most elaborate renditions wifh hiphsirwa tone and abible rolutue for a room of any reasonable size.
Only hich mrade parts aru supphled for this kit and the instruntinne mathe if citsy fur for thinis obluiti harveluus recention at. a modarate price. LIST OF PARTS
 board, 1 single . 00035 condenser, 1 double 00035 condenser. 2 illuminated dials. 1 midget emnbinding post strip, 2 posts. I linding post strip. 8 posts, screws, wire, lugs, miscellaneous.
Slinping weight. 25 lbs.


BRUNO Unitune Units


These instruments are very convenient and permit the bullding of a set pery striking and attractive in appearance. The basic unlt is a double condenser consisting of two Bruno .0005 mid. condensers mounted on an aluminum plate but, patirely inculated from cach other electrically. Adjustment is provided through a pair of noulded bakelite drums, whose knurled edges and grad. uated scales protrude through the front surface of the pranel. Tho drums , cap bo operated individually or together. No sumplementary "vernler" condensers are necessary. Handsome bronze escutcheon plates included.

# Electric Phonograph Pick-Ups 

## Electrical Reproduction of Phonograph Records

## How the Electric Pick-Up Operates

If you have heard an electrio phonograph, you no doubt niarveled at the fidelity and naturalness of tone and the majestic volume of the renroduction without a trace of blur or distortion. Phonograph engineers turned to radio to obtain this depth and fullness of reproduction together with great volume without distortion. Contained within their cabtnets are the latest tyne of radio power amplifiers-the eecret of helr life-like and natural reproduction

Recently engineers have developed a simple and highly ffective method for converting the oid style phonograph into an electrlc phonocraph. In conjunction with a radio recelver, tagether with an electric plek-up such as the Gradeon, phonorox Sensitone, or others, and apy old style of phonohonh ox. Sensitone, or others, and any old style of phonograph, the quality of reproduction similar to that of the expensive electric phonographs is easily obtainable. No changes whatscerer are male in wiring of set.

The Pick-Up consists of three units-the reproducer, the adapter, whieh is inserted in the detector socket of your radio set in place of the detector tube and- ine volume control uuit. The reproducer replaces the ordinary reprolucer and consists assentially of a permanent mamet in the fleld of which is a
spectally designed coll: an 1 ron rod placed within the coll erminates at the needle support or arm. A cord connects this reproducer with the adapter, which is inserted in the detector socket of the radio set.

With the Pick-Up thus attached, and the radio aet turned "on." the Phonorraph is started. As the needle moves in the grooves of the record tt actuates the Iron rod, causing the magnetic fleld about the coll to be altered, thereby settinks up a current in the coll. This current varles in propor tion to the intensity of the ribration of the needle in groove of record.
the energy thus dereloped is transferred, through the adapter in the detector socket of the radio set, to the audio requency aniplifier. Here the small initial energy is, built up and ampilfled many times-just as a radio stgnal is amplifled-then dellvered to the loud speaker with a volums ample for all occasions. By the ald of the Folume control the volume can be conventently varied from a whisper to the volume sultable for danctng purposes. With electric reproduction you will particularly note the entire absence of all forms of Interference common to radio reception such as static


## viak Rad

A marvelous now tone recreating instru. ment which can be attached to any phonograph in a few seconds. Changes your phonograph into a modern radio-actuated musical instrument of unsurpassed tone quallty. Outflt cunsists of a VIA-BAD\& specially designed reproducer-which attaches to the tone arm In place of the phonograph sound box, a VIA-TECTOR which fits into detector socket of radio set and VIA-TROL for regulating the volume. Easy to install, rugged and fcol-proof and cannot get out of adjustment Control your own broadeast prosrams with a VIABADI Can be used as a dictaphone. Send for information. Shlpping wit., 3 lbs. Basporive \$6.00
 up. NET. 156
P. N


One of the most sensitive and yet most rugged of this class of devices. Incorporates the most scientific construction. Made of best materlals. Perfect workmanshid Gets the most Folume and produces most perfect tones. Complate with Folume controi and tapter Shipping wt 5 lisg 382653 -With Tone arm. *in 1.9 Llst, $\$ 18,00$ NET. . None".... ar'm. Repro. duver fits standard phono-tone ar List, \$16.00. NET
$\$ 9,60$


Pacent Phonovox
Electric Phonograph Reproducer
This unit, developed by Pacent En. gineers, though very low in price has proven to be ons of the best. It provides true tone values together with volume that will equal the electric phonograplis selling at several hundred dollars. Equipment consists of Reproducer, volume control, slug for detector socket and connecting wires. Shipping wt. 3 lbs.
$\$ 7.35$

## $\$ 12.50$, NET



Provides an auxlliary arm, 50 that the regular phonograph equipment need not the disturbed. Consists of syecial electrical recreator unit with arm, whteh plugs directly into detector socket of radio set and a sensitive volume control which is placed in the spoaker circult. Simple instructions furntshed -anyone can install and operate it. Shipping wt., 3 lbs.
386494-List, s20.00. \$11.76 NET


## Na-Ald Electric

A masterpiece of aooustical engineering, havirgs features that cannot be claimed by any other device of its sind. Embodied is a valume control which makes pussible perfect musle from whisper to the full biast of a jazz band. Also has a needle-scratch fiter which eliminates the annoying hissing sound of the needle over the record Installed Instantly in place of regular mhonoeraph unit ship. wt. 3 ths. 386493 -Llst, $\$ 10.00$.
NET ........................... 88

National Scratch Filter
For use with electrical phonograph plek-ups to subdue the amplification 386498 -List, $\$ 5.50$.
NET $\$ 3.30$
Daven Electric Phonograph Pick-Up


A new ides In pick-ups. Mapnetic type with double coll. Completely covers musical tange with equal effi ctency. Greatest volume. No needle gcratch notse. Has volume control. Ured without changing phonograph tone


Attached to the tone arm of any phonograph, the Gradeon carries the
sound impulses from the record through the audio tubes of the radio set amplifies them electrically. picks up all the fine tones usually lost and pours them forth in glorlous splendor and volume through your radio loud speaker. Vol uige enough for dancing -tone quallty surpassing the most expensive

nstruments.
You can make the newest. the most sensational of all music reprom ducing instruments using only your phonograph and your radio! phonograph Instrument adds the wizardry of radio to your most belover phonograph records. No matter how satisfactory your present phonograph may be; matter how splendid your radio-you can create an eva bey 3B2650-List, \$17.50. NET.

# Our Special Amateur Section Everything For the Ham Station 

 Aero-Coil Short Wave Kit

## \$2 665 complete

## As Specified In Citizens' Radio Call Book

The Aero Short wave kit makes the ideal receiver for the anateur. Its distance getting ability, selectivity, volume and easy control make it tho leading short wave set. Used by the torics. Govarnment. Broacicasting Stations, tiniversity laboraGreenliuld Expedition Expedition, Liniversity of Michigan, Greentiand Expedition, and by hundreds of leading experts and andeteurs throughont the country. The coils are coin. cotele or broaderist stations ong possible the reception of either code er broadeist stations on any of the short wave bands. sujpilied for tunines are employed in a feed back clrcuit. 550 meters by auining from $15-130$ meters, but will tuae up to 550 meters by auding colls INT-4 and INT-5.
LIST OF PARTS

1 Aero Foundation Unit, \$5.75; 1 Aero Short Wave Tuner Kit LWT 125, \$12.50; 1 Aero RF Choke Coil, \$1.j0; 2 Na tional Type B Dlals © (©) $\$ 2.50$, $\$ 5.00$ : 1 Amsco . 00014 Conct. \$2.75: I Amisco . 00025 Cond., $\$ 3.00$; I Yaxley Battery switch, soc: 1 Yaxley 25 ohm Theo., $\$ 1.35$; 1 Bedjamin 9010 Socket, 75c; 9 XL Binding Pests, $\$ 1.35 ; 1$ Carter . 0001 Condenser

Witl Clips, 50c: 1 Yaxley 2 ohm Res., $1 \overline{\mathrm{c}} ; 1$ Tobe Tipon 5 Bleg. Grid I.eak, 50e; ${ }^{2}$ Thordarson $6-1$ Trans., $\$ 9.00 ;$ Bus 3 Bionc: Lugs, Nuts and serews, juc. List Price, \$45.85, NET.
\$2665
Shipplag weight, 15 lis.


This kit consists of three interchangeable colls, i5 to 130 meters, each unit comprising a grid and plate inductance. Base is provicled with a mounted adjustable primary coil, whose coupling may be set to sirt long or short anteuna. Any low wave tuner can be greatiy improved by using $A E R O$ short wave coils. Used by leading engineers and annatetrs througiout the world. Gises 00014 tuning colndenser, 00025 perdback condellser. In luties 3 coils and mountin: base. Shlpping welght, it, ita $383522-10$ LVYT-Iき5.
List, $\$ 12.50$. NET
$\$ 7.34$

## 8roken Kits.

$38: 063-N o . N T-1$, Range $15-33.5$ meters. 38 O64-No. NT-2, Hange 31.5-6X meters. LBIO65-No. INT-3. Hange $57-133$ nieters. List, each, $\$ 4.00$. NET

## Aero Interchangeable Coils

Optional for Greater Range with Short wave kit.
3B3524-LNT-4 Coil, $125-$ 850 Meters.
3B3526-INT-5 Coil, 235 550 Mcters.
3B6404-N゙T-0 Coil, 13 -
20.4 Meters.



## Bremer-Tully Short Wave Kit



This is the short wave outfit with which $2.5 Z$ copied the flrst news of Byrd's successful filght over the in coils and (onsists of four plusin coils and base; adjustable, roon skeleton framework: fixed, ca-macity-rennt rollati tiolikit ut fif a ment ent of colls: covers is to 207 meters with B-T I. 7 , 150 minf. condenser and $\mathrm{L}-13$, $\mathrm{e}_{5} \mathrm{n}$ mmf. reseneration control. Nhipping wit. 1 pound.
384241-Short Wave Outfit.
List, \$8.50. NET
\$5. 10

# Our Special Amateur Section 

## Silver-Marshall Short Wave Kit



The S.M 635 Short Wave KIt contains carefully designed and matehed essentials for constructing a receiver with warelength range from 18 to 150 meters and a practically unlimited distance ranke.

Has been given great prominenco through its use by expeditions such as Commander 'Tyott's in Brazil. Usillg the fotr colls sumplied. the amateur transmitting bants fall wefl to the center of the tuning condenser grale, and mas be shifted as desired irrespective of normal antemina length. "Dead syots" Further, the antenna condenser allows easy adjustment of ant. tenna coupling to suit individual condition of location and antenna.

When built up using a pair of 220 transformers for aludin amplification. makhus a three tube set, they will give excellent reception of distant short wave amateur and broadcast stations oven in hal radio conditions.

Flt contains one each No. $117 \mathrm{M}_{4}$ N. O. and P. plum in mils: oue 515 coil socket one 340 midget condenser and rariable condensers. Welght. 3 lbs .

## 384875-List price, $\$ 23.00$. NET.

\$13.52

## Type 117 Kit of Coils Only

Consists of one each No. $117 \mathrm{~m} . \mathrm{N}, \mathrm{O}$, and P coils Heensed under Armstrong Patent No. 1.113.140. Range $18-150$ meter: whth 00014 mfd . contenser. Weisht. 1 ll . 3B4B19-List price. \$ll.00. NET PRICE
$\$ 6.47$

## Hammarlund Space Wound Coils

For the amateur who makes his own coils. No. 16 treen-cotion-sili cov-
ered copper wire. space ered copper wire. space
wound tent turns to the Inch, on transuarent celIuloid composition tube .00.i inch thich, 3 inches dinmeter. Fxceedingly strong and runged. For choke colls and ticklers nuother size is avainable-11/2 inches dinmeter, No. 36 simgle silk covered wire, 90 turns to the inch. Use these meritorious inductances in your own recedver design. Maximum length $2^{\prime \prime}$ inclies in one piece. $385910-5 i z e 16$ wire.
List per inch. 40c. NET.
24c

## Barawik Choke Coils

A smalf low capacity choke coil for re. ceiver plate chokes has been in demand for some the as few amateurs care to go through the necessary experimental work to arrite at the best values. Here is a diameter and one-cuarter inch thick, wound with fine wirc. They are especially manufactured for us and have been recommented in many QST articles. Unmounted. two leads. Posiare 3 e extra. 385903 -Each.


## Tubes for Short Wave Receivers CX300A-Power Detector

A very sensitive power detector. Gas flled piving very mrat scrsitirity, yet it is rery stable and noncritical in adjusiment. Produces loud signals which would otherwise be unheard. Oscillates as low as ten meters. Fllament 5 volts. $1 / 4$ amp. 3B103I-Cunningham cx300A. List. \$4.00. NET
\$2.74

## CX340-Hi-Mu Amplifier

This new tube is especially suited to inmateur work. Its high plate impedance when used with trinsformers peilis the amplifier at 1000 cycles. piving tremendous amplificntion to the signals but not amplifying static and similar noises. Amplification constant of tube is 30 . Filament 5 volts: $1 / 4$ amp.
2B939-Cunningham $\mathbf{c \times 3} 40$.
List. \$3.00. NET.
$\$ 1.54$

# Our Special Amateur Section 

## KarasOrthometricShort Wave Condensers <br> Die-Cast Condensers



Karas Condensers are an tiful workmanship and eleccombined in one unit. The plates are shaped of heavy lacquered brass, securely soldered and give a stralght-linefrequency curve. The rotor is pigtalled an insulated spring-bronge post through noiseless action. The insulation is efficient and the condenser resistance is negliglble. Avallable in three slzes. Prices are prepald.

|  | Plates | minf. |  |
| :---: | :---: | :---: | ---: |
| 381823 | 5 | 100 | $\$ 3.90$ |
| 381899 | 7 | 140 | 3.99 |
| 381824 | 11 | 250 | 3.90 |

## Cardwell Variable Condensers

No better can. denser can be used radio get than a Cardwell.
 warch equipment and experimenter for many years, and thelr quality is unexcelled. types are avallable. The new type F Taper Plate is the latest model gtraight-ine-frequency style and is model straight-line-irequency style and is daily becoming more popular. Its use is recommended in the tuned circult of the rewave length gtyle and is intended for elther Wave length gtyle and is intende
regeneration control or tuning. regeneration control or tuning. List Net $\begin{array}{llll}3 \mathrm{~B} 3400-191 \mathrm{E} & .000075 & \$ 4.00 & \$ 2.66 \\ 3 \mathrm{~B} 3401-167 \mathrm{E} & .00015 & 4.00 & 2.65\end{array}$ $3 \mathrm{B3401}-167 \mathrm{E}$
$3 \mathrm{~B} 402-168 \mathrm{E}$

## Type C

Tuning curve gives straight irequency at low end and straight wave length at top.

| $383444-167 \mathrm{C}$ | .000075 | List | Net |
| :--- | :--- | :--- | :--- |
| $383446-168 \mathrm{C}$ | .00015 | 4.00 | $\$ 2.70$ |
| $383446-170 \mathrm{C}$ | 00025 | 4.25 | 2.80 |

## Chelton Midget Condensers


pled antenna circuits. rubber insulation, not in electrostatic field. One-hole mounting. Postage, 3c extra. 383423 -Panel Mount type- 13 plates maximum .000045. Each ............89q plates maximum 000035 Each.......... 894 $383426-$ Base Mount iype-9 plates
maximum .00035. Each.............. 33

## B-T R. F. Choke Coil

Thls is a small choke, mounted in a moulded bakelite oase with two binding posts for connection. It consists of several series windings of fine wire on a wooden spool and has a high L/C ratio. Sultable for recelving sets only. 538
$384308-$ Each...
Fixed Condensers See pages 94, 96


The Bremer-T a rugzed, electrically a rugbed, electricaliy elficlent dio=0ast
model throughout The rotor and stator The rotor and stator
are individual castare individual casttween metal endplates and securely pigtalled. Clear bakelite insulation, adjustable rotor tension, straight-line wave of its features. Two sizes are available. oi its features. Two sizen are available.

| 384243 | L-7 | 150 | Price |
| :---: | :---: | :---: | :---: |
| 384244 | L-13 | 250 | 2.65 |

## Hammarlund, Jr.

A baby precislon condenser b u 11 t Soldered brase. plates, cone bearvice for any position. Slagle hole mount-
 ling. Just the thing for that 5 meter transmitter or wavemeter. Shlp. wt., 5 oz .

|  | M. Cap. | List | Net |
| :---: | :---: | :---: | :---: |
| 383336 | . 000032 | \$1.50 | s |
| 383337 | . 000050 | 1.50 | 90 |
| 83338 | . 000065 | 2.00 | 0 |
| 3 B 339 | . 00001 | 2.25 |  |
| B331 | able | ting | 15 |

bracket for above. Mounting 15
National Transmitting Condensers


One of the finest types of high voltuge condensers that can be made. These are double or tripie spaced models, ruggedly. built of aluminum plates and securely plr-talled. Supplied with Nutlonal Fclvet Vernler dial and pointer and completely mounted for quick instalfation. 385928 - 3.0001 nit. -6000 volts. List. $\$ 12.50$.
Net.

 Net
$\$ 5.25$
 ${ }^{311.60 .}$ $\$ 8.05$
 Siet
Net...
$\$ 11.55$

mounted
mounted on a polished wood base. Buzzer reproduces accurately the high pltched sounds of code stations. Connect a dry battery to the blading posts on the set by means of a short plecre of wire, press the key and a buzzing sound will be produced. In a very short time your ear will become accustomed to the varl ous comblnattons of dots and dashes representing difterent letters and numerais. Chart included with each set. Base size, 7 inches long by $48 / 4$ inches
सुde 9 998-Euch........... $\$ 2.89$

## Hammarlund Midine Condensers

A new shape of plate ly S.L Wetween marlund's latest and embodles several new principles. Full floating rotor shait. Pignished and lacquered brass plates. Lowest lonses. Mechanticay and elec-

| 383323 | Plates | Cup. | Prlce |
| :---: | :---: | :---: | :---: |
| 383331 | 5 | .00025 | 33.85 |
|  | .001 | 3.61 |  |

## Mamintrinta So mín

Alight, stroug and efficient stralght-llnefrequency condenser assembled from polisned brass plates, securely soldered and pigtailed similar to the Midline. The frame is rib-reinforced aluminum alloy: the miniminm of dielectric is used and the unit $s$ single-hole mounting. The shaft is full foating with ball and cone bearings and a friction brake Two typeg are nvallable the standard single-speced model in thred the standard singlespaced model in three model especially Intended for short wave model, especially intended for short-wave Postage, 8c extra

|  | Plates | mmp. | List | Prlee |
| :---: | :---: | :---: | :---: | :---: |
| 3B6386 | 5 | 100 | \$4.76 | 53.06 |
| $3 \mathrm{B6386}$ | 7 | 150 | 6.00 | 3.26 |
| 3B6387 | 11 | 250 | 5.00 | 3.25 |
| $3 \mathrm{B6388}$ | 11 do |  |  |  |
|  |  | 100 | 6.00 | 3.25 |

## Hammarlund Transmitting Condensers

Tested to withstand very high potentials. $\begin{array}{llrr} & \text { Max. Cep. } & \text { List } & \text { Net } \\ 3 K 3461 & .0001 \mathrm{mfd} . & 6.00 & \$ 3.90 \\ 3 K 3462 & .0002 \mathrm{mfd} . & 7.00 & 4.55 \\ 3 K 3463 & .0004 \mathrm{mfd} . & 10.00 & 6.50\end{array}$
Cardwell Transmitting Condensers


A very popular condenser for amateur stiflons. Bullt with the areatest arebeavy low loss construction, wider suacing. high insulation, lower losses, are their main features. Shipplig welpht 5 lbs.

|  | Cap. mmi. | Type | et |
| :---: | :---: | :---: | :---: |
| 386391 | 245 | 14-H3 | 34.26 |
| $3 \mathrm{B6392}$ | 480 | 123-13 | 6.09 |
| 386393 | 954 | 137-13 | 6.00 |
| 386394 | 217 | 164-B | 7.00 |
| 386395 | 441 | 147-13 | 10.00 |
| 386396 | 217* | 157-13 | 12.00 |
| 386397 | 330 | T-I99 | 10.00 |
| $3 \mathrm{B6398}$ | 110 | T-183 | 10.00 |
| +1 ${ }^{\text {\% }}$ OU1 | ator, | ity | 10n. |

## Standard Radio Key

A heavy type
of Radio Key
desfgned ior
radio work. The
arm, base, and
supporting posts are made of heavy cast brass. The whole key is of rugged cbnstruetion, so it will stand up well under rough usage. The contact points are $1 / 1$ Ilssipetion. Which ussists materially in the made of a metal which will resist arcing


## Our Special Amateur Section

## Aero Transmitter Kit

A universal transmitter designed by $\mathbf{M r}, \mathbf{F}_{\text {, }} \mathbf{J}$. Marco, noted short wave export. Cronra amateur hands with intercbaageable colls. Cses tuned-grld tunedplate circuit. Extremely flexible. Makes a sery efticlent low power. luag ailytance. Has worked all districts from Chicaso and Nev York refularly using only a 201-A tube. May be used with tubes not larger than $\mathrm{i}_{1 / 2}$ watis. Supplied for two different ranges. If to be used with A. C. fllament supply specify so A. C. voltmeter will be supplied.

## List of Parts

1 Aern Transmitter Kit, 2040K, 4080K, or 9018 K with 2 mounting bases and 2 No. 248 choke colls; 3 . 0005 Variable Condensers, Karas; ${ }^{3}$ Dluls; 1 Curter T. P. $10000-25$ reslstance; 2 Carter .0001 Mica Condensers; 2 Carter .00025
 Mice Condensers; 1 Silver-Miarshall UX Socket; 7 Binding Posts; I Micarta $7 \times 18$ Panel; 1 Micerta $10 \times 18$ Sub-Panel; 10 lengths No. 14 Tinned Copper WIre; 1 Miscellaneous Screws. Lugs, Nuts, etc.; 1 palr Aero Subpanel Brackets. (This Kit does not include Meters.)
3B378-For 16.5 to 52 Meters, 2040K coils. (This Kit does not include Meters.
$\mathbf{3 B 3 7 8 - F o r} 16.5$ to 52 Meters, 2040K coils.

3B379-For 36 to 90 Meters, 4091 K colls.
3B380-For 72 to 190 Meters, 9018 K colls.
Complete set of parts. List, $\$ 44.25$.
NET ..............................ish ibio.
\$2565

## Transmitter Kit with Meters

These kits are exactly the same as the above except they have in addition $10 \times 18 \times 1 / 8$ panel; $10-100$ D.C. Jowell Milliammeter; $10-10$ Jewell Voltmeter
and it Ampere Jowell Antenna Metor. Specify whether to be used vit A. C. or D. C. flament supply. Slupping weight, 22 lbs .
$38382-16.5$ to 52 meters. $38383-36$ to 90 meters.
$3 \mathrm{~B} 384-72$ to 190 meters. List, each, $\$ 67.60$, NET
$\$ 4467$

Interchangeable Transmitter Coils
3B3629-2040C 16.5 to 52 meter coil. ( List, Each,
$3 \mathrm{~B} 3644-4090 \mathrm{C} 36$ to 90 meter coll. $\$ 4.00$.
3B3631-9018C 72 to 190 meter coll. NET 4235 3B3632-PRI 300 Antenna Mounting Base. $\$ 1.76$ List, $\$ 3.00$ NET..................................
3 B3633-GRID. 100 Grid Mounting Base.




Jewell
Transmitting Trio
These are the nec. essary instruments for amateur transmission. Unlform in size, 3 in . body. $3 \% / \mathrm{ln}$. flange. Shy. wt.: 3 liss.
No. 54 D. C. List, $\$ 7.50$. NET. $\$ 5.63$ $3 \mathrm{~B} 1970-0-10$ volts.
$381971-0-3 \mathrm{amps}$.
$38: 924-0-10$ milliamps.

3B1927-0-300 milliamps.
$3 \mathrm{~B} \boldsymbol{9} \mathbf{9 8 - 0 - 5 0 0} \mathrm{milliamps}$.
Following Equipped with External Re-
$381918-0-500$ volts. $\$ 15.50$ List $\$ 12.00$ $3 \mathrm{Big} 9-0-1000$ rults 22.50 17.20 $3 \mathrm{~B} 1920-0-1500$ rolts $28.50 \quad 22.00$ $382007-\mathrm{A} . \mathrm{C}$. Voltmeter $0-15$ volts. LIst, $\$ 7.50$. NET. $\qquad$ ......... $\$ 5.63$

## No. 64 Radiation Ammeter

Thermo couple type with D'Arsonval morement. Same slze as No. 64.


 | 38 | 9 | $0-3$ | amps. |
| :---: | :---: | :---: | :---: |
| 3 | $9: 106$ | amps. |  |

No. 74 A. C. Voltmeters
For reading transmitter fllament foltage A. C. only. Used only on 60 cycle A. C. current. Same size as No. 54. Shipping wi.. 3 lbs .
List, \$7.50. NET.

| $3866-0-10$ voits |  |
| :---: | :---: | :---: |
| 3 B | $967-0-3$ suus | | $381967-0-3$ annus. |
| :--- |
| 3 B | $38 \mid 968-0-15$ volts

$3 \mathrm{~B} \mid 969-0-10$ amps
......... 58.63
For 5 watt tubes
For 50 watt tubes
Aero Short Wave Cinoikes
Designed for uniform choking orer the amateur bands. Eliminates the ap"pearancs of so called "holes" in the tuning range where the receirer
will not oscllate. Short will not osclliate. Short wase special is used for any type short ware recelver.


For transmitters use No. C-248 espoclally destgned for tranmitting clrcuits. Good on all amateur wavelengths. Whll handle transmitter up to 100 watts. 3B6405-Short ware Special. 386406 -Transmitter. List each, \$1.50. NET.

88c


## Weston Meters

These meters ar. known the world oser for their extreme accuracy and high qualIty. C'nquesticnably the leader of $t$ he if t 1 eld. Esjecially adapted for amateur work. Very neat appearing face. Black

 types, $21 / 2$ lbs.

| Model 301 | Meters <br> List | Net |
| :---: | :---: | :---: |
| $3 \mathrm{Bl} 973-0-8$ volts | \$8.00 | \$6.00 |
| 3 1977-0-3 amps. | 8.00 | 6.00 |
| 86408-0-100 ma. | 8.00 | 6.00 |
| $3 \mathrm{B6409-0.200} \mathrm{ma}$. | 8.00 | 6.00 |
| A.C Meta | d 47 |  |

For reading transmitter filament voltage. These meters are for use on A.C. only. 3B8994-0-10 roits......... (For 5 watt 3E6494-0-3 anps............. ) tubes 3B64(0-0-3 anups...........) tubes $3 B 64\{(1-0-15$ volts............\} Fcr 50
$3 \mathrm{~B} 64\{2-0-10$ amps..........) watt tubes 3B64 12-0-10 amps........... S watt tubes

## Thermo-Ammeters Model $\mathbf{4 2 5}$

 for reading radio frequency current in antenna 3B6413-0-1 amps. 3864 (4-0-1.5 amps. 3864 I $5-0-3$ ainps. 3864 i6-0.5 amps. List each, $\$ 13.50$. NET

## Nationail Variabie Vernier Dial

The type "B" if a 1 is especlally sulted to the varying conditions of the amateur. Any Pernier ratio of from 6/1 to 20/1 is instantly is inganat No
avallablo. No slippage or back lash-turns rery easily. Hair line Indicator for accurate tubing. Beautifully made of moulded bakelite. Mretal parts nickeled, craduated full $360^{\circ}$. FIts any $1 / 6$ in. shaft. Shipping wt. 8 an
384146 -clockwise.
3B4 147-Counterclockwise.
List each, \$2.50.
NET.
$+$

# REL) Our Special Amateur Section <br> \section*{Radio Engineering Laboratory Transmitter Kits} 

The Radio Engineering Laboratories have long been known as the leaders in the short ware fleld. To meet the demands of the amateur for all kinds of high quality transmiting ap paratus, they have designed the transmitter kits displayed be low. These kits are the hlghest type of apparatus that can be


## No. 157. Coupled Hartley The popular loose coupled Hartley

 circuit is used in this kit. This 4 the simplest type of transmitter and will te found extremely easy to alace in oueration. An excellent erystal anplitfer stafe is cbtained by using the scries feed aircuit with this kit. Power sumply can be had edther throurh motur generator, rectitied $d$. Chrough motur generAll parts are sumplied to inake a wnipheto transmitter. Supplied ln the two sizes must commonly used by amateurs. No tubes, batteries or other accessories included

## $3 \mathrm{~B} 6430-\mathrm{TYPO}$ TR-5. Usao 210 Tuhe, 7/2 watk <br> \$50,40



## Seif Fectiried Coupled Hartley

Looks similar to coupled Hartley above. By using two tubes as oscllators in the self rectifind clrcult a good signal tone can be produced Without the additional use of extra rectifler tubes. The only ofher apparatus necessary is the power transformer whel supplies the plates aud llaments. This comblnation is popular with the amateurs becuuse of 1ts simple laeans of obtaining the power supply direct from a transformer. except tubes and power acuessories a distance getter Cunmplete
 tubes-71/2 watts. List, $\$ 6050$. NET
$\$ 54.45$ 3B6434-No. 152. Tyie S-75R L
ses 2-1'X852
65.70

## No. 136 Low Power Radiophone

Interest In amateur bhone work has been renewed. R. E. L. is on the job. Here is a very compact and efflelent low power phone transmitter. Adaptable to all tubes with standard or L'X bases-199, 201A, 112, 210 types E'ses two tubes of the same kind. Any stándard carbon microphone will do. TIse any kind of direct current power supply that matches the tubes used. Use storage battery for filament voltace. Jakes an unasually floe portable transmitter. Complete with instructions. No tubes, batteries nor microphone included. Shpg. wt.. 20 pounds.
3B6432-List Price, \$68.00.
NET.
$\$ 61.20$


## Electrolytic Rectifler

When assembled these rectifier kits furnish complete nower supply to the trunsmitter. Simply huz in to your 110 volt A. C. house 11 ne socket connections. Includes all filter and power apparatus. Also plate and flament volt meters. U ses electrolytic Jars for rectifleation. Performs very efficiently and gires com plete satisfaction. Matches transmuturs in appearance. Shyg. wh., 125 lbs
3B6441-No. 158 Type R-10-C. For s W. Kits. List, $\$ 96.00$. NET.
 3B6442-No, 158 Type R-75-C. For 75 Wiatt 08 Kits. List, $\$ 120.00$. NET bullt. The We shall be very glad to answer your inquiries concerning any of this apparatus as we are here to serve the amateur and Fre firmly belleve this the best apparatus that can be bought at any price.

## Master-Oscillator-Power-Amplifier

Next to a crystal controlled transmitter the master - oxcillator - powe amplifier set will put out tho steadiest signal. An tenna swinging has prac tically no effect on the enitted signal. This cir cuit is recommended where consistent com munication is a require ment. Complete kit of parts. No tubes, batteries nor other yower ac ceswories included. Shpg. wi., 25 lbs. 3B6439-No. 155 Type TR-5. Uses 2-210 Tules.s. List, \$77.
$\$ 86.00$. NET.


3 B6440-No. 155. Type TR-75. Uses 2-UX852 \$86.40

## Tuned Plate <br> Tuned Grid

The Most Popular Ham Circult
This is one of the nost nopular present day transmitters. large majority of blort wave stations a 10 employing this circult.
Very eflicient for
 bor accessorles lucluded. Shpg 20 lbs $3 B 6437-N 0$. 139. TYD TR-5. L'ses L'X210 , Tube. List Price, \$7i.00. NET


## Modulator and Speech Amplifier

These combined modulator and speech ampliber kits were ex-
pressly designed for use with ang of the oscllator units listed. The zeneral appearance and dfmonsions are the same as their orresponding oscillators, $T$ his nsures neat appearance to transnitters bullt up of these symnetrical units. They are used to feed the osclllator tube when usrig radioplione transinissioll. With lis kit a 11 d the corresponding
 on the plate, a very excellent phone stafion can be built. Kit contains all parts necessary. No tubes, batteries nor other accessories included. Shpg. wt, 20 lbs.
3B6435-No. 159. TYpe MS. For 210 tube- $\$ 62,00$
$71 / 2$ wates. NET PRICE........................
3B6436-No. 159. Trpe M75. For tX852-
12.00

## De Forest H-Tube Holder



To be used With De Furest De Forest HR rectifler tube. An theal socket for the ultra S. W8644. List, $\$ 2.00$ NET *1.40

## UX852 Holder

Holds tube absonections for grid and plate leads. Prorisions for mounting of grid and plate conclensers. Insurcs short direct leads. 3R6444-L Ist
NET....... $\$ 1.75$

## R.E. L.-R. F. Choke

To make your short wave circuits operate must you
must have the proper radio fromuen choke coils. Here is a rado frentuenc pecially to meet the problem of the anaeur. They effectively eliminate the dead spots in a recelver due to antenna har monics. They also protect the valuable ineters in your transmitting clrcults. Theso chokes are wound with triple cor ered maraftin on a bakelite tube 4 Inches long and $3 / 4 \mathrm{fn}$. diam. Designed to carry 1000 millamperes. Slipping welght, 8 oz $3 B 6445$-List, \$1.10. NET.

71c
We Pay Freight, See Offer Page 3
R. E. L. Transmitting Inductances


The finest of low - loss construction Trex glass insulation between curns: flat wise wound nickel-plated copper strip. Suitable for anything from a recelrin tube trananitter to a onle kilowatt set. Made in two sires. tyme $I_{d} 5$ inches in diameter, for 40.80 and 150 meter bands type $S$, $2 y_{4}$ inches in diameter for 20 meter band and lower. Sinitle units hare hree positire contact ellps. Double units have prinuary and secoluary with two glass coupling rods and six clips.
385987 -Type $t_{\text {t }}$ single unlt. 53.85 $\begin{array}{ll}385988-T y j e \\ 385989-T y p e ~ & \text { L double unlt. unit. } \\ 3.85 \\ 3090\end{array}$

## Our Special Amateur Section <br> Thordarson Power Transtormers

## Acme Transformers and Chokes

Acme Apparatus has long been preferred by the American amateur. recognition of this falth they have con-
stantly striven to produce better appastantly striven to produce better appa-
ratus. Their new type transformers will fit practically all $C$. W. requiremeats.

Type TR 5-500 watts cap. supplies 2000-1500-1000 volts each side of center Hp, at 250 mills.

Type TR 2-200 watts cap. supplies 750-550 each side of center at 250 MA and has

## winding

Type TR 4 has two 10 volt 8 amp . flament windings only.

## Cat. No. <br> 386446 386447 38448 <br> | Type | List |
| :---: | :---: |
| TR 5 | $\$ 30.00$ |
| TR 2 | 20.00 |
| TR 4 | 18.00 | <br> Choke Cails <br> Ward-Leonard Transmittling Grld Leaks




These resistances are standard throughout the world and are especially recomwound of specis] wire upon a refractory tube and then coated entirely with fused vitreous enamel. Heating and cooling have no effect-their resistance is permanent. All models insted except 3 B 6468 manter tapped. Shlp wt., 1 lb . $3 B 6464-5000$ ohms. For up to 50 watts input. List, \$2.00. Net... $\$ 1,30$ $386465-5000$ ohms. For up to 1400 Watts input. list, $\$ 2.80$. Net... \$1 882 $386466-10000$ ohms. For up to 1000 watis pht. 20000 , Net... $\$ 2.60$ $386467-20$ 386468 - 15000 ohms, taped at 5000 $386468-15000$ ohms, tapped at 5000 10000 , and 15000 ohms. For up to 1000 watt input. List. $\$ 6.00$, Net... $\$ 3,90$ 3B6469-200 ohms, center tapped for


Pyrex Insulators
The Ideal
absorb molsture or chanically strong and light in weight conserve the valuable energy your an tenna by using good insulators.

## Antenna Insulators

$386470-F o r ~ r e c e l v i n g ~ a n t e n n a s . ~$
Length
3,2 Strength 450 ibs. Ship. wt.. 8 oz . List. ${ }^{45 \mathrm{c}}$, Net......................... 31 c Length $7 / 4 \mathrm{in}$. Leakage path 6 in . Strength 1000 lbs. Ship. wt., $13 / 2$ lbs.
 $121 / 2 \mathrm{~m}$. Leakage path 11 ¹/ In. List, $\$ 3.50$.
Net..............ina......
Familiar custard cup type for power up woth k. Height $4 /$ in. width at hot tom6 68473 in. Ship. Wit. ${ }^{21 / 2}$ lbs. 3864
Net.


## Stand-Off insulators 386474-For insulating

 lead-in whre of recelving setsor transmitting sets. Fine for mounting apparatus. Helght 3 in ., length of hase
31 in. widh of base 15 in in. $3 / 10 \mathrm{in}$. hole, 16 threats per inch tappedin top brass cap. lbs. List, $\$ 2,75$. Net. \$1.92 386475 -Large size for powers up to ${ }^{1}$




## Small Standoff Insulators

Sultable for supporting wiring and instruments in transmitters or lead-ing, Dark brown ghzed porcelain $13 / 4 \mathrm{in}$, long, $11 / 8 \mathrm{in}$. hlgh. Shlp. wt., 8 oz $386459-L i s t, 12 C$
20c. $20 c$

Filament (Shell Typo)
The newest and most complete line of shell type filament transformers. Both primary and secondary winding assembled on the center core. Secondary is made of heavy copper ribbon and wound in pancake form. Tap brought out at center. Mounted in a heavy durable frame. Bakelite terminal boards. Standard primary 110 volts, 60 cycles. Ship. Wit., 10 lbs Cap. sec.
$385980 \quad 80 \quad 81 / 2 \quad \$ 7.00$
$\begin{array}{llllll}385980 & 150 & 12 & 10.00 & \$ .90 \\ 385981 & 1500 & 12 & 15.00 & & \end{array}$

## We encourgatat

 or hiph voltare the use of shely transformers be cause of their hiph effictency and good regulation. Supplied mounted in a heavy black steel case. All leads brought out through porcela in bushings. Two secondary coils on every transformer. Standard primary 110 volts, 60 cy cles.

Cap. Second. Each
Wts. Slde of Ntrl. List
$385983100 \quad 350$ and $550 \quad \$ 13.00$ \$ 9.10 $\begin{array}{lllll}385983 & 100 & 350 \\ 385984 & \text { and } & 1500 & 18.00 & 12.60 \\ 385985 & 900 & 1000 & \text { and } 1500 & 30.00 \\ 31.00\end{array}$
Thordarson Special $71 / 2$ Watt Transformer
This has a flament voltage of 10 volts and plate supply voltage of 650 volts destgned for use with one $7 \frac{1}{2}$-watt tube sliell type, unmounted only.

## Condensers

## Transmitting Tubes <br> UX-852



These condensers have been especially lesigned for amateur transmitting purposes and have a high factor of safety. poses and have a hindivilually tested for voltage safety and capacity and are kuaranteed sarety and capacity $5 \%$ of rated values. The larger sizes are fitted with brass bindlag posts. the smaller with heary soldering lugs. They are put up in finished aluminum cases and so constructed to hold their operating characteristics without variation.

| Cap. M18s. |  | $\begin{aligned} & 1000 \\ & \text { Volts } \end{aligned}$ | * | $\begin{aligned} & 2000 \\ & \text { Volts } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| . 1 | 385967 | \$ 1.62 |  |  |
| 5 | 385969 | 2.60 |  |  |
| 1.0 | $3 \mathrm{B5970}$ | 3.25 | 385974 | \$ 5.20 |
| 2.0 | $3 \mathrm{B5971}$ | 5.85 | $3 \mathrm{B5976}$ | 9.10 |
| 5.0 | 3B5973 | 11.05 | 3B5977 | 15.60 |

## Porcelain Standoff Insulators

This insulator is larger in size than the General Radlo and is suitable for higher voltage work or where leads must be kept at considerable distances glazel. other material; bighly glazed.
4 inches high. Postage, 3 c inches
extra.

> 382614-.......12c
> Each.........


## Lead-In Insulators

Made of moulded hard ruhber. Fits inch hole. Securely locked by two adjustable guts.
3B2608-For $2 \%$ In. or smaller walls. Each...................................... 35 c

A new Tube for amateur use. Nrison waves from 7
meter up. Standrd UX base on flament end. Ylate and frid
leaks thru top and leaks thru top Filament 10 volts, 3.25 amps. Plate 2000 volts, 75 M.A. Safe porrer dlssipation 100 watts. The ideal tube for short waves. Shlpping wt., 2 lbs.
386460-UX852. List, \$27. $\mathbf{\$ 3 2 . 5 0 .}$ Net.............

## UX-210-71/2 Watts

For the low power transmitter, this tube cannot be beat. Whll deliver a they safely dissipate 15 watts in plate heating. Low interelectrode capacity making for stablity on short waves,
Fllament 7.5 volts, 1.25 amps. Plate rating 425 voits but much higher can be used in an efficient circult. Use thl tube and get real DX on low power. 3B 1038 -List, $\$ 9.00$.
Net.
$\$ 6.30$

## Transmitter Microphone

Well made from standard telephone parts. especially $\begin{aligned} & \text { constructed }\end{aligned}$ for radio telephone work. Mor radio telephone worke Metal parts are nick plated and polished. handle. black knurled handle.
2 pounds. Complete Fith handle and cord.
386498-List price, $\$ 6.00 . \$ 3.60$ Net price

## Enamelled Antenna Wire

It has been generally settled that for short-wave work a solid antenna wire is more suitable than a stranded wire. Since corrosion due to smoke and the elements is very destructlve to the surface of bare copper wire, it has been found that enamelled wire is far preferable in keeping antenna resistance losses down. This No. 12 wire, soit wire, is receiving aerisis
receiving aeriais.
2B5904-Per 100 foot coll... 89 C
Postage, 10 c extra.

Set Builders Special Gondensers

or big condenser value manufacturer who desires a quality condenser at a low price. All types have removable aharts and are strongly bullt mechanically Heavy brass plates held in alignment with brass the rods. Excellent insulation with mindmum dielectric. Very low loss, units 00035 mp Modifled stralkht-line wave length tuning curve.

|  | Shpg. wt. |  |  |
| :---: | :---: | :---: | :---: |
| 383419 - Single | $\begin{array}{r} 12 \mathrm{oz} \\ 2 \mathrm{lbs} . \end{array}$ | $\begin{array}{r} \$ 2.50 \\ 6.00 \end{array}$ | $\$ 0.90$ |
| 286381 -Three Gung | 3 lbs . | 8.00 | 2.98 |



383421 -Triple-With 383422 - Double-With Link Motion

3 1bs.
$\$ 9.00$
55.19 Link Motion 2 lbs, ${ }^{\circ} 6.00 \quad 3.60$

Condenser Shafts
1/-Inch Dlameter


## (Straight-Line Frequency) Grounded rotor, aluminstuds at zero and full scale posltions fiexible pletail connectlons and rotor shaft of chromium nickel needle steel makes this a highly efficient and desirable instrument. Poilshed nickeled trame. Singlo Unit. Shipping wi. 1 ${ }^{1 b}$.

 List 508 -No. SLF1213-13 plates, cap., . 0003 mfd .81 .99
 38351 -No. SLF1226-13 plates, cap., . 0003 mfd . 33

 Shlpplag welght, i"gibs.

Amsco Gang Condenser
Allocates stations on dial in equal wave length divialuhs. Rotors on common shaft for single dial control. Connected stators. Perfect bearings.
hole $m$ oungle
sing. Electrically shlelded. Easily and accurately compensated. shipping wt., $383450-2-\operatorname{gang}$
$38345-2-\operatorname{gang}$
$38348-3-\operatorname{tang}$ 383453 -3-cang

U. S. La Compensated Multiple Varlable Condenser
This contipnser makos nossible thit construction of one dial control sets. T'sed with any good type of coll maximum results will be obtained and reception will equal or surpass the best results obtainable when using three separate condensers. Capacity each unit .00035 . Bakelite 3 -inch dial. Rigid construction. Radion nsulation. Low minimum capacity.
panel, 5 inches wide, 3 inches high when open. Shipping wt., 4 lbs. $383500-\mathrm{List}$ price, $\$ 13.50$.

## *


nickel. Direct electrical connection made from rotor to frame by spring phosphor-bronze pig-tall eonnector. Small phase angle dirinince: m o m capacity. Double $a n d$ triple
 w 1 th compen-Sh1pWt., $1 \mathrm{lb} .$, single:
$13 / \mathrm{lbs}$ lo, double: $21 / 2$ ibs., triple.

| $3 \mathrm{~B} 3480-.00014 \mathrm{mfd}$. | Single . . . . . . . . $\$ 3.00$ | Net 1.6 |
| :---: | :---: | :---: |
| $383481-.00025 \mathrm{md}$. | Eingle. . . . . . . . . 3.00 |  |
| $470-.00035 \mathrm{mfd}$. | Single. . . . . . . . . 3.25 |  |
| $3471-.0005 \mathrm{mfd}$. | Single.... . . . . . . 3.60 |  |
| . 00035 mid . | Double.... . . . . . 6.50 |  |
| 3473-.0005 mid. | Double. . . . . . . . 7.00 |  |
| 3474 -. 00035 mfd . | Triple.......... 9.75 |  |
| $3475-.0005$ mid. | Triple.......... 10.60 |  |

## Camfield Synchrotune Condenser

A new invention making possible perfect synchronlzation of two or more tuning clrcults. Especially dill mate any set stirle dial control. Ten points of djustrut overe sile and once adusted it need neve be touched again. Complete instructions included. Shuppine wt., 2 lbs. 384033 -Type 350 . .00035 mf . List, $\$ 14.75$.


## Camfield Equaltune Condensers



Insuring long life. Destgned for elther panel or baseboard mounting. Plates fnished in bright dipped brass. Other parts nickel plated. Made in
three gang units. for all purposes.
three gang units. For all purposhpg. wt
1b. Oz. List
3 B 4065151 Single Gang . 00015 mf . 1455.00
384067351 SIngle $\quad .00035 \mathrm{mf} .1 \mathrm{5} 1.75$
3 B 4068352 Two Gang $.00035 \mathrm{mi} .113 \quad 10.50$ 384069353 Three Gang . $00035 \mathrm{mf} .210 \quad 15.00$ 3 B4070 501 Slagle

## Cardwell Variable Condensers

Ploneers in preclsion-made instruments. Accuracy equal to laboratory Superior mechanical degigns wlll keep them that way.

TYPE E
Taper plate.

clock only. Tunins curve midway between stralght wave length and frequency. Shpg. wt., $11 / 2 \mathrm{lbs}$.
$383400-191 \mathrm{~F}$ Mrd. List Net
$\begin{array}{lll}383400-191 \mathrm{E} & .000075 & \$ 4.00 \\ 38340.65 \\ 38 & \mathbf{2 0 0 1 5} & 4.00 \\ 2.65\end{array}$
 $\begin{array}{llll}383403-169 E & .00035 & 4.75 & 3.00 \\ 3 B 344 & .0005 & 5.00 & 3.38\end{array}$ TYPEC
TYPE

Tuning curve gives straight frequency at low end and stralght wave length at top.
Mist. Net 3B3444-167C .000075 54.00 S2 70
 $\begin{array}{llll}383446-170 \mathrm{C} & .00025 & 4.25 & 2.97 \\ 383447-171 \mathrm{C} & .00035 & 4.76 & 3.25 \\ 38 & 6.05 & 3.38\end{array}$

## Cardwell Balancet

A midpet condenser of supreme efficiency.
$383456-$
Single acity
607A, 000025
$383457-1$
$\$ 1.2579 c$
609A . 000035 383458-


## $1.5096 c$

Type Dual Capacity Last Net 3B3459-614A.000025* $\$ 2.25 \$ 1.45$ 383460-622A.00004* $2.50 \quad 1.62$ *Each Side

## Signal Condenser

Separates uniformly over the entire 360 defrees of the dial all from 150 to 600 meters. Irom minimum capacity. At no point on the dia Wilistations iecrowded. lacmitancelosses areextremely small. Pigtall
connections. Single or
 three hole mount. Shipping wt., $11 / 2 \mathrm{lbs}$. $\left.\begin{array}{l}383435-.00025 \\ 3843 \\ 3\end{array}\right\} 1.1 s t .54 .000$ $3_{3}{ }^{3}{ }^{3} 4436=.00035$

These condensers are an outstanding achievement in the radlo fleld. Reconlmended for many sets in which slingle control multiple tuning is essential Equipped with special adjustment for perfect equullizatlon. No necessity for trimmers. Shaft may be shortened or lengthened without disturbing rotor adjustment. Mounted from either end. Variable spring
tension provided. Rotor ball-bearlnas,
. 0002.94

3.53

Hammarndund
A sclentific precision conlenser. Hard brass rotor and stator plates of hish conductivity placed In slotted brass posts securing elert cul effects of a solld piece. Speclally shaped plates for easy tuning on both lower and upper Justable ball-
bearing rotor shaft. grounded through lietal end-plates. Soldered clock-spring plg-tall with automatic stop. Losses too pig-tal with automatic stop. Lugged, comsmact to can't warp.
Full flonting rotor shaft which supports no welght and is instantly adjustable for length. Any number of mants separated on tandem shaft can be built up rrom the slngle units. Template, hand-capacity shiteld and anchoring screw included. An units accurately matched in caparity Tested on 1,000 volts $A$. C. Ideal for drum dial. Shpg. Wt., $11 / 3$ liss.

| Сар. | Plates LIst | , |
| :---: | :---: | :---: |
|  | $17 \quad 5.25$ |  |
| 29 -. 000275 | $13 \quad 5.10$ | 06 |
| 383323-.00025 | 115.00 | 06 |
| 383331-.0001 | $5 \quad 4.75$ |  |
| $83325-00015$ | 76.00 |  |
| 3 B 332 -.0001 | 1-10* 5.00 | 0 |
| - Double spaced. |  |  |

 | $383342-17.00035$ |
| :--- |
| $38334-23$ | . 55



Practically stralghtiine characteristles. Mounted 11 horizontal or vertical positlon and reversed as to
direction. Plates may be removed to direction. Plates may be removed to

 | $383417 二 .0007$ | max.. 5.00 | 2.00 |
| :--- | :--- | :--- | :--- |
| 383418 人.001 max.. 6.00 | 2.00 |  |

Compensator Provides an easy method of raplaly baianelng two clrcuits as capacity is whlle belng added to the other 382932 - Llst.
$\$ 1.75$. Net $\$ 1.15$

## Chelton Midget and Bakelite Condensers Are Listed on Page 58

## Midline

 Condensers
## A small heutrallzing or bal-

lng condenser having an ex-

$\begin{array}{lll}383347-17 & .00035 & 13.00\end{array}$

## New Hammarlund

## Equa'izer

ceptonally uide capacity ranpe. For equalizing the umits of a multiple-tuning ondenser. Its small size pernits use in mited space. Bakelite base mount, monze spring plate. Maximum capacity. 30 mmids. Minlmum capacity, 2 mmids. $383307-E a c h$

## Hammarlund, Jr.

Soldered brass
 plates, cone beanings. Has new locking. device for fixing rotor plates in any posihon. Bakelite knot. Single hole panel mount. Shpg, wt. $50 z$. 383335 M. Cap.

| List | Net |
| :--- | ---: |
| $\$ 1.50$ | $s 0.90$ |
| 1.50 | .96 |
| 1.60 | .90 |

$33337-.000050$
$38338-.000065$
1.60
2.00
1.20
$383319-T a b l e ~ M o u n t i n g ~ b r a c k e t ~ f o r ~$
above. Fich....

## NA-ALD Localized Control Unit





These are the best style tuners for regenerative circuits. The three circuit feacure enables you to casing build a set that will step out and get the distant stations and yet cause littie Interference to surrounding sets as most regenerative cir euits do. Consists of an aperiodic aeria inductance und secondary, wound on stator tube within which is a tickler coll Wlindings are of red, white and green silk wre on low loss cut-out forms. With these units first class sets can be built at low cost as with them three tubes wil equal five tubes in most other clrcuits Distant stations can be conslstently tufied In with an exreptional volume and qualty of tone. shipping welght, 12 oz. $3 B 3615$-Large slze. 3 lnehes diameter menes high. rovers 190 to 970 Each.
3836 © 0 dithame 570 meters with .0005 condenser. Each
383617 -smail size. iow wave ty 37 to 150 meters with 0005 condensers. Each.

Smail sizes are especlally suited to

## Superior Low-Loss Antenna Coil

Used with above tuners in elrcuits such as Browning, Drake, etc. Wound with silk covered Litz Wire on low-loss kenuine bakellte frame. For 0005 condeuser only. Shipping welgh 3B3618-Large slze. 3-in. dam.; 3, in. hl gh Each. 3B3619-small size

2イ-lit. diam.

## Bruno No. 99 3-Circult Tuner


$21 / 2 \times 21 / 2 \mathrm{In}$. $21 / 2 x 2$
Net.
$3 B 362$ - 200 to 575 meters for .00025 Net........................ \$3.22

3B3622-20
to 110 condenser. Net. \$3.22

3B3007-R. F. Transformer. Same constructlon as tuner. Primary in center loss and efficient. size.

## Space Wound 3-Circuit Tuner

 383700 Net., \$1, 10

Space woundon machine threaded bakelite form with green silk coveredw wre
Single hole mounting

Duo-Control 3-Circuit Tuner


Alr spaced colls, with preensilk ingulation. Primary and tickier are peclally desirable peclally desirable typer of tuner. permits very close tundng. Tunes out inter-
ference. greatest distance. Covers 200 to 600 meters with .0005 condenser 3B3018-List, $\$ 6.00$. \$2.59

 $200^{2}$ to 550 Covers broadcast ranke 200 to whi meters with 0005 condenser. ping weight, 15 oz.
3B3699-Antenna Coll.

Operates | "It |
| :--- |
| 02 |
|  |
|  |

Net, each
65 c
$180^{\circ}$ Variometer and Variocoupler 383701 -Variometer.- List. $\$ 2.00$ 3 B 3702 -Varlocoupler.

Net.

$\frac{\text { with } 0005 \text { condenser }}{\text { Slotted Tuner }}$


Three clr
tuner wound onskeleton 1orm. Measures only 2 is 23. iong by 2\% in. In May be installed at great stalled at great space. Highly efficlent. LowTuned with 0005 condenser. 97 C

## Slotted R. F. Coil

Radio frequency or antenna coll wound on skeleton form to match the baby slotted tuner. Highly efficient. iay be used in the popular circuits with the tuner where sligle stage of T.R.F. and regenerative detector is speclied. Tuned with . 005 con-
denser. $\quad$ 2B36i9-Net.


383710 -Set of three with con- 946 383711 -Slugle coll only without mount. Each ... onis with- 30 Rcal value for the set buider rr prices a for die set bulder. A our prices a flne fle-tube set can be built at a yory low cost, using these colls. Results prove them one of the best types of trapisformer colls in tuned radio frequency elrcults for volume, distance and tone quallty. Fine silk insulatlon. Primary wound in ceuter for greater effichey. Bracket permit mounting to practically any condenser Uscd with .00035 condenser. Shipping welght, 1 lb.

## Improved Low Loss Coils



3B3709-Set of three with $\$ 1.16$
An improved type af bageret mentie inductance. Dlameter 2 Inches. Felght 2 Inches. Speclal fibre mounting dlak enables easy mounting on condenser pane or baseboard. Fach set of colls is very carefully selected and balanced for use with two or three gang condensers hav ing units of .00035 to .00038 capacits shidphig weizht. is oz

## R. E. L. Basket Weave Coils



10 to 110 mering when used with .0001 mp . con. denser. Flexhle leads and clips and adjus able mount $1 \mathrm{~m}_{\mathrm{g}}$ not Supg 383527 -Fiv
colls with mounting.
List, \$3.15
Benjamin Tuned Radio Frequency Transformers
3B4 1 13-3-lnch dimeter

sis 5 $43 n 53$ $3.1 .1 s t, 55.75$.
$\$ 3.39$


Self-supporting cylin drold form. Extremely strong and rigid and Fill stand hard usage Advanced sclentlif deslgn gives minimum distributed capacity and preater tunine range: Jower resistance greatest energy transfer. Green sllk wire For . 00035 condensers. Shlpplng wt., 1 lb .

## Benjarnin "Lekeless" Trans-

 formersClosed field pre venting leakage and feed back. M1nimumimin lowers sulation lowers prwer losses. low distributed capacity, low resistance and hish inductance. Used in any tuned
radio frequency circuit. Especially desir able for slagle control. Self supporting green silk winding. For use with . 00035 m . condensers. Shlpping welght, 1 lb .5
3B4115-Set of 3 matched colls List price, $\$ 7.50$.
Net.



The curve at the left presents a striking portrait of the characteristics 0 f the Nerranti Transformer. It was taken from data obtulned under actual working conditicns and shows just how the amplification varies with the frequency. The curte is fiat for practically all of the most commonly used frequen cles. This means that all tones are amplified the same amount giving reunlque in ths full well-rounded toncs. The projection of the musical seale
above the curve shows the corresponding Thus, the curve shows the corresponding musical note for any frequency. For quality and timbre of tone they have no equal. Transformer is proven.

## Thordarson Type 200

 Transformer A quatity tranaformer With un faithpul reproductive powers and powers anda pery wide a Dery Fide
ampliflcation range. The super - sized bined with the high linductance sult in the erenness of amplification so charscteristio of this itansformer. De. gigned for 2 -stage amplification. Ideally $281216-$ use with cone type speakers. 2E1216-List price, \$8,00. \$4772

Thordarson Autoformer
An all frequency ame
plifier. Amplifies low-
est notes as perfectly as high ones. Glves great clarity on all slgnals and better volume control. Improves reception of weak programs. Bulit on same princlple as line amplifier at newest high
powered broadcasting stations.
2 B i 2 i7-Thordarson Auto.
former, EACH


Thordarson A. F.

## Transformer

 The Thordarson transformer is now being used es standard equipment in more high grade sets than any other make. It is a very efficient, clear toned transformer and gires excellent volumo.2B1209-2 to 1.
List. \$5.00. NET
ET.
62.94 List. $\$ 4.00$. NET
$\$ 2.35$ $281211-6$ to 1. 42.55 2B6477-Therdarson Power Push. Pull transformers, one input and output ohoke. List, $\$ 16.00, \$ 9,50$


## Thordarson Sub-

 Panel Transformers Furnished with leads coming out the hase for sets mounted in subpanel. Proviles neater assembly, shorter leads2B1213-6 to ratio eficiency List. $\$ 4.50$. NET ravio. $\$ 2.35$
 List, \$4.00. NET 2B1215-2 to i ratio. *2.94

## Lst, \$5.00. NET. <br> $\qquad$ <br> rmer <br> Amertran DeLuxe Transformer

 Long recognized or thelr superiority in the radio laboratories Man m laboratories 0 m -ploy these transformers in making tests. Long lden-
 tity with the radio fleld has proven the quality of the product. Its falthful amplification when combined with the best of reception conditions will reproduce natural volume orer the entire range. Made in two types. Shipping wt., $21 / 4$ lbs. $3 \mathrm{~B} / 220-15 t \mathrm{stage}$.
3 B1221-2nd stape.
List, \$10.00. Net.
\$6.85

Individual Truphonic Couplers
For those who plan sets, and who want to bulld into them the finest possible type of audio frequency amplification separate TruphonIc couplers are prorided.

Individual units in
ets included for mounting in convenieut position. Flexible leads for casy connection. $21 / 2$ in. square, $11 / 2 \mathrm{in}$. thick. $38 \mid 345=301 R$ for first stage.
$381346-301$ for 2nd or 3rd stage
$381347-300$ output-P r ot ect speaker.
List, each, \$5.00. NET, EACH \$2.94
See pape 37 for Truphonic Ampllfier.


Z-3 unit consigts of s coupling resistance and condenser with impedance leak. Binding posts are provided with the same marking as ransiormers. Can. be Fantage by replacing one stage of audio in a trvostage amplifier. Shipping wt., $1 \frac{1}{2}$ lbs. 3E\{338-2-2 A. F. Impedance 200 henrles.
List, \$4.50. NET.
© 2.55
 dance Stapo.
\$2.94
 ratio.
List. 56.00 . NET..............3. 53
 LIst, \$3.00. NET.

## Rauland-Lyric




Rauland-Trlo Similar in ap: pearance to the Rau-land-Lyric, except slighty smaller in size. An impedance aining in one housing the thre necessary untis-inductance, resist ance and capacity in correctly bal anced relation. Shpg. wt., 2 lus. dlate stages.
$381320-$ For last audio stage. Postpaid.
EACH $\qquad$ $\$ 3.54$

## Push Puil Transformers

3 I $1332-R 30$ input. \$2.
LIst, each, $\$ 5,00$. NET... 3 BI 333 -R31 output.
List, each, $\$ 5,00$. NET.
$\$ 294$
All-Amerlcan A. F. Transformer


 3813 to NET... $50^{\circ}$ 2. 55 $38 i 331-10$ to 1
List, \$4.50
NET
$\$ 2.65$

## Natlonal

 TransformerTone quality is a requirelizent of vital importance In audio ire${ }^{\text {quency }} \mathrm{m}$ transNationalhas tone quality. A pronounced characterlstic is
the successful amplification of a bass the guccessiun ampincation oo a pitched toned human voice instruments. Unusual ability to operate equally well in the third to operate equally well in the third stage as in the first two stages of ampincation. Attractive nicked case. Attractlve nickeled case.
$381395-315$. to 1 .
$381306-6$ $\begin{array}{ll}381395-31 \% \text { to } 1 .\} \\ 381306-6 & \text { to } 1 .\}\end{array} \begin{aligned} & \text { alue, } \$ 0.97 \\ & \text { Net. } \$ 0.97\end{aligned}$

## Pacent Super Audioformer



Designed for finer musical values in broadcast reception Bidit to sturdily hande 3 to work. is caprible of 3 to 1 is capable of handling energy ampilflcation of $500-1$ per audio step and ther enough so that higher frequencles are not distorted. Especially designed for power amplifation. Sult able for use in all sets of the popurar hook-ups now in use. its attractive arched shield proterts it from interference orered by other elements in the alr. Shlpping wit.. 3 lbs.
381310 -Output Superformer List price, $\$ 7.50$.
Net..
$\$ 4.41$

## Jefferson Transformers



Carefully deslened of the best materials to incorporate the newest principles in transformer construction. Pro nounced by leading engineers to be one of the finest lines of transiormers made. Jefferson transformers are adaptable to all circults and all standard makes of tubes.
3B1307-Jefferson Concertone Shlpplng wt.: $31 / 2 \mathrm{lbs}$
1.lst price. $\$ 6.00$. \$3.53
381308-Jefferson Star. Ratio 3 to 1. Shipping wt. 1 lb . List price, \$2.75. 51.63

3B1309-Jefferson Star. Ratio 6 to List price, $\$ 3.00$. 81.77

## Variable <br> Audio Transformer

Really matches the characteristics of tube. Results of experimentyears of experimentng brs wich cuts out neers, Which cuts out squealing and howiIng in any radio re celver. Merely turn knob untll reception is clearest nud sharp-
 fect co-ordinatlon between tube and trans former. The entire transformer is magnetically and statically smel the thus permitting the ange desfed withtransiormer at any anilng due to magout howling and squealing of succesive netle and static coupling of successive stages.
$3 B 1231$-List, $\$ 10.60$.
$\$ 6.30$

## Marvelo Transformers

A decidedly superior type of audio frequency transformer. Exceptional in pure tone reproduction and volume. Laboratory tests show the wonderful response to frequency variationsedance the entire musical Bcale. HV 199 or C 299, WD to match UV 201-A type. UV 199 or C 299 , Wing or $C^{\vee} 11$ and 12 and other type tubes having similar characteristics. The bakelite terialnal piate prevents leakage
 and iosses. No electromagnetic or
static coupling.

## Completely

Shielded $3 \mathrm{~B} 1200-2$ to 1.
List, $54.60 . \$^{2} 10$
$381201-31 / 2$ to 1 . $381201-31 / 2$ to
List, $\$ 3.50 . . \$ 180$
Net.


Net.......... Manufacturer's Model for Su 3B1206-2 to 1 ratlo.
51.45

Net...

## BARAWIK Special Units

Guaranteed Finest Quality

## Our Special Units

The type RR former for A. C. tubes has a primary voltage of 110 and has a secondary coltage of 550 with a tap in the center dulng 275 volts on ench side. Vill deHver 50 mills without heating.
3B1223-List, \$5.00.


The 30 Henry filter choke has an inductance of 30 henrles at approximately 40 millis. This drops somewhat below 30 mearies on a 20 mill. load. Whe 1). C. resistance ts 375 ohms. While they are most efficient wilth the current from 0 to 60 mills. they will not overfrom 0 to 60 milds. 85 mills. They heat with used in a filter circult for $B$ Ellminators. also across the output Eliminators. a the radio set in conjunction terminals oicroiarad condenser to prevent With a 2 microiarid cont from getting into the high D. C. Current spenker. Completely shlelded. 3 B 1224 -ilst. $\$ 3.00$. 8180

## Hedghog A. F. Transformer Smallest audio fre-  able and other sets where space is imited, ampufication. Shpg. Wt. 1 lb .  381304-10 to $1 . . . . .$. . 4.50 2.50 2.59 See Pages 58,65,67,68,70,71,72,73,

Our 86 millihenry radio frequency choke has tull rated inductance and choke has our special type of coll has in minimum distributed capaclty. it will give uniform results on the entire The reststance is 215 ohms .
3B1226-IIst. \$2.00. $\qquad$ 95c
The 1 to 1 output iliter transformer is designed for protection of the loud is deaker where high plate voltage is used. It is wound on a 1 to 1 ratio and has sufficlently high impedance to take care of the hich voltare and current when of the power tubes are used. The nverage the power coll will not stand the hlgh voltage and current delivered by the larger sets where power tubes are used. The output transformer enables the operaThe output advantage of the maximum voltare of the set without in any way voltage of the set of the loud speaker. The transformers are equipped with cord The trans or that they can be readily and tip so the plug of the set and the atisch the land speaker cord may in tips of the lond speare secondary binding posts of the transformer.
3B 1228 -List. $\$ 5.00$.
3B12..
\$2.25

## Karas Harmonik Audio

 TransformersSultable for regen erative clrcults, radio frequency sets, superbets and rellex clrcyits. Hizh amplification without distortion. All stage ratio. Shipping wt.,
 1 lb .12 oz .
1 1b. 12 oz.
38 1222 Karas Harmonik. $\$ 2.94$
List, $\$ 5.00$. Net.............. $\$ 4$.


## TOBE FIX

 Case of matt-f Case of matt-finished aluminum very compact and neat in ap
pearance. Shpg. wt., 12 oz. pearance. Shp

## $\begin{array}{llll}\text { No. } & \text { Mit } & \text { List } & \text { Net } \\ \text { RB429 } & .1 & \$ 0.70 & 50.42 \\ 38436 & .25 & .75 & .45\end{array}$ <br> 

,
"B" Block


For use with
Raytheon or
Q. 8.85 mll.
Qud. 8 imilar
tubes where piate supply currents do not $\begin{array}{ll}\text { exceed } 300 \\ v o l t s & C\end{array}$ volts D. C. 8 mid. two one mid. and two 1.0 mid . Easy connecting termInals at bottom ofsilvered metal 38465 hpg Wt. each, $33 / 4 \mathrm{ibs}$. $38465-L i s t, 511.00$. Net. $38466-1 \dot{3} \mathrm{Block}-\mathrm{Contain}$ two 4 and one 6 mid. 400 v . cond. For B. H. tube. 3 List 511.00 Net.... $\$ 6.48$ pacity, 2-2-2-0-1-4 Lst. $\$ 13.00$. Net
38472 -Tobe No. i7i ${ }^{2}$. 5
paclty, 8-2-2-0-1-1 mid
For Raytheon A-B-C
Power supply using 350 MU tube. Shpp. wt.. 3 3 1 Ibs. List. $\$ 10.00$ Ne. Net.... $\$ \mathbf{4} .00$ $38498-N 0.2 ; 8-1-1-1 \mathrm{mid}$. List. $\$ 10.50$. Net. . $\$ 6.30$
$3 B 49-F$ Q. R . Power Supply using 400 MU tube. 16 mfd .
List. \$14.00. Net..... $\$ 8.40$


## Dubllier <br> Condensers <br> Type 901-2-3

Whlle dealgned particularly for fitter clrcults they can be used whereever a condenser of capacity and volt-
age test fiven is required. The rated capaclty is a ccurate noldering lug termtnals. Shpg. wt., 12 o2, to 3 lb . No. Mipg. Wolt., List


| 3 B 400 | 1 | 160 | $\$ 2.00$ | 51.18 |
| ---: | ---: | ---: | ---: | ---: |
| 3 B 401 | 2 | 160 | 2.50 | 1.60 |
| 3 B 402 | 4 | 160 | 3.00 | 2.10 |

$\begin{array}{lllll}3 \mathrm{B4} 4 & 4 & 160 & 3.60 & 1.60 \\ 3 & 3.10\end{array}$
$\begin{array}{lllll}3 \mathrm{B402} & 4 & 160 & 3.50 & 2.10 \\ 3 \mathrm{~B} & \mathbf{8} & 160 & 6.00 & 3.00\end{array}$
$\begin{array}{lllll}3 \mathrm{B494} & \mathbf{2} & 400 & \mathbf{2 . 0 0} & 3.00 \\ 3 \mathrm{~B} 405 & 2 & 400 & 3.60 & 1.47 \\ 3\end{array}$
$\begin{array}{lllll}3 \mathrm{~B} 405 & 2 & 400 & 3.60 & 1.47 \\ 3 \mathrm{~B} 406 & 4 & 400 & 5.60 & 3.30 \\ 3 .\end{array}$
$\begin{array}{lllll}38406 & 4 & 400 & 6.60 & 3.30 \\ 38407 & 6 & 400 & 7.50 & 4.50 \\ 38408 & 1 & 600 & 3.00 & 1.77\end{array}$
$\begin{array}{lllll}38408 & 1 & 600 & 3.00 & 1.77 \\ 38409 & 2 & 600 & 5.50 & 3.26\end{array}$

| 38410 | 4 | 600 | 9.50 | 5.65 |
| ---: | ---: | ---: | ---: | ---: |
| 3 B 411 | 6 | 600 | 11.50 | 6.78 |

Dubilier Micadon


640G
With mount
ing for tubular grid lenk. No grid leak included. 3B424-.00025. List, 45c


## Tobe 400 Line

Designed for continuous operation on 400 yolts D. C. Suitable for "A , "B" and "C" Q. R. S. 85 mll . or 216 B Tubes. Short Pathtype. Very compact. Strong lugs for connections. Attractive silver finlshed case. Shpg. wt., 13 lbs.
No. Cap.
$38437 \quad 1 \quad \$ 2.00 \quad \$ 1.18$
3B438
1.62
$3 B 439$
2.76
2.65

## Tobe Buffer

 Condenser UnitContains two 0.1 high test condensers for ellminator transformer secondary. For use with above unit. Shpg. wt.. 12 oz. 38467-List, 52.00.
$\$ 1.20$

## Dubilier Condenser <br> Type-907



Designed to serve as
 Requires only small space.



| 38592 | 0.1 | 50.80 | 50.47 |
| ---: | :--- | ---: | ---: |
| 38583 | 0.25 | .90 | .54 |
| 38584 | 0.5 | 1.00 | .60 |
| 38585 | 1.0 | 1.50 | .96 |
| 38566 | 2.0 | 2.00 | 1.18 |

 curate. molsture proof. Shpg wt., 2 oz.

| No. | Capl | 5 |  |
| :---: | :---: | :---: | :---: |
| $8462$ | . 00001 | 50.45 | 50.26 |
|  |  | 45 |  |
|  | . 0005 | 45 |  |
|  | . 002 | . 60 |  |
|  | . 0022 | 60 |  |
| 38470 | . 008 | 60 |  |

Tinytobe Condensers
Thesmallest So light that no other support than the bus wre to Where they are quired. Case is high. Wide, 1 imin. In .0001 size. For constant operating voltage not over 500 volts D. C. Shpg. Wt.. 2 uz. Capacty List Net 38451.000135 c 21 c 38452.0002535 c 22 e $\begin{array}{llll}38453 & .0005 & 36 \mathrm{c} & 23 \mathrm{e} \\ 38454 & .001 & 40 \mathrm{e} & 24 \mathrm{e}\end{array}$

## 38455 .002

$38456.003 \quad 40 \mathrm{c} \quad 26 \mathrm{c}$

| 38457 | .004 |
| :--- | :--- |
| 38458 | .005 |
| 38459 | 006 |


| 38459 | .006 |
| :--- | :--- | :--- |
| 38460 | .01 |

450 27e
45c 28c
3B461.02 60e 36c

## Tobe Interference Filter

 machines, sewing macilines, etc., cause unpleasant Interference with radio receptlon. This device makes possible the ellmination of all such interference. Easily Installed and a sure remedy. Simple is a ructions supplied. Here is a blg sales possibility. Shpg. Wt., 4151 bs.
38469 -LIst, 515.00.
58.82
(et...............58.82
 Type. Long Hie. ireefrom lenkage. Made with fuest Innen paper and higher grade foll. Facuum Impregnated rith most stable Insulating compounds. age speclied with wide margin of dafoty, Accurany gurrailteed within $5 \%$. Shpg. wt.

Type A. 300 volts 13. ( $\begin{array}{lccc}\text { No. Cap. List } & \text { Net } \\ 3 \mathrm{~B} 588 & .1 & 50.60 & 50.34\end{array}$

| Polymet Moulded Condenser |
| :---: |
|  |
|  |
| condeser |
| dyenest tuulty bakellte. Shpr. |
|  |
| 5579 |
|  |
| (errer |
|  |
| ${ }^{788} .006$ |
| $38658.02 \quad 1.50$ |
|  |
|  |
|  |
| We Pay Froight as P Ofier on Page 3 |

impervious to molsture Provision is made for elther machine screw or solder con-
nection. Flash tested at 1.500 Folth D. C. Shpg. wt. 2 og.

| No. |  | List | Net |
| :--- | :--- | :--- | :--- |
| 38412 | .00025 | 50.40 | 50.25 |
| 38414 | .0005 | .40 | .26 |
| 38415 | .001 | .46 | .27 |
| 38416 | .002 | .46 | .28 |
| 38417 | .0025 | .45 | .29 |
| 38418 | .005 | .65 | .41 |
| 38419 | .006 | .80 | .56 |
| 38420 | .0075 | .90 | .58 |
| 38421 | .01 | 1.00 | .62 |
| 38422 | .015 | 1.10 | .69 |
| 38423 | .02 | 1.20 | .72 |

Dubilier Micadon


## The Latest, Most Popular Drum Dials <br> Silver Marshail <br> New 805 vernier drum dial furnished Whith attractive brass panel bezel or window. Simple to mount. Suitable for any type standard shaft conpanel knob. May be illuminated. Furnished with lamp bracket. Attractive in appearantee and very emclent. 384802-List. $\mathbf{\$ 3 . 0 0}$. <br>  <br> The New REMLER Beautiful-Efficient <br> Unquestionably the flnest dial on the market. Smoothest running dial hear drive quiet in opersation. No back lasli, veruler tunlng to a halr's space divided into 200 divisions. Embossed dial indeator. Calibration strips on dial for lugging. 6-volt lamp and socket for illumination. drive any standard condenser, single or in gangs. Template furnished. Shlppling ycight. 2 lbs. <br> $3 B 4166$-Condenser Mounts on Left Side. $3 B 4167$-Condenser Alounts on Right side. ist. each, 54.50 . <br> $\$ 2.65$ <br> $\$ 1.76$ <br>  <br> Net, each. . <br> Hammarlund <br> New drum dial sperified for the latest Hi-Q kit and many new tuncuing. Vernier plified control. Beautiful degign. Gives factory built any kit. Nation ally populanFurnished with attractivh Finely finishod <br> - scutehoon plate. <br> ${ }^{381} 1444-$ List, $56.00 . \quad \$ 3.53$



## Polymet Condenser Blocks



Speclal Block for Raytheon Circult
3B536-14 Mid. Total shpg. "wit. ${ }^{\text {bist. }}$ Net.... $\$ 5.68$


 totalling 11. Mid. shpg. wt.. \$8.24 iths. List. 514.00 . Net. ... $\$ 8.24$ 38585 -Amertran Block-totaling 8 . ildd. Shpg. wt., 5 lbs. . \$7. $\$ 12.00$ 3 B586-Raytheon 'A.B.C." Elimlhator Blocks. An efficlent assembly unit totaling 19.2 Mrd. for use with Raytheon BA-350 tube and consisting of following unites: Block "A" tapped at 4.-4.-c.ii Block "B" tapped at co8-1-1-c-1, Smaii Buifer type Fiool, tapped .1-c-1.' shpg. wet. 5 . $1 /$.

## Mountings for Grid Leaks <br>  <br> $\underset{\substack{3 B 3123 \\ \text { Single } \\ \text { Mo }}}{ }$ Single Mount3 B 3124 Double <br> nes. <br> 23c <br> shps. wt., 2 oz. <br> Amsco Resistor Mounting <br> 381740-List. 30c. ............................ Has two strong phosphor-bronze. niokel-plated cilps. Assures positive

## Carter Fixed Condensers



Molded in bakellte to protect them from nivisture. Not affected by climate or tentperature. Extremely accurate. rated capacity. Tinned terninals for solderling. Shipplng wt., 2 oz.
inf List Net mi List Net
 $38752.0002540 \mathrm{c} 24=38765.00260 \mathrm{c} 30 \mathrm{c}$ 38753.0005 40c 24 c 3 3756.0025 600 30c

## With Grid Leak Clips


Carter By-Pass Condensers
uest grade materials. Sealed in metal can and dipped in specinl wax compound. Ship. Wit. 8.02.
$38757-1 / 2 \mathrm{mf}$. List. 90 c .

.54c

## 1] Sprague Midget Condensers <br> Sprague <br> FBEET <br>  <br> High voltage midget condensers. Tested to 1500 volts. The efinclency of these condensers is almost unbellevable. Half the usual size for continuous operation at 1000 volts D.C. Easy to wire with new type pre-soldered lugs. <br> 386651 <br> 386652 <br> 3B6652 <br> 38665 386655 <br> 386656 <br> 3 36657 <br> 386658 38659 3865 <br> 386659 386660 386661 <br> 386662 <br> $\left.\begin{array}{lll}\text { Cap. } & \text { List } & \text { Net } \\ .0001 & 35 c \\ .00025 & 35 c \\ .0005 & 35 c \\ .001 & 40 c \\ .002 & 20 c \\ .0025 & 40 c\end{array}\right\}$

M. S. Fantail Jacks


Have solld brass frames heavily nlekel platen. Tempered springs with pure sllver contacts. Bakelite insulation. Connectiv lugs are spread tantall, making soldering easy.
382404 -Open elrcult.
Each
18 e
3 3240 -
3B2487-Single circuit filament con
382408 -Double circuit ilament

## Veritas

## Resistors

Especially destgued for B Eliminators, transmitting grid leaks and resistance audio amplification. Capable of radiating 4 to 5 watts continuously without change or deterioration. May be soldered directly into circuit or fits standard grid leak mounts.

|  | Resist. | List | Net |
| :---: | :---: | :---: | :---: |
|  | 2.000 ohms | \$1.10 |  |
| 4 | 5.000 ohms | 1.10 |  |
| d | 7,500 ohms | 1.10 |  |
|  | 10,000 ohms | 1.10 |  |
|  | 50,000 (1-20 meg) | . 90 |  |
|  | 100.000 ( $1-10 \mathrm{meg}$ ) | . 80 |  |
|  | 250.000 (1/4 meg) | . 75 |  |
|  | 500,000 ( $1 / 2 \mathrm{meg}$ ) | . 75 |  |
| 84 | 1 megohm | 75 |  |

## Tobe Tipon Grid Leak



A new resister free from Induction Leakcapacity small plass tubing costed with a sillohtly condutive layer of metal and a aled in a conduetive pormanent in value Capocte 1 watt. Ship. w't., 2 oz.

| me | List Net | m | List Ne |
| :---: | :---: | :---: | :---: |
| . | \$1.00 60c | $3 \mathrm{B763}$ | 50.50 |
| 3B760 . 25 | . 60300 | 387642 | . 60 |
| 3B761. 6 | . 60 30c | 3B765 | . 60 |
| 3B762 .75 | . 6030 c | 3B766 | . 60 |

## Aerovox Tapped Resistances

The aero-
vox Tap-
ped Ps-
rohme Re-
slstances
are made

for all popular ellminator and power pack circuits. Consists of single resistor unit for the circuit.
386665 -Type $994-$ B. For Raytheon "B" or slmilar rectifying tube. 9.500 ohms - tapped $3,000-3,500-1,500-1.500$ 1.1st. 165.
.1 C
386666-Type 974-171. For Thordarson type R171 Power compact or circult. em ploying Raytheon BII 85 mill. tube. 13.000 ohms - tapped $2,000-3,000-3,000-3,000-$ $2,000$.
List, \$1.80. Net...
$65 c$
3B6667-Type 996-210. Fior Thordarson R210 power compact. 29,000 ohmstapped $8.000-10,000-10,000-1,000$.
List. $\$ 2.80$.
$\$ 1.52$
$386668-T y p e 996-A M$ For Amertran eliminators und power amplifers. 41.000 ohms - tapped $9.000-3.500-4,000-4,500$ 11.000-9.000. List, s3.00. . . . . . . . . . . . . 62

386669-Type 996-BA. For Raytheon BA tube Eliminates all variable resist-
 865-2,600. List, $\$ 2.30$
$\$ 1.25$


CARTER QUALITY PRODUCTS


Smallest rheostat made DI ameter $11 / 2$ inches. Projects $1 / 4$ metal frame, absorbs and radlates heat more readily than a moulded frame. Wires cannot move and short clrcuit. Shpg. wt.. 6 oz.
IIst price 50c. Nct Price. 29e 38653 ohm 3B65620 ohm $3 \mathrm{B654} 6 \mathrm{ohm} 3 \mathrm{~B} 65725 \mathrm{ohm}$ 3 B 65510 ohm 3 B 588 ohm

## Midget Potentiometer

I.ist price. 75 c . Net.... 44 c

3 B 615200 ohm 3 B 659400 ohm

## Carter Midget Rheostat Heavy Duty Type

Rheostat of the same general construction as MIDGET, only it is proviaed with $3 / 4$ incl re sistance strip. It is of rugged construction, small, compact tact arm is of new and unique design. Shpg. Wt. 6 oz . $\begin{array}{ll}\text { Ilst price 75e. Net } \\ 3 \mathrm{B45611/5} \mathrm{ohm} & 3 \mathrm{B4565} 10 \mathrm{ohm}\end{array}$ $3 \mathrm{B4562} 1 / 2 \mathrm{ohm} 3 \mathrm{B4566} 20 \mathrm{ohm}$ $3 \mathrm{B4563} 2 \mathrm{ohm} 3 \mathrm{B4567} 30 \mathrm{ohm}$ 3B4564 6 ohm

## H. D. Potentiometers

3 B 4568
3 B 456920 ohm
2 ohm Thst price. 75 c 3 B4570 400 ohm$\}$ Net.....45c


Midget Rheostat with Switch
Consists
ofstan$\underset{G}{\text { dard MII }}$ Rheostat Witl separate in!a$\mathrm{maxith}_{\mathrm{s}}^{\mathrm{t}} \mathrm{t}$ Ellminates one knob I.lst prlee. $\$ 1.00$ Net.....59e $3 \mathrm{~B} 4572 \mathrm{ohm} 3 \mathrm{~B} 4574: 20 \mathrm{ohm}$ $384572 \quad 6 \mathrm{hm} 3 \mathrm{~h} 454 \mathrm{~g} 0 \mathrm{ohm}$
3 B 457310 ohm 3 B 457630 ohm

## Carter Wall <br> Receptacle Jacks

Wall plates for loud speaker, antennaand kround connections. Monints on any box or direetly to wall. Shpg. wt. 10 oz .
$3 \mathrm{B4548}$ - For loud speakerseries connertion. Ifst prlee, 85cic 384549 -For lond speaker -parallel connection. $L$ ist price, 80a. Net..... 48 c $38455 i$ - With Vojume Conc trol. List price. $\$ 2.75$. NBt ${ }^{\text {Net }} 5$ cround. List price, 90 c . Net......... 54 c

Carter Imp Rheostats


The heavy nickeled plated brass frame absorbs and radiates heat and will not break, crack or Farp. Diameter $13 / 8$ inch; projects $3 / 8$ inch back of panel. One hole mounting.
List price, $\$ 1.00$. Net. . . 59 c $3 \mathrm{B4515} 3 \mathrm{ohm} 3 \mathrm{B451820ohm}$ $3 \mathrm{B4516} 6 \mathrm{ohm} 3 \mathrm{B4519} 30 \mathrm{ohm}$ $3 \mathrm{B4517} 10 \mathrm{ohm} 3 \mathrm{~B} 455350 \mathrm{ohm}$

## Potentiometers

3 B 4520200 ohm list. $\$ 1.26$ 3 B4521 400 ohmf Net.......74c

## Carter Resistance Units Heavy Duty Type

## 

Used to reduce 6 volt current to 5 volts as required for different tube combinations. Can be used as fitament ballast. 3 Resistance ohm Use-Tubes $\begin{array}{llll}384508 & 4 & \text { ohm } & \text { 1-201A type } \\ 3 \mathrm{B4509} & 2 & \text { ohm } & 2-201 \text { A type }\end{array}$ $3 \mathrm{B4510}$ 11/3 ohm 3-201A type $3 \mathrm{B4511} 1 / 3$ ohm 4-201A type $3 \mathrm{B4512}$ /5 ohm 5-201A type 3 B4513 35 ohm 6-201A type 3B4514 40 ohm 1-199 type $3 \mathrm{B4536} 25$ ohm $2-109$ type $384537 \quad 20 \mathrm{ohm} 2-199$ type 3 B 4538 15 ohm $3-199$ type $3 \mathrm{B4539} 10$ ohm $4-199$ type All of ahove. Inst 250 tyje Aet of ahove. Inist, 25c. . 15 c $3 B 4541-1000$ olum. Grin Cricults. 11st. 30c. Net. 18 c $384542-750 \mathrm{ohm}$. Grid (Ir cuits. List, 30 c. Net.... 18 c

## Carter Battery Panei

 Switch3B25 12-List


65 c . Net. 39 c
one hole turn of attractive
button makes a quick snap break contart. "On-Of" panel plate.

## Carter Lock 5 witch

Same as Carter panel switch but with remorable key in place of knob. Shpg. Wt. 4 oz.



Has positive snap action. Extends $5 / 8$ duch buck of pancl, and is $13 / 1$ inches overall. Insulated ior metal panel mountling. Furnished with "ON and OFF" name plate. Shpg. wt., 4 oz. 384543 -Single pole, double throw. Lalst prlec. 60 c . Net.
384544 -Double pole 36 c throw list prec 70 c , single Net List price, $70 c$.
3B4546-Bouble pole, double throw. List price. 90c.


A non-Inductive, wre-protected. high resistance volume control. Contact arm slides on protecting wire covering the spectal moisture-proof resistance arm

HI-POT is slmilar in construction to HI-OHM except for a third terminal.
HI-OHM. List price, $\$ 2.00$.
Net $1554100000 . . \$ 1.18$
$\begin{array}{ll}3 \mathrm{~B} 4554 & 100,000 \mathrm{ohm} \\ 3 \mathrm{~B} 4555 & 200,000 \text { ohm }\end{array}$
$3 \mathrm{~B} 4555200,000 \mathrm{ohm}$
$3 \mathrm{~B} 4556300,000 \mathrm{ohm}$ 3 B4556 300.000 ohm HI-POT. List price $\mathbf{\$ 2 . 2 5}$. Net 3B4558 100.000 ohm 3 B 4659200.000 ohm 3 B3303 500,000 opm


C-H. RadioLock Switch Protecta set from tampering.
Two keys furnished. ${ }^{\text {neys }}$ fur-

## WI., 4 oz . <br> 3B2509-Lust, 60c.



Bases and handle of polshed hard mbber. Nicke? plated metal parts. Sinirle throw types to 2 Inclues long. Double throw types $2 \geqslant$ inches long.
3B2521-Single pole. single throw. Ifst. 60a. Net. 3B252-singlepole double throw. List, 70c. Net.
 single throw List 900 e Net.
 double thro 0 ouble polc Net.............................. 3 N 2526 - T'riple pole, double throw. List. $\$ 1.50$.
 $3 B 2527-F$ o ut pole.
double throw. List $\$ 2.00$. double throw. List. $\$ 2.00$. 382528 Five pole, double throw. ISat, \$2.50. Net...................... $\$ 1.50$ Special
Miniature SwItches


3B2518-Single pole single throw. List, 20c. Net. 382sig-singlepole double throw. List, 30a. Net. 3B2520-D oubie. 18 c double throw. List. 50 c . Net......................30c.
For base or panel mounting. Bakelite bases $11 / 5$ inches long. Highly nickel plated


## DÂVENparts

New Improved Super Amplifier Type "3S"
A compact 3 stage resistance coupled unit including all resistors, grid leaks and coupling condensers of the binding post terminals in wiring complete. Sockets fear. Mould sed bakelite base 4x10 in. All interior binding posts on each stage permitting till tubes. Equipped with "Co" battery binding posts on each stage permitting proper biasing of each individual tube, 3 32900-price, not including tubes. List, $\$ 15.00$. $21 / 2 \mathrm{lbs}$.

$$
\text { List, } \mathbf{5 1 5 . 0 0 .} \text { Nct.............. } \mathbf{S 8 . 8 2}
$$

## Anti-Motorboater



Prevents"motor boating in resistance coupled amplificts Increases power handing capacity. Quickly installed by replacing grid leak in second audio stage.
3B2978-List, $\$ 4.00$.
Nct............ 2.40

## Daven Filament Ballast

Eliminates rheostat - auto-
matically regumatically regutubes. Saves
 wiring space and Current. One Ballast controls one to five tubes. Price includes mounting.
$382936-1$ Tube $3 / 4 \mathrm{Amp}$. List, each, $382937-2$ Tubes 13 Amp. $\$ 1.00$. $382938-3$ Tubes $3 / \mathrm{Amp}$ Amp.
382939 Tubes 1
$382939-4$
$382940-5$
Tubes $11 / 4$ Amp. Net, $60 c$

## Daven Resisto-Coupler

Fixed coupling condenser sealed
in base. Resistor in base. Resistor not included in the price as be low Recomed values are:
all stages 100,000
 onms.

Grid Leaks: 1st stage, 1 meg.; 2 d stage, 1/5 meg.; 3 d stage, $1 / 4 \mathrm{meg}$. Instructions resistors. $\$ 1.60$, wet. 6 oz . List, without $3 \mathrm{B290} 4$-B-Battery type.
3 32930-B-Eliminator type (will not "motor-boat'").

## (1) (IGNsig Grid

Inserted in Grid circuit of each R. F. Tube, it stops squeals and whistlesoselllations. Shpg. wt., 4 oz.
List each. 75c. Net
3B2942-200 10 mm....45r 3 B2943- 300 ohm . 3 B2945- 510 ohro. $3 \mathrm{E} 2944-400 \mathrm{ohm}$. 3 B2947-750 ohmu.

## Hi-Duty <br> Glastor <br> 

The big brother of the Daven Glastor -made the same way. Desiyned paiticularly for "B" Eliminators where high current capacity is required. DO NOT OVERLOAD, Shpg. wt., 4 oz.
List, \$1.00. Net....................59e 3 N2950 $\quad 2, \dot{5} 00$ Megohms Capacity $\begin{array}{lrll}3 \mathrm{~B} 2950 & 2,000 & .0025 & 28.00 \mathrm{MA} \\ 3 \mathrm{~B} 2951 & 5,000 & .005 & 20.00 \mathrm{MI} \\ 3 \mathrm{~B} 2952 & 10,000 & 01\end{array}$ $\begin{array}{llll}3 \mathrm{~B} 2952 & 10.020 & .01 & 14.00 \mathrm{MA} \\ 3 \mathrm{~B} 2953 & 15.000 & .015 & 1150 \mathrm{MA}\end{array}$ $\begin{array}{llll}382954 & 25,000 & .015 & 11.0 \mathrm{MA} \\ 3 \mathrm{~B} 2955 & 50 & 8000\end{array}$ $\begin{array}{llll}382955 & 50,000 & .05 & 6.35 \mathrm{MA} \\ 3 \mathrm{~B} 2956 & 100000 & 1\end{array}$ $\begin{array}{llll}3 \mathrm{~B} 2957 & 500,000 & .5 & 2.00 \mathrm{MA}\end{array}$

## Daven Mount



## Daven Manual

Reslstors-their practical applications in rado reception. Giving circuit diatrams and other data by leading author-
2B2902-List, 26c. Net.......17c

## New Daven Seven Tube Bass Note Circuit

 Illuminated Single bice
## $40^{69}{ }^{6 \pi}$

The bass
Note Cir cuit isbuilt around resistance
coupled amplifiea

$$
\operatorname{tion} a n d
$$

the D. R. F. colls. rurity of tone, quality of reproduction is the first
aim or thls set. This feature, com-
of the most favored of all circuits for quas selectivity, make this one circuit employs seven tubes-3 stages R. F., detector and 3 Daven Resistance coupled audlo. Shpg. Wt., 15 Ibs .
3B2976-Complete set, of parts not assembled with $7 \times 18$ drlled and engraved panel and sub-panel, single dial control condensers. No tubes, no cabinets. $382977-$ set of 7 Baven Tubes for Bass Note Circuit-3 type 201A. 3 type Mu20 and 1 type Mu6. Shpg. Wt., 4 bbs. List. $\$ 16,50$. Net...... $\$ 10.69$


## Amplifier Kit Type 3-K

For 3 stages of amplification and for those who prefer self assembly. All resistors and grid leaks are included (no sockets). Contains three Daven No. 42 Resisto-Couplers, fitted with coupling condensers of proper capacity. Gives best tone quality and volume on sets using "B" batteries. When agssembled will produce the same-results as the Daven Super Amplifler. Packed complete with instructions 382901 . Shpg. wt., $11 / 2$ Ibs.
382901 -List, $\$ 8.00$., Net.... $\$ 4.70$

## Type 3-L Kit

intendeđ especially for operation with $\mathrm{B}^{\prime \prime}$ Eliminator sets and with superheteroayne circuits. WII not "motor-boat." $3 \mathrm{~B} 293 \mathrm{I}^{2}$-List 58.00 . Net 470
$.54: 70$

## (1) JusTox ) <br> Daven Glastor

These new Daven resistors entirely eliminvice the use of impregnated paper or flore Glastor will carry a inuch higher current and is absolutely nolseless. Will not vary from rated value under any conaition. Shpg. wt., 2 oz .

|  |  | Megohms | List | Net |
| :---: | :---: | :---: | :---: | :---: |
| 382908 | $2,500$ | ohms $.0025$ | \$1.00 | \$0.69 |
| 382908 | 5,000 | . 005 | 1.00 | . 69 |
| $3 \mathrm{B2907}$ | 12,000 | . 012 | . 76 | . 45 |
| 382908 | 25,000 | . 025 | . 76 | 46 |
| 382909 | 50,000 | . 05 | . 76 | . 45 |
| 382910 | 100,000 | . 1 | . 75 | .45 |
| 582911 | 250,000 | .25 | . 50 | .30 |
| 382912 | 500,000 | . 5 | . 50 | . 30 |
| 3 B 2913 | 1,000,000 | 1. | . 50 | . 30 |
| $3 \mathrm{B2914}$ | 2.000,000 | 2. | . 50 | . 30 |
| 3 B 2915 | 3.000,000 | 3. | . 50 | . 30 |
| 3 B 2916 | 5,000,000 | 5. | .50 | .30 |
| $3 \mathrm{B2917}$ | 7,000.000 | 7. | . 50 | . 30 |
| 3 B 2918 | 10,000,000 | 10. | . 50 | . 30 |

## Daven R. F. Coils

Solenoid t y pecolls
small extcrnal sinall extcrnal for use in Daven Bass Note Circuit with .0005 Condensers. Sulitable circuit of this type. Range
ineters. Greator Selectivity Shag 1161 lbs.
38294 -Set of 3 coils.
$\mathbf{3 8 2 9 4}$ - Set of 3 coils.


List, $\$ 8.00$. Net.
$\$ 4.80$


## Daven Tubes

These tubes are manufactured in two types expressly for use in sets having Resistance Coupled
Amplders. The type Ampiners. The type mended for detector and first and second andio stage. For the last audio stage use
ty $\mathrm{ye} \mathrm{Mu}-6$. The type Mu-6. The
perior to most tubes of this type offered and supply unlform appearance to complete set of tubes. FIt all standard sockets. Shpg. wt., 12 oz.
$2 \mathrm{B9} 10-\mathrm{Mu}-20$.
Inst, $\$ 2.25$ Net....
2B9 1 - New Mü-6.
2B9 1.1 New Mu-6.
51.42

List, \$4.50. Net.
$\$ 2.86$
38907-Type 201 A (Same style bulb). Seo Page 54 for now Darin A c Tubers


## AMPERITE

REG. U. S. PAT. OFF.
The automatie flament control wich ellminates all forms of hand rheost:ats from every type of radio recelving circuit and by perfect selfrecensment permits the unlformly efficlent operation of vacuum tube filaments

No nioving parts. Permit's the use di ang type of tabes or any combliation of tubes.
Amperite operates on the Therino-Ele tric principle. It consists of a sperlal treated flament hermetically sealed in aghass tube and surrounded by an inert gits. This filament has the unlque property of changing in resistance antantly operated at maximum effictency-for hest volume and lonsest life.
GUARANTEE-FVery Amperite is guranteed to functlon perfectly and agalnst any defect in constriction. If found defective in any resject replacement will be any delect wout charge.
I.lst price, $\$ 1.10$. Net price, complete with mounting
$65 C$ 383207 No. $1-A-1 /$ unipere type-for the UV-20i-A; C-301-A; UX゙-201-A: CX-301-A: ©N-200-A; DV-2 or any li ampere, 5 volt tube on the 6 -volt " $A$ ' battery.
383208 -No. 4V-199-For the UV-199; C-299
 383209 the 6 -volt "A" battery.
tubes on the 6-volt A 3 A 3210 ampere type-For the UX-112; CX-212; UX-171 CX-371 ind similar tubes or $21 /$ amp. $201-\mathrm{A}$ tubes on the 6 -voit battery ( 3 dry cells) 3B3211-NO. 120-For $\begin{aligned} & \text { or on the 4-volt storage battery }\end{aligned}$
$3 B 3214-3-A-x$ ampere-to control 34 amp ( $201-\mathrm{A}$ ) tubes on 6 volts. $3 \mathbf{3} 313$-No. 4-A-For all 1 ampere 5-volt tubes or 4 4amp. (201-A) on 6 volts 3B3299-Double Amperite Mounting. Shpg. wt., 4 oz .

## "Electrad" Variable High Resistance

Ideal for volume control. Wire wound on kenuluc balecilto bpsp, Reslstance remainscon-
stant at every polnt. stant at every point. permitting full range one turn. no nondroscople. No parts to break or Wear. Practirally inhigh current-carrying cuparity.
$89 C$ 3 1st 3232 - Type A Variulile grid leak-$1-10$ to 7 merohms.
3 33233-Type B- 1,500 to 100,000 ohms.
383234 -Type C-500 to 50,000 ohms. ohms (detector e D- 10.000 to 700.000 $383282-$ Type $F$ - $u$ w 2,000 ohms. 383282 - Type F - 0 to 5,000 ohms. 3 B 3284 二Ty, $\mathrm{G}-0$ to 10,000 ohms. 3 B 3285 -Type $\mathrm{H}-0$ to 25.000 ohms. 3 33287-Type $\mathrm{I}-0$ to 500,000 ohms. 3B3286-Type E-Compensator. 500 , 000 ohms potentioneter for perfect tone and volume control. List . \$1, 18 price, $\$ 2.00$. Net price. ....... Volume Control. List prlee, s1.50. ......89C
 IIst, $\$ 2.00$. Net.
$\$ 1.18$

## DE LUXE RHEOSTATS



Fine looking heostat of the Carefully muale Carerully made Genulne bakelite Genume bakente attractive pollshed black knob. Only one hole required for secure mounting. Smooth, quiet rent Potentlometers mateh rheostats and are of the same high grade design and construetion.
$384604-2 \mathrm{ohm}$. $384637=100 \mathrm{ohm}$. $384608-30 \mathrm{ohm}$.
$384609-50 \mathrm{ohm}$.

List. \$1.00
Net. . . . 4 C

3B4638-200 ohm potentiometer. List, 51.26. $\left.\begin{array}{l}384611-400 \text { ohm } \\ \text { potentiometer. }\end{array}\right\}$ Net.... 65 C


Automatte flament control of tubes. EllmInates hand rheostats, With mountlng, complete.
t.1st, \$1.00.

3B3238-í amp. (1or 1-201A),
3 33273-1/2 amp. (for 2-201-A or 1-112, $383274-3$ amp. (for $3-201-A$, etc.). etc.). $275^{-1}$ amp. (for $4-201-\mathrm{Amp}$ (for $5-201-\mathrm{A}$, etc.). $383276-11$ amp. (for 5-201-A, etc.).
3 B, $383239-06 \mathrm{amp}$. (for $1-199$ on $41 / 2 \mathrm{~V}$ ).
$383278-125 \mathrm{amp}$. (for $2-199$ on $41 / 2 \mathrm{~V}$.
3837 .



## Elkay Equalizor

With the en-
trance of new
type tubes into
radlo, sets were
unprepared for
rapld changes
 to the varlolis
has devised a control whith equallzes the working voltage by inserting this device into the tube clicult. With slight change in wirting tubes may be changed on short notice by merely changing the control. $383218-$ For 1201 A tube ${ }^{3}$ (list price. 383219-For 2201 A tubes 383220 -For 112 tube
383225 -For 109 tube Includiag 3B3225-For 109 tube ${ }^{2}$ mounting.


Frost DeLuxe Rheostats
Nationally advertised. Careful bullt, smooth operating and nolseless 3 B4400-21/2 ohms 3 B4401- 4 ohms 384402 - 60 hms 3 B4403-10 ohms $38404-25$ ohms $384404-20$ ohms. 3 B440 - 50 ohins 3 B4406-50 ohms. 3 B4407List prl
Net. $\qquad$
Potentiometers
$384408-200$ olims 3 List price, 51.00 $384409-400$ ohms $\}$ Net. Bakellte Frame 59c
 3844i4-30 -3 oims $\}$ 59c

 Resistance Non-Inductive Silent in operation. Resistance does not change under varylng
temperature or contemperature or con-
stant use. Niekeled cuse. Attractive arrow marked dial.

## Standard Rheostats and Potentiometers

$384500-6 \mathrm{ohm}$ pluln.
$384501-6 \mathrm{~h} m \mathrm{mernier}$
 Eah 26 C
$384506-200$ ohm
$384507-400 \mathrm{ohm}$
Iotentometer
515 These instruments are of high quality usting base Resistance element securely wound and will not work loose. Bindink post connertlons. Standard spaced screw. holes for mounting. Smooth working contact lever.

## Bradleystat

3B4431-Lst, s1.85. . . \$1. 20


 $34435-1,000$ to 50,000 onm.

$\mathbf{3} 80,000$ to 500,000 hm. | 384 |
| :---: |
| 384 |
| $37-25,000$ |

票雨
直
直
宣Eby Ensign Binding Posts
These binding posts are the Anest on the market． They are used as standard equipment on many of the blghest priced manufactured aets．They have patented construction，non－removable tops which unscrew enough to allow plenty of room for wires． All are complete with nut，lugs and serew．Neat white enamel captions engraved on pollshed black bakelite top．Dlameter 1／2 Inch．Size 6－32 screw List，each long．

| Plain． | $3 \mathrm{B885}-\mathrm{B}$ | $3 \mathrm{B8} 63-\mathrm{C}$ Bat． |
| :---: | :---: | :---: |
| Ant． | Amp＋ | $3 \mathrm{B891-4V.C}$ |
| 38880 －Short An | $3 \mathrm{B646-22} \mathrm{~V}$ ． | $3 \mathrm{B892}$ |
| $3 \mathrm{B881}$－Long Ant． | $38647-45 \mathrm{~V} .+$ | 38893－27 V |
|  | $3 \mathrm{B886-67} \mathrm{~V} .+$ | 3B894－40 |
| 8 | $3 \mathrm{B648-90} \mathrm{~V}$ ． | 3 6651－Phones． |
| 641－A Bat．＋ | 3B649－135 V | 3 B895－Speaker |
| 642－A Ba | $3 \mathrm{B88} 7-150 \mathrm{~V}$ | 38896－Speaker |
| $862-A+$ Bat． | 3B888－180 | 3 B897－Input． |
|  | $3 \mathrm{B889}-200 \mathrm{~V}$ | 3 B898－Output． |
| 644－B Bat． | $3 \mathrm{B890}$－ A －Bat． | $3 \mathrm{B645-Loop}$. |
| B643－B Bat．＋ | C＋ | 3 B899－Ioop 1. |
| 8884－B Det． | 3B652－CBat | 3 B879－Loop 2. |

## Eby Binding Fost Strip



A stmp of 7 post In the most populir marikings mounterl mib binkiad hara
ribber strip，with nibekel－pinted brackets and wood
3B637－List prtce． 51.25 ．Net


Radio Screw As sortment 3B628 Last price ${ }^{50} \mathrm{c}$
Net price． A handy assortment of wood screws，machine screws，nuts and washers in the sizes and styles needed for assembling radio sets．

$38700-$ Per set of elght．List Have fine looking polished black insulated tops with titles elearly marked in contrastins White enamel．Titles supplien are those used on practically all ret polighnicte with brass bar－ orsew to il pinel of any thick－ ness．

## Composition Top <br> Binding Posts

3 B 701 －Per doz． 30
Per hundred．．．．．$\$ 2.25$ I Well made．Attractive $\mathrm{E}_{\mathrm{I}}$ lookiny．Poilshed black insulated top．Brass body $\boldsymbol{\sim}$ nickel plated．Size 6－32 screw andyer ertonda in ach．
Ready Panel Mounting

$$
\begin{aligned}
& \text { Markings are slver } \\
& \text { and blark nlekeled plates set under binalng posts. }
\end{aligned}
$$

$$
3 B 662 \text {-IIst price, } \$ 1.50 \text {. Net }
$$ for Binding Posts

## Binding Posts on Panel Strip

## 3B795－

Set of seven 3 ．30c
posts mounted on strip
Posts blalnly marked
soldering lugs attached

## $-\Theta \Theta \Theta \Theta \Theta \Theta \Theta$

## X－L Binding Posts

Have attached sllver and black inish post marker． Connection is made by pressing cap down，insert wire．remove pressure and wire is firmily held．

| 381355－Aerial | 51363 | 3 B |
| :---: | :---: | :---: |
| Ground． |  | 3 B1368 |
|  | 13 Pat． 45 | 381370－B＋ |
| 81359－A 13at．＋ | 381365－ | 381371－Sht． |
| 381360－Phui |  | 381372－Lg．Aerlat |
|  |  |  |
| 1 |  |  |

## Switch Levers

3B635－With
black knob
Each．．．．．．10c
I．ever adjust－
able from lat to

## Switch Contact

5
$B$8630－Per doz．．．．． 8 c Per hundred．．．．．．． 305
Per thousand．．．． 51.50 Prass．fine polished nickel thisish．Screws are b／in． ong：size．6－32
Switch Lever Stop 38797－Per doz ．．．．9a nlekpl finish．Has $s=1 \mathrm{in}$ ， nlekpl finlsh．Has sis in． $\xrightarrow{\text { On }}$－？screw．One n
A copperluz on
wheh no solder
is required．Wi
is held in grip．
3 B6E3－Pkg．


＂T＂Lug
3B624－3 doz．30c

## Solder Lugs

Fits binding posts Bax and contart points．
$3 \mathrm{~B} 626-\mathrm{Per} 100305$

Per thousind．．．． 51

合 Rajah Connectors
A postive solderies snap for wires．Jusi puish lead wres．Just push on or pull of to make 3 break connection． 38796
list price
Net
20 c
2 c
Fahnestock Spring Grip Connectors
 Fit any binding post．60c with their use up to five sets of phones or loud speakers can be counected up at one time．
$\qquad$
3B715－Blark，each．．．．15c 3B716－Mahogany，each． 16 c Conslists of a strip of fnest hard runber paneling $13 / 4$ inches Whde， 7 inches long and $3-16$ inch thick．
shown．

## Binding Post Mounting

 stripsDrilled for mounting bfading posts．Screw holes at ends 3－16 inch thick．Strlps unlet


Brass Binding Posts
Brass binding posts，ilne pol ished niekel aumsh，well made Fitted with washer and 6－32 3B703－1 arge sinch． harrol and knob targe size long．nozen．．．．60c 3B704－Smailer size harrel and kuob $9-161 \mathrm{n}$ ． Hundred


## Binding Post

 3B702－Each． 8 Mozen．．65cMade of brass pol－ tshed nickel tuish． Has two holes for wlres or cord tlps． Fits any thlckness of panel．

## 3B627

Per doz，30c
Nicely finlshed
in black．Sold in spenty titles wanter
Specify titles Wanted
Plate Plate Secd + Load Ground＋A Bat．
 Phones $\pm$ A Bat． Output $\quad+\mathbf{C}$ Bat．
Input Titior－Bat． Grld

BRASS SCREWS Polished Nickel－Plated Heads
The tive styles of screws shown are all brass with pol shown areal brass with pol ished miekel plated heads，
especlally made for radio set espectans
bulders．


Size 6－32 threads to inch． 3B878－Lenath Gross

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

 Proper thickness for radio work．Size Length Gross


## 

Proper thickness for radio work．Sizes 6 and 7.

## $3 B 616$ Length

$3 B 617=1 / 3111 . . . . . .478$
38

## Hexagon Nuts

Made of brass nleckel plated．Cham－
fered and counter Pered and counter
sunk．F＇1t all stze 6 gerews with 32 threads to inch．

## Flat Washer



Made of hrass nekel plated．Fit size 19
3869
（jross．．．．．．． 25 c
Flat
Lugs
3B620－Per 100.1 .236 Cer
Fiser thousandi with iwo hole Flat lig with two
nustration artual size．


Similar to lug above．but 3 Bmaller 1 －per 100

32 Per thousand．．$\$ 2.15{ }^{32 \mathrm{c}}$
Shakeproof Lugs and Washers


Insure permanent tight eon－ nertions．Plosphor bronze， hot tinned．
38631 －Lugs，per 100.39 c

## BUS BAR-WIRE-COILFORMS-TUBING-SHIELDING

## Bus Bar Strip

382213 - $^{3-f 00 t}$ strips. Net, each, 30c. 19 . Flat brass striy li-inch Wide approximately .oolowinch thick. Replaces on high grade sets. More satisfactory because of better firmer and more duratble cont tacts.
Tinned 4 Bus ${ }^{99}$ Nire 382101 -R ound. 10 (eet).
$382162-s i n g$ feet 10 lengths ( 20 feet).
00 lengths ( 200 leet) $-1,13$ Size 14 tinned stifl solld Best size for neat job and easysolderins. 2 -font lengths

## No. 12 Bus Wire

382107-Round. lengths. 10 lengths ( 20230
feet). 23
100 lengths ( 200 reet). 22.05

## Gosilco Bus-Wire

Size 14 copper bus-wire
siver plated, with protective covering of 24 K gold. $382108-10$ teet.
List,
Net. . . . . . . . . . . . . . 410

## Celatsite Bus Wire

 $382100-\mathrm{I}$, st length, 10 c . ${ }^{30}$ Net price for. 1045 bus wire insulated with highest grade varnished cover-
Ings, supplied in $y$ ellow, brown bIack, green,
maroon, salmon slate gray, blue white and red. Us ing different colors rcuits easy and sure, neater - and lower cost. Size 14 stifi - Bolld wire.


382 106-25 ft. coll. 45 C per conductor. Covered with per conductor. Covered with. cotton berving and smooth. - dled. Makes attractive job. Supplled in black, yellow brown, green, maroon, salmon, slate gray, blue, white - color wanted.

Acme "Spaghetti" Tubing
\}32105-List price per 30 Inch length, 10 c . Net 45 e The best quallty spaghetti -made. Made of high arade with high insulation trans-- parent varnish. Supplied maroon salmon, alate gray. blue, white and black colors. Different colors can be used to mark difterent circuits
$\qquad$
WE PAY FREIGHT See Page 3

## Rubber Covered Hook-Up Wire

Stranded. tinned copper wire covered with live rubber insulation any withstand any narlity used in radio. liest
 for short leads and ease or wirlng. Five colors. 25-foot colls.
$382220-R e d$.
382221 Green.
$382222-$ Blue
$3822001 / 2-$ Black
38222 - White
Net each.
24c

## Pigtail Wire



A bralded wire cable made up of very fine strands of copper wire, which gives it extreme flexibility, Use it for making connections on your variable condensers, varlometers and switches and avold high trequency resistance losses. Prevents nolse caused by loose or
imperfect connertions due to imperfect conne
silding contacts.

## Litz Wire for Loops

3B2004-Per 125 ft List, $\$ 1.00$.

65 c


Conductor of A 60 strands No. 38 wire with 5 strands No. 36.
Speclally treated toprevent
Covered with stretching. double serving of maroon cotton.

## Silk Covered Loop Antenna Wire

## 3B2005-Per 125

87c $\$ 1.75$.
Net.

87c
Composed of 60 strands No. 38 copper wire with 5 strands No. 36. Covered with inner serving cotton. Outer serving artiftelal silk of maroon or green color. looks well, Will no
stretch and holds its shape.

Litz Wire for Coils 382003 -Per 100 f $\$ 1.00$.
$\rho^{\text {List. }}$ Net.
$65 C$
Conslsts of 20 struands of No. 38 enameled wire, twisted and covered with a double serving of sllk. The correct Wire for low loss inductance colls. Equivalent to size 25.

## Radio Shellac Compound

For covering cabinets. base boards, etc. Also used for imprernating wres is out our insulating cement is recommended in preierence for this purpose. ${ }^{2}$ oz. bottle. 18 C

## Radio Insulating Cement <br> 382210-

Bottle
22c
A transparcnt relluloid base cement for Insulating and Impregnating wizes and colls. Makes spider web, honeycomb, etc., colls self-supporting. No capacity or absorption
eflects. 2-0z. hottle.

## Bakelite Low Loss Coil Supports

The bakellto tub- 1 ing and strips listed here can be assem- together to make low loss coll $\square$ typen of windings can be constructed. All tubing is sininch wide, i/n-Anch thick. Isimension given is inside ilameter. pieces pleces

 $382304-33 \ln .29 \mathrm{c}$ stite strips $1 / 4-$ in, wide, i-in. thick, 620120
in. length..............

## Bakelite Tubing

Genuine bakelite
 tubing. Pleces 3 in. long only. For windwill not warp nor bend not arp whl bend. tanch whl Natural color. Dlameter given is inside.

Slngle Lots


## Cardboard Tubing

Used for making tuning coils oading colls, etc. Made of elected stock covered with smooth paper. All sizes are 1 foot long.
383835 -Diameter 2 in. single lots. 13 c ; Lots 0
$3 \operatorname{ten}_{3} \mathbf{3}$ - Dinmeter 214 in. Each, 14 e Lots of ten... 12 c 383837 Diameter 3 in. Each. 15 c ; Lots of ten... 13 c 383838 - Diameter $31 / 2$ In. Each, 17 c ; Lots of ten...15 Each. 19 e ; Lots of ten.. 18 c Slzes can be assorted for 10 lot price.

## Zinc Shielding

For use between A.F. or R. F. stages, for shielding panels or cablnets. Thick enough to be selif-supporting and hold shape frmiy when bent. Eusily formed or cut. Made of zinc with polished nickel coating.
$382206-5 i z e 6 \times 12$ 40 C 382207 -Size $7 \times 24$ Ser shect....









Threaded Bakeilite Tubing 3B2323-Genulne bakellte tubing threaded for apace winding. Tube is $26 / \mathrm{in}$. long. 1/5/ in. outaide diameter, $1 / 0 \mathrm{In}$ wall. Threaded with 10 threads, 64 threads per inch best sulted for No. 30 ename wire. Full length winding accurataly covers the broad cast bind with . 00035 vari able condenser.

Bakelite Discs
Lots


Copper Foil
382201-6x24 neine 25c $\$ 1.20$
 Thin copper foll for shield-
$.00 \%$ inches thick.

## Tin Foil

$382204-S h e e t s \quad 61 / 2 \times 8$ x inches, about 25 sheets to the pound.

36 c
$382205-$ sheets $6 \times 241 \mathrm{In}$.
4bout 8 sheets to the 39 C
pound. Per $1 \mathrm{~b} . . . . . . .3 \$ 2$ Used for making condensery shielding panel or cabinets.
Aluminum Shieiding
Proper thlckness for maximum shielding effect with ample mechanical strength. mercially pure aluminum Sheets. About $\frac{1}{5}$ nen thick. Shippinf whís-6 x 12 inches.
Each $38230-7 \times 24$ inches. $45 c$
$38232 i-81 / 3 \times 30$ Inches.


Goodrich Hard Rubber Panels
Acknowledged by those who know bo tho beat hard rubluer pallels made for radio purposes，yet they cost no more than inferior makes

A special insulation for radlo purposes． The cholce of set builders and envineers． Wonderful smooth high polished finish eliminates losses caused by moisture gathering on surface of ordinary in－ having a rubber bage．Can be drilled or cut without chipping．Wlll not warp．A perfect insulator for radio use．Smooth，clean edges．Thickness，何－inch．Av．shíp．wt．，${ }^{3}$ Mbs． No．Each Inches No．Each $\begin{array}{lllll}\$ 0.57 & 7 \times 10 & 385624 & \$ 0.67\end{array}$ $\begin{array}{lllll}385619 & .59 & 7 \times 12 & 385628 & .73 \\ 385620 & .77 & 7 \times 14 & 385629 & .88\end{array}$ $\begin{array}{lllll}385620 & .77 & 7 \times 14 & 385629 & .88 \\ 385623 & 94 & 7 \times 18 & 385630 & 1.84\end{array}$ |  | 385623 | .94 | $7 \times 18$ |
| :--- | :--- | :--- | :--- |
|  | 385630 |  |  | $1.29 \quad 7 \times 24$ $\begin{array}{llll}385626 & 1.29 & 7 \times 24 & 385632 \\ & 1.39 & 7 \times 26 & 385627\end{array}$ 385626 $7 \times 30$

## Fiorentine（Frieze）Panels



## Self－Supporting Brackets

Assembles sub－ panel firmly to 63 in ．Takes sub－ panels up to 8 in ． panels up to 8 in.
deep． 2 in．high，
plenty of room beneath plenty of room beneath panel for wiring， reslstances，etc．Nickel filsh．Ship．

385719－Per palr．Llst，70c． Net

## Adjustable Brackets

 Can be adapted to meet prac－ ticaluyany ments．Flt any slope Adjustable distance to bottom of cabinet．Adjustable length．Made of brass nickel plated．Ship．wt．， 1 lb ． 3B4 116 －Per pair，list，$\$ 1.25$. Net
$77 c$

## Panel Mounting Brackets

 Cast aluminum brackets ior mount－ lng sub－base and rront panel．For finch hioh panels． depth 7a／4 inches． Ship．wt．， 1 lb．$$
\text { 385720-Palr. List, } \$ 1.50 .
$$

## Net

## Bakelite or Phenoline Panels

This product has been used for many years in Ranio work．Made of laminated stock，impregnated with phenol com－ pounds．We supply best grade bakelite or phenoline panels which are chemically and mechantcally similar．Machine well with－ out chippins．Won＇t warp．Waterprool Attrictive natural pollshed black finish can be sanded or olled．Av．ship．Wt．， 3 ibs． finch thick Slze．$\quad$ in inch thlek ${ }^{3}$ B4． $384921 \quad 5.77 \quad 6 \times 10^{1 /} \quad 38560250.51$ $\begin{array}{lllll}384922 & .89 & 7 \times 12 & 3856605 & 1.25\end{array}$ $\begin{array}{lll}384924 & 1.37 & 7 \times 14\end{array}$ 3 B4924 1.37

## Lignole Radio Panols

## Engraved Panels for Circuits

See page 108 for drilled engraved panels for popular cireuits．

## Special Size Panels

We can supply bakelite or phenolite panels in any size or thickness，cither black mahogany or walnut finish．Remit full alue or panel with order．Special size panels cannot be exchanged．
binch thick．Per sq．inch，net．．．． $11 / 4 \mathrm{c}$多inch thick．Per sq．inch，net．．．． I $_{1 / 3 / 4}$ c 4 inch thick．Per sq．inch，net．．．．
Minimum charge $\$ 1.00$ per order．

## Panel Engraving

We can fill orders for engraving and tet－ tering on any style panel，elther one already drilled or on new pancls just pur－ chased．When ordering，please send lay－ out showing exact lettering desired and out show
location．
Price，per letter or flgures．
$\$ 0.04$
Minlmum charge per panel
1.00

## Base Boards



61／2 Inches wide

|  | Leth |  | Lgth． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No． | In． | Cach | No． |  | Each |
| 385638 | 6 | 18 c | $3 \mathrm{B5647}$ | 20 | 36 c |
| $3 \mathrm{B5639}$ | 9 | 20c | $3 \mathrm{B5645}$ | 23 | 39c |
| 3 B 5642 | 11 | 240 | $3 \mathrm{B5648}$ | 25 | 44c |
| $3 \mathrm{B5643}$ | 13 | 29c | $3 \mathrm{B5641}$ | 27 | 52c |
| 3B5646 | 17 | 310 | 385653 | 29 | 59 |


A new specially treated wood panel that eets an panel requirements and is now used and recommended by leading radio entineers．Surpasses all others in beauty and richness of appearance．As a dielectric there is no better panel material obtainable cxtremely rigid，will not warp．Made of genuine walnut，finished elther plain o two tone with a darker border separate from the body of the panel by beautifu Marqueterle inlay．Panel thickness Inch．Av．ship wt．， 3 lbs．
Rich Grain Wainut Face and Back

| 385890 | Slze | \＄2．52 | $11.64$ |
| :---: | :---: | :---: | :---: |
|  | $7 \times 21$ | \＄2．52 |  |
| B5802 | $7 \times 24$ | 3.36 | 20 |
| 385803 | $7 \times 26$ | 3.64 | 40 |
| 385884 | $7 \times 28$ | 3.92 |  |
|  | 7x30 | 4.20 | 4 |
| Inlaid Walnut Two－Toned with |  |  |  |
| Marqueterie Inlay |  |  |  |
|  | Size | List | Net |
| 385 | 7x18 | \＄6．52 | 54. |
| 385887 | $7 \times 21$ | 6.94 | 1 |
| 35888 | $7 \times 24$ | 7.36 |  |
| 3 B 510 | $7 \times 28$ | 7.92 | 5.05 |
| 385811 | $7 \times 30$ | 8.20 | 5.3 |

## VEE DEE Metal Panels



Beautifully finished in attractive walnut grain．Readily drilled with ordinary brens drill and may be used for all standard kits Border in rich ctched emect．Thickness about 盾inch．Av．ship．wt．， 3 lbs．


A complete set of transfers in neat white lettering for marking connections，dials like real machine engravings，contrasis neatly on black walnut or mahozany panels．Plenty of titles for the largest set Lettering at right is actual size．Ship 3B5701－Per set．List，500．Net．． 19 c

Tait Brackets
Very strong，light welght．For sloping panels．Suitable for any nent，solld assembly．Ship．w 1 lb ．
3B5722－
Let．． 2.01 .35

## bakelin brackelite

 support sub． panels．$$
\begin{aligned}
& \text { paners } \\
& \text { mensions: }
\end{aligned}
$$

$61 / 2$ Inches long， 2 inches wide and 1 Inch thek．Have no effect on circuit Shid． 385723－Pair．List price，$\$ 1.00$ Net



## Spring Coil Antenna

## Q mmminimminiminmumimminmo

3B2607-List, $\$ 1.25$. Net...
Used as an indoor aerial mives excelient resuits. Consists of 44 c feet of brass wire colled into a spring about 2 feet long. Stretches out to nearly the full 100 feet. Shpg. wt., $21 / 2 \mathrm{lbs}$.
 screw heads, $8-\mathrm{in}$. slze has addttional bruss holder, in 2 parts, Shpg. wt 6 as illustrated 3B2614-4-in. Net...12c

## Wall Mounting Insulators

382603-with 3-fn. longscrew. Each..4c c 3B2604- With 7-in. long screw. Each. 7 c Dozen. For attaching lead-in or ground wire to posts or side of building. Shpg. wt., 4 oz.

## Porcelain Aerial Insulators <br> 

3B2622-21/2 in. long. jozen
3B2623-4 in. long. Parh.
$.42 c$
10 c
58 c
3B2624-5in. long.
Shpg. wt., 亩 ib.

## Glass Insulators (8id Ind

Special tempered glass unaffected by heat or cold or other atmospheric conditlons. A pproximately 4 1n. long. Shpg. wt.. 6 oz 3B26.15-List, 20c. Net. 7 c

## Baby Insulators <br> 3B2602-Per box of <br> 10. For guspending wires <br> Flexible Insulated Wire Cord

 nslde of house Rubber insulatar Suse. Rubber insulator. Screw $1 / 1 / \mathrm{in}$.over anl. Shpg. wt., 1 b .
Ekko Ground Clamp 3B2605List....... 26e Net.... 15 c Makes posi-
tive contact
 even on rusty or painted surfaces. For plpes up to $11 / 2$ inches. Shpy. wt., 6 oz .


## Nifty Ground Clamp <br> Made of tin. copper

 and brass. Adjustable from $1 / 2$ to $1-5 / 1 \mathrm{ln}$. pipe diameters. The screws bore to a positive contact with plpe. Shpg.
## wt. 4 oz .

3B2637-List.
Net. earh

| 15 c |
| :--- |
| Oc |

## Bell Wire

382613-50-ft. coll......25e Size 18 copper wire insulated Mith pararined cotton bradd. shpg. wt., $3 / 5 \mathrm{~b}$.

0Antenma Wire Full 100 ft. coils, best grade eopper wire. Shpg. wit., $21 / 2 \mathrm{lbs}$.

## Bare Copper Wire

Single Lots

3B2625-
7 stranclis of No. 22.37e 36 c $382628-$
7 strands of
3 sirand of No. 24. 26 c 25c $3826111-1$
7 strandsilgh
78 rrandsi.lgh
38229.
No. 14 solld.
.34c

## Enameled Copper <br> Wire

Highest quallty enamel. Witl not chlp nor peel. 100 ft . Colls. 382610 C 7 strands of No. 10 lots. Each.........335c $383630-7$ strands of 10 lots. Each.. 48 c

## Lead-In Wire



Insulated copper uire. Used for lead-in and cround wire. 382612 -Black wire. Outer waterproof black cotton bridd. Wire size No. 14 . 50 -ft. colls. Shps. wt., 2 lus.
Each.
$48 c$

Conslsts of flexible stranded size 18 copper wire with rubber sleeve insulation, over whtch is a neat tan colored cotton brald. $3 B 2616$-Single wire, 50


## Lead-in Insulators

$382608-$ For $2 s$ in or sinaller walls. Less than 382609 - For $81 / 2$ in. or ten....................... 56 c

## Made of

inouldect hurd rub-- 1 - 1 th
 bole. tifjustablearely locked by two at 10 oz .
10 oz.

## Porcelain Strain 382627-

 382627-65a $100 . . . .{ }^{5} .80$ Dealgned espectally for insulating extra Tong aertals or gny wires. Shps.

## Popular F'anels

Panels are black Bakelte with gold decoration, white and gold engraving. Av. shpg. wt., 3 llos.

Browning-Drake 5 Tube 3 B6671-Front List Net Panel, $7 \times 21$ in... 55.5053 .19 Camfield Super-Selective Nine
3B5696-Front.
$7 \times 30$ in........ $\$ 7.50 \$ 4.36$ $385697-5 \mathrm{u} \mathrm{b}-7.50 \quad 4.36$
Panel, $10 x 29 \mathrm{ln} . .7 .50 \quad 4.3$ Panel, $10 x 29$ In. $7,604,36$ 3B6672-1'ront
$7 \times 21$ in..........55.50 S3. 19 Improved Remler $45 \mathrm{~K} . \mathrm{C}$. 3 B5671-1'rollt
$\begin{array}{ll}7 \times 26 \\ 3 \mathrm{Ln} 572 & \ldots\end{array} 4.25$ 3 B5672-S II b - $8.50 \quad 4.95$ Improved Nine-In-Line 3B5692-liroll t $7 \times 2611 \ldots . .$.
$3 \mathrm{~B} 5693-\mathrm{s} \dot{\mathrm{b}} .50 \quad 3.78$ panel $8 \times 24$ in..... 8.004 .66 Karas Two-Dial Equamatic
 782 1 111.
 Silver-Marshall Super Het
3 B6673—Frollt
$7 \times 24$ 11n............ $6.75 \quad 3.93$
 Victoreen Universal, 8 Tubo
3 B6G75-Front 3B6675-Front
World'. Record Super Eight 385789-Front
$7 \times 24111 . .$. World's Record Super Ten 3 B5690-Front

pancl $10 \times 25$ 1n... $8.00 \quad 4.58$
 Antenna A new flat bralded ribbon antenna madends of copper wire. contains nearly $1 / 2 \mathrm{mile}$ of slngle wire strinds-this gives maximum attrnctive and conductive surface for radio waves. For outdoor and indoor use. Shpg. wt. 3 lus.
LS2600-Per 100 -ft. coll.
Antenna Lead-in


 L Jst, $\$ 2.50$.
 ledge, againgt wall anywhere OUTSIDE. Conslsts of 100 feet enamel covered aerlal wire in compact cage unit. $100 \%$ insulated with moulded bakellte irames. Comes complete including pole Stands 6 ft . high when erected. Shipplng wi., 5 Ibs . 3B2741-List, $\$ 10.00$.
Net.

## Dubilier Light Socket Aerial



Ellminates outside aerlal. Equipped with famous Dublifer condensers to insure quality A pproved by
Underwriters. Shipping wt. 8 oz.
382700-List 51.50
Net
89c

## Echo Tape Indoor Aerial



Ideal for inside aerial instalflexibie and neat appearing. 286363 -
50-ft. roll. List $50-1 \mathrm{t}$.
50 e . 50e.

30c
2B6364-100-ft. roll. List, 90 c. Net.

Aerial Booters
Sharp-
 en selecincrease $\mathrm{valume}_{\mathrm{a}}^{\mathrm{a}} \mathrm{d}$ effectble saving on butand tubes. For any antenna. Shipping wt., 1 lb .
3B2710-Set of 6 booters. List. $\$ 1.00$. Net.

57 c


Brach Arrester
For outdoor use Attaches directly to antenna or leadin whe. Binding post on bottorn for ground wire. Fnc]osed Vacuum rartridge insures maximun protec tion. $\$ 100$ insur ance policy against lghtning. Shipping Wt., 1 lb .
382720-List,
$3: 5720$

## Effarsee Antenna

 The Ideal Indoor AerialLooks like a magnificent tapestry. a 19 -color lithograph presenting a reproduction of famous paintings. Takes the place of and ellminates outdoor antenna. Whil give almost equal distance and volume. Clamed to eliminate 80 per cellt of stapic. Greater selectivity and cleurer ton roproduction. Less interference from neighboring electrio wires. Has no lightaing hazard. Waterproof. Ior use with any radio recelver requiring an antenna. SIZE: 4 ft . Wide. 7 ft. long. Shipplng wt., 5 lits.
 3B2775-Small size, 6 ft . long, 3 ft. Wicle. niain (without plcture)
$\$ 1.47$

## Morris Ball Aerial Kit



Improves reception. Ball 10 inches in diameter and has adfustable roof bracket. Alum$3 B 2743-\mathrm{List}, \quad \$ 294$ \$5.00. Net........ S2.94

## Antenna Mast Fittings

 Net.Improves reception. Eltminates interference. makes tuning sharper and pleks up weaker mointed at any anivle moanted at any angle
$\$ 5.85$
 Tetuct dineate. $\$ 1.76$



Price quated is for ons set of nttings. Two sets are required for each aerial.

Two styles: A-to At any pitch of gable roof. B-to fit flat surface. Adjustable from any angle from vertical to horishipping wo 5 libs.

## 0 <br> (T) Super-Ball Antenna

$\rightarrow-\rightarrow-4$
$-$


Spring with 2 porcelain strain sulators on elther ead. rakes up siac
1 s 1b8.

25c Underwriters approved, Shipping wt. 111


AIrgup type arrestcase, Shipping wt., 10 oz. 148
 3R2722-List. $\$ 1.50 .89$
Net. Brach
Storm
King An
Arrester 7herasentrohnel Made of genuratemeneure air gap prificiple. stallation. 8100.00 Insurance polley against lightning. Ship${ }_{3}{ }_{3} \mathrm{Bing}^{2}$ wt. 1 lb .
 prool porce

This great new Invention is making quick money for up-to-date dealers. fiffient with any set under all conditlons. Mrikes irlends and repeat sales everywhere. Rerelves all wave lengths. s nondirectiona, clarities tone, increases rectivity, minimizes static, improves ummer reception. shedsice and snow. Diameter of ball 10 Inches. Condenser is built Into ball. No rod Included. Uses s-inch iron plpe. Shipping wt., 4 lbs.
$382725-$ Retall price, $\$ 10.00$. Net price wholesale, single
lots.
$\$ 6.53$
Lots of 10
$\$ 5.88$
382726 -Base to hold plpe used With antemns to roof. Retails,
50 c.
Net price.................... 3 .

## Super-Ball

 Accessory KitConsists of 50 ft . lead-in R. C. Wire No. $14,50 \mathrm{ft}$. Copper Gulde wire, Ground Clamp Brach lead-in, nail knobs, screw eyes and eyes and 10 ft. of plpe. Shpg. wt. 18 lhs. 828.8 6 lots.-Fach.
. 32.65



## Sat of Bearings for <br> Tuning Coils




This is a very beautiful Iight for use on the radlo. It sets on top of the cabinet and throws a very carcfully deflested light on the dials where it is needed most. Makes tuning easy and ellininates the strain of the cyes when the set is in a dark corner. The light is $21 / 5 \mathrm{in}$. high by $7 / 1 / 2 \mathrm{in}$. from front to back. Adjustable shade. Candelabra socket-base of white metal heavily welghted to prevent tippling. 10 fect of silk cord and attachment plus for 110 volt lighting current. All bronze finish. Shlpping wt. 3 lbs.
382584 -List.
$\$ 3.85$. Net....
\$2.24

## Time Electric Lite <br> Time Switch

A splendid clock fitted quality, beautliful switch device which an electric or turns on your radio set any moment you destre. No harm if you iorget to shut of your set If Time Lite is on the job. Pretty bronze fnish case wlth 30 -hour rellable movement. Two radio regulator hands, one for turning on set, one for shutting off. Easily conne:ted. only one Wilre affected. Uses no current.
382548 -I.lst price, $\$ 5.95$
ranule type granule type. to any vilurate ins surface or diaphragm. broadcast modulation; for telephone and repuir work; for detectophones; for stethoscopes, amplifers, ete. Offers every radio fan the means of bullding his own powerful speech ampinier. Instruction sheet included. Shpg.wt., 4 oz .
Zincite and Tellurium Detector


3B3811-List, 50 c .33 C An efnement detertir, Rectification is obtained by conturt of two sylper sensitive rystals No cat whiskers used. ispecially recommended with the use of tubes for reflex or other types of
circuits. Shpg. wt.. 6 oz .
Brownilie Vernier Detector

## 383814 -List.

$\underset{\substack{\text { s.2........ } \\ \text { Net. }}}{ }$
Provides perent reflex or erystal receptlon A combination permanent fixed and semf-adjust ahir deteriotnr. lernvides maxi mum rovtilication and pure tone simple to udjust.

## Brownlie Crystal

 $383815-L i s t ~ p r i c e . ~$75 c. N For leo with irournilio de with sensitive spots. Shis.

Crewol Crystal Detector $383808-\mathrm{J}$ Ist,
$\$ 1.50$. $\$ 1.50$.
Net....
10 Has nermanent carefully set and tested. Very senready for ulwe Ideal for use.
circuits. Mounts on panel In very little spare. Dust-proot glass cover. Slipg. wt., $40 z$.

## Electric Panel Clock

## Operates from Set* Batteries

An electrically operated clock that may be Incorporatedi in a radio set and runs on either dry reit or storage batteries. The clock consists die cast case. The amount of current used is nerpinille and the atot diameter. The clal has a black backirount with white figures and hands. Luminous dial risible in the dark. The barrel is $1 / \frac{1}{2}$ inches deep. 382546 -List price, $\$ 12.00$. Net

## Crystal Set Kit <br> Bu//d It <br> Yourseff <br> set for the berinner with limited means Who lives within a Short radius of a <br> It glves the bullder <br> 

good entertainment at small cost and gives him an insight into the fundamentals of radio. It makes an ideal present for the growing boy who evinces some interest in radio. hith quality pair of coil. high grade crystal detector, Riphiahle distance of headphones, instructions, etc. Reliahle distance about 10 miles. Ship. Wit., 4 lus ,
386426 -kit, without headphones.
\$2.60 List, $\$ 3.00$. Net.


## I Detector

Each. 28 c crystal encas e. cat whisker spripg projectinz
through hinding composition top. ost connections Wt.. 5 oz .

## Broadcast Tested

 CrystalsMounted. Good commerclal quality crystals give results satisfactory for the rdinary broadenst listener. Not recommended for reflex circuits. Shpg. wt., 2 oz. 383818-Silicon. List. each...
$10 c$

## Carborundum Detector



3B3816-List. $\$ 1.50$.

## Net

A detector using a spectaliy selected carbornndum crystial sealed under pressure. This lusures perinauent solld contact and dependable operation, guaranteed not to burn out Does not lose sensithith other crystils. Best for rellex circults shog wot 3 oz

## Carborundum Stabiliz-

ing Detector Unit


Ahtehly stabilizing devlce. By adjusting detector resistance to matich 14 a lye
trols self-oscillation in $r$ if tubes. Permits operation at peak of reseneration-gives sclertivty, cleaner tones. A sclertivity, cleaner tones. A it rieeds. Complete with Carborundum Detector. Shpg. wt. 12 oz. Net (with List price. \$3.50. tery)..
$\$ 2.22$

Pyratek Fixed Detector


3B3810-List, 51.25 .85 C Permanent stability with great sensitivity Especially recommended for reflex. Stands high plate voltage. Has mount-

## Meter Tested Crystals

## Produce loud and

 clear signals. These are exceptionally fine quality crystals. Laboratory tested on sen-sitive meters. WT 20 $383820-G i l i c o n . ~$
38382 -Galena. $383821-G a l$
List price, 60 c . Jist price, 60c

39c


Du-tec $3 B 3822$ List price, 30c Net 188 A Dubiller maderally rectifer. Replace erystals. Every point sensitive and remains so. No adjustments neressary. Mounted in cup reidy for use, Shpg. wt., 2 oz, polnt crystal Genuine million over. Mounted. 21 C 3B3824-Areieorite. A syn thetic crystal mounted in metal cup. Very sensi-1 $2 e$ 383826 Silver clay crystal. a fused crystal of great and clarlty.
Each.
17 c

anch hole by small spring clips. Shpg. wt., 2 oz.

## Pandora Crystal Set

Nationally known for years, the Pandora crystal set is effeclent. compact and distinctive appearing. smple adjustment. Covers entire ringe, longer for super-power stations. Crystal receptlon has perfect tone quality, no distortion. shpg. wt.. 2 lbs.
$3 \mathrm{B3} 333$-List price.
 with aerial and ground equipmete quailty head phones. 5 .bss.
Your pecial price......
$\$ 3.89$


# Jewell Radio Meters 

## Pattern 135

A compact instrument with $2 \ln$, case nind fange dlam. $21 / 4 \mathrm{in}$. Finest coll type movement, fully jeweled. Black scale on sllver background. Shp. wt., 2 lbs.


$1900-0-5$ volts 81902-0-100 volts.


List
Net
7.00

$\$ 4.46$ $1904-0-50 \mathrm{mlliamps}$ 7.00 | $\mathrm{B} 1905-0-10$-100 voltt.. | 8.00 |
| :--- | :--- |
| 4.00 | 5.10 |
| 90 |  | Pattern $135-1$ (with Push Button) $382008-0-5-100$ volts... $\$ 9.00$

$382009-0-75-150$ volts. 9.00
5.74

## Switch Type 140

Double range, 2 inch body, 25 自 inch flange. Shipping wt., 2 ibs .
3B $1986-0-71 / 3-150$ volts. IJ.Ist, $\$ 9.50$

## Pin-Jack Pattern 135-A <br> 2-Inch instrument for Radiola, Victor, Brunswick and Bosch sets for flament voltake only Adjustable thish. <br> $381912-0-5$ $3 \mathrm{~B} 2010-0-7$ volts.



Readrite Panel Meters
Well made meters that rheck your circuits ${ }_{2}$ accurately, Case diam 1ah is full nickel. Dlak are metal sllvered. Bard clampst furntshed. wt., 1 id lbs.

## 8

## Sterling D. C. Panel Meters

High grade, Inexpensive meters for cherking the voltage or current save thelr cost In the apparatus of Narrow fiange panel type with
sllver etrhed
dials. Nicket-plated rim. Inody 2 Rim $21 / \mathrm{in}$. Shp. wt., $11 / 2 \mathrm{lls}$.
3R1941-0-3 amp..... $\$ 3.00$ N 1 Net 3 B
3 B
3 B

$942-0-8$ volts.....
$943=0-150$ voits... $929-0-15$ millianps3.00 $929-0-15 \mathrm{milliamps3.00}$
$944-0-30 \mathrm{~m} \mid 11 \mathrm{amps} 3.00$ 3E1930-0-7:150 with
$\qquad$ 5.00

## Sterling Pin-Jack Voltmeter

High reslstance voltmeter for plugging nto Radlolas No. 25 and No. 28 and simiblack ogures. Shp. wt., $11 / 1$ lbs.
$381935-0-6$ volts...... 56.00 Net $\$ 3.89$



## Jewell Meters No. 53

For laboratory and yeneral use. inch body Flilahed in black enamel Shp. wt., 3 lbs.
o. 98 Portable Voltmeter
Destgned to make battery testing easy. Supphed with three 18 in . colored
scales.
15-10,
$10-50$ Shp wot. fibs. ${ }^{6}$ list price. $\$ 13.50$. Net, $\$ 8.62$

No. 57
Simllar to No. 9Rexcept for higher range, Particinlarly useful for general testing. Two phone tho leads fur nished. shp. wt., 6 lbs.

- 382015-0-714-150 volts. List. $\$ 12.50$ Net..


## No. 116 Eliminator Voltmeter

For checking $" \mathrm{~B}^{\prime *}$ eliminntor voltages
simlar to No. 98 except that its intorna Similar to No. 98 except that Its Intornai
reatistance is 800 ohms per volt. Range $0-50-250$.
3 B 2016 -List. $\$ 25.00$. Net, $\$ 19.35$

No. 55-Combination Meters
Self contalned switch to change scales. Checks A andeled finish. Nickeled enameled finish. Nickeled switch knob. For direct current only. Helps to prolotg filament infe of for tubes that can be obtalned. ineh mounting hole. Shp. wt., 2 lbs. $381931-3$ CIrcuit $0-8$ volts $381932-0-10-100$ volts 3Bi933-0-7.5-150 volts $\left\{\begin{array}{l}\text { Net } \\ \text { eneh, }\end{array}\right.$

I.1st 10.00
$\qquad$
 $951-0-11 / 3 \mathrm{~nm}$ 3 B1953-0-5 amps
 Tist volts... $\$ 7.50$
7.50
$\qquad$ $81948=0-150$ volts. 7.50
7.50
7.50 Net

## "B" Elliminator Voltage Tester

For testing voltage output of ail " B" Filmlnators. Range (f-300 volts. Portable type. Accurately hand calibrated and hannmetal dials. Shyppling w't., 6 oz .
2B7760-LIst, \$5.00.
St, eath.
Sime su above but callb

## et ench

For testing A. © current supply 60 $0-150$ volts.
2B7762-List, $\mathbf{\$ 5 . 0 0 .}$
Net, each.
.$\$ 3.00$

## Hoyt Peep-Hole Meter

Designed for use in panels. Fits Nickel fnlshed. Front 14
3 B19
14
14 -Ammeter to 1.2 amperes.
3B1915-Voltmeter.
0 to 6 volts.
381916 -Voltmeter.


List, $\$ 3.00$ Net................... $\mathbf{5} 2.10$
 57.35

## Weston Radio Meters

The Standard of the World


## Resistance Stand

Conslsts of Pin-Jack Voltmeter and high resistance stand into which it phass for reading " 13 " battery voltage.
$3 \mathrm{~B} 1990-0-4-160$ voits. $\$ 10.00$ $3 \mathrm{~B} 1991-0-8-160$ volts. 10.00 \$6.37

## Eliminator Voltmeter <br> Model 489

A double range meter with resistance of 1.000 ohms per tery substltutes. Pulr of 30 Inch cables supplled.

List Net
382018-
$\$ 28.00 \quad \$ 20.58$
$381992-$ volts $\qquad$ 28.0020 .58

## New A C Voltmeters

Model 517 matches Model 506.
A. C. voltage only. 2 in , diam.
 List
$\$ 8.00$
8.00
3B1995-0-150 volts.
Model 476-matches Model 301. 3lí in. alameter.

Net
5.88


- 19


## American Beauty Soldering Iron

A famous brand that has


$$
\begin{aligned}
& \text { by fame, } \\
& \text { plosions, acid fumes and find } \\
& \text { evin }
\end{aligned}
$$


plosions, arid fumes and Injury to the cyes. The first two sizes are for Hisht and medilum work, the third for heavier work. Thousands are in use on steady factory production work.


slze or type
uniform self-supporting
coll. Turn ratlo may be varied, placing primary between secondary windings or using two separate windings forgricl and plate circult, etc. Makes perfect 50 turn coll in less than minute wt., 3 lbs. 3B4050-Each. .
$\$ 7.50$


## Coil Winder

## 3B4075-\$3.68

For winding coils on

## "Press-to-Feed" Solder Iron

 cardboard. Adjustable disks nutomaticully center the cylinders. Sipring on spindie prevents coil from unwinding or releasing tenslon. Fastens to any table. Overall ength, 14 l/2 inches. Shpe. wt., 4 lbs

## Honeycombe Coil Winder



## Stevens Panel Cutters


 Produces true round hole in
metal, bakelite hard rulber, wood. ctt., without digging in or chattermas lig. Shpg. wt., 12 383931 -Nize Net.

Clean cut, true bezel holes throust rubber or bakelite fit standard car-
penter's brace. Shpg. wt.,

## 383934 - inwh. List price $\$ 0.75$ Net $383935-1$ inch $\begin{array}{lr}\text {. } \$ 0.75 & \$ 0.50 \\ \therefore .85 & .56 \\ . .1 .00 & .66\end{array}$

## Stevens Reamer

 BEsw 통 ing. Slpg. wt., 12 st Price, 52.00 .

Easy to solder with this new Iron. Wire solker ts held in magazine. Pross of the trigerer feests as much solder as ts wanted to point. Leaves other hand free to hundle work-sB3951-List, \$3.75. wt. \$2.48


Requires no fux because rosin has been moulded lnto the core of solder wire. Best for tine radio connections 3 and elertrical work. Shpg. Wt., 6 oz. Net.

## Wire Solder

 ventent for soldering inch. very con Ideal for rudto work Shpg wt 11 Ideal for radio work. shpg. wt., 384014-8 ounces.

28c

## Solderall

Acomblnation solderall $\quad$ and $\Rightarrow$ solder and flux in handy paste form
A little Solderall on the connection and the feat of a match or fron will form a perfect comection.

## Solder Paste

A non-corrosive solidertr.g flux. Makes possible a se cure mechanteal and perfect clectrial connction.
$3 \mathrm{~B} 4016-2 \mathrm{gz}$. ('an.
$\qquad$

## Stevens Adjustable Panel Cutter


$383910-$ list Prlce, .
\$1. 14
An excellent tool for catting holes
in panels. justable from 115 to 6 inches. Dlameter of shank is " winch for conventent brace or machine use. shyg. wit. 10 oz .

## Wizard Coil Winder



Winds
ness from 3 is to $4 \frac{1}{2}$ fincla diameter un 10 inches in length. Adjustable automatic feeder and spacer. Ratchet gear prevents wire loosening. Insures uniform colls of finest workmanship. Coils rannot conse undone once they have been anchored. Gives that destrable factory touch to the colls. Shpg. wt
3B3950-List price, $\$ 7.50$. \$5. 00


## Simpiex Alcohol Torch

nenendahia inr real morls Generiatos Itg own pressirfe upertues 2 houns on one filling of dunabued aicuitoi. More than 2,000 deg. Fahn. blast. Leak proof. Easily cleaned. Will not clog. 2 in . barrel. 7 In. hizll. Shpg. wt. 12 oz . \$3.03. Net.
$\$ 1.95$

## Automatic Blow Torch



3B4000-List price, 75 (5C hurns denatured "aleohol. Automatically generates pointed flame in few seconds. Fasy to solder jolnts in hard places. Lights with match Burns 20 minutes on one filling. 51 Inches hish. 7 /6-1neh dlameter cylinder. shpg. wt., 12 0.

## Super Blow Torch

Burns denatured alcohol. Blowing on rubber tube produces hot pointed flame. Lights with a match. Burns 10 minutes on one flling. Easy to solder Jolnts in hard phaces. 3 in. hizh. 7/8in cylinder. Shpa. wt., 6 3 34001 - List price,
50 c . Net


Medium welght and perfectly balanced. Handle of black ebonized wood. Guaranteed 1,000 hours. Ventliated shank. Full nickel plated. $6-100 t$ asbestos cord. 3/8-Inch and 9 , ninch $^{2}$ interchangeable tips. Separable plug. Nichrome heating element. For 110 to 120 volt current. Shpg.


## Radio-Electric Soidering Outfit



Punconill


Whdely used all day long in hundre is of Industrial plants. proving their ruggednete and dependabllity. For use on 105 to 115 plug. Shps. wt., 2 lbs. 3R4010—3. Llst Net 384010 -andinch point
384011 - 1 -ncl heavy point. $\qquad$

## Self Heating Soldering Outift



Self-heating. One tilling of 2 ounces of gasolline is enouph to keep copper at corren't soldering temperature for about 20 minutes. Extensively used for nerin soldering. Flux und small plece of solder


## Ready Hot Soldering Iron

Safe, Non-Explosive and Portable


Every
madio

 time to set consists of a metal stove, burning alcohol az fuef: two solderins frons, onc for heavy ility work, the other for the finur radlo solderlab; a box o. soldering flux and 8a! ammoniac abrasive tape; two generous

 snap switeli built into pis. tol grip makes current control easy and positive. Fir use in 110-volt current. Drills $1 / 4-$ Ineh holes in hardest metal a $n$ d up to
 3B3922-

Stevens Radio Screw Clamp
Holds screws for filing down to ord lengtles required in radlo. Jaws have 3 threaded depres. sions for holding Nos, 6 , 8,10 screws, 32 thread. Made of forged steel The hardened jaws mas be $u s e d$ as rethreadiar dies. Shing wt.: 2 lbs. $383920-$
NET. .98 c
 over all. 5 In Silp. ping wt., ${ }^{211 / 2} 305$ 3B3942-Taws in. wide. lenuth Shpg. wit, 5 60E lbe. EACH... in. wide. lencth ore all, 8 in Shipain wt., 8 lbs. 95e


EACH........ 5 St
Moves on threaded horizontal screw Hardened, jaws. Made of black enameled metal. poblisned thatue alul mat
3B3933-List, 25c. NET.... 17 c
Needle point on each end for marking hairline. Will go into smallest screw hole. Finest stecl fully tempered. Shp, wt. 6 oz Stevens Oversize Feamer


## 3B391 |-List Prlce. 75c.

For general utaity purposes in radlo wherever reaming ls renuired. $1 / 4-\ln$. size.

## Scroll Saw with Eiade

Cuts bake:
lite. metal or
inches 10 ng .
Top of frame,
from blade


Hiade revolres to any mosition for sawing. Complete with six blades.
3B3937-List Price, $\$ 1.00$. NET
3B3938-Extra Blades.
6 FOR.
Tap and Die Set
3B3929NET, \$5.60
Contains Contalns
taps and dies to cut 4-36, $6-32,8-32,10$ 24 and 14 -20. Each set also Includes 61/2 in. long stoek and adfustahle 3 and


Hold drllls up to $1 / 4$-inch; will drlit up to $\boldsymbol{r}_{10}$ Inch in bakellte with $1 / 4$-inch shanked drills. Fandle of polished wood hollowed and with sarew top, to hold drills. Shippiuxg weight, 21/2 lbs.

## Radlo Drills

3B3927-Set of four...........29c 3 E Shls. 4.36 , 6.32 , 383928-Set of seven $\qquad$ 383928-Set of seven $\qquad$ .49 c 3 in. $7 / 32,1 / 4$-inch. Handy radio sizes. Shipping welght, 10 oz .

Nut Forceps
383912-List
60c. NET......38 3
Gives a perfect grlp on all
s 1 ze knurled
hex, or square nuts
1)rop forged steel. Nicely
finished. Shpg. Wt., 12 cz
 3839i4LIst, 50 C, Long, thin seml $=$ rount nose for close fons that other phers coulh not reach. 'erfect eyelets easily formed. Made of dron forsed steel nicely finlshed. Lungth, $61 / 4$ inches. Shing. wt., 12 oz .

## Radio Electric Pliers

## 383913

## List, 50c

NET. 356


Long thin nose for work in IImited space. Wire cutter hetween jaws. Mude of drop forged steel nicely finished. of dron forged steel nimp
$\frac{\text { Shipplng weight, } 12 \mathrm{oz} \text {. }}{\text { Diagonal Jaw Nippers }}$
Diagonal Jaw Nippers $383915-45 \mathrm{c}$
EACH Made of hard. pned topl steel. Cuts wiro clean In tight places. $A$ very high grade tool. fine pollshed finish. Shpg. wh., 12 cz . $3 B 3916$ - Long Nose Pliers EACH. 56 C quality tool
 made of finte
hardened tcol steel, finels finished. hardened tcol steel, 1 in
shipping welght. 12 oz.
Stevens Drifl and Countersink

Drills holes through hard rubber or wakelite manels and also countersinks hales in one ouration. The $6 \pi^{-i n}$. drill print takes No. 6 and No. 8 crews. The $1 / 2 \cdot \ln$. shank fits every tandird drill. Shpg. wt. $1 \stackrel{1}{T}$ oz. 383917 -List. 350. NET.... 24 c

## Socket Wrench Set <br>  <br>  <br> NET ..50c Five sock.

 most commonly used in raulo: $\bar{x}$, 告m. \%, 718, 1/2 inch. Sockets snap on shank quickly. Shlpping welght, 12 o\%
## Hexagon Nut Wrenches

3B3908-Set of three........... 39 c

 nuts. Hollow etems take projecting screws. Reach puts in limited spaces. Wood handle. Strong metal stems. Shinning woight. 1 lb .

## Countersink

SO3907 -10
NET......IEO For haping holes in hard rubber, bakelite. tibre. wood. sto. to fit heads of flathead serews. Shpg. wh. 6 oz .

## Goodell-Pratt Electric <br> For Drilling in Soft and Hard Woods. Soft Metals. of 81 min IIas character.

These drills work with jightning rapidits: A punch and Instantly you have a hole. Linapproached for peed
There aro hundreds of drilling jobs too light for the ordinary electric drill. These involve the rapld boring of holes up to $1,16 \mathrm{in}$. In diameter which these drills will perform with amaing ease and rapidity. Cabinet. makers, furniture factories, patternmakers, chair factories, pleture-irame makers, electrical contractors, trunk and luggage makers, carpenters and craftsmen in a great many industries will adopt them. The motors are of Lhe Universal Type for elther alternating or direct current at 110 volts. Speed 15,000 R. P. M. at no load. Polished aluminum irame. Variable speed switch. Ball hearing spindle. Eight feet of cord. Length of drills about $91 / 2$ inches. Shipplng weight. 5 lbs.
$383945-1 / 8-$ in. size with 5 drills EACH H. P. Wt., $21 / 4$ lbs. 383946 .in in..........isith 8 with 80 E1/10 H. P. Wt., $31 / 4$ Ibs.
EACH .......................... 17.00 Punch
3B3904-EACH
Panels must be prick starter for the drijl. This is a high, grade solld steel center punch. Knurled han dle, sharp point. Length, 4 inches Shipping weight, 6 oz .

## Reamer

3B3906-List, 25s. NET.........17c For enlarging drilled holes to proper slze. For bakelite, hard rubber, etc. Shipping woight. 4 oz .

## Radio Wrench Set 3B3906- List, 250. Cusen

Set of thres wrenches in leather case. For all hex. nuts measuring $1 / 4.5 / 1 \mathrm{~s}, 3 / 8$, 7/2 F and $1 / 2$ inch with alligator jaw for odd gizes. Shlpping welght, 6 oz .


A handy kit of 4 screw drlvers that ilt every screw used in radio. All metal. Three small sizes, nest inside largest slzo. Shipping wefght, 14 cz .

## Adjustable Template

## Indicates ex

 act location for dr1111ng in panel or base board. Arms adjusted to position andthen locked in
position. Can be moved تithous dapger of changing adjustment. Shlpplag welght. 802.
383939 -Litt, 800 . NET..... 355


## An Amazing Value

Of the Hiboy type in a beautifully adapted modorn American design, this cabinet has become very popular. It is, unquesthonably, one of the best values on the market today. Construoted of selected, walnut plywood in a lich, soft, velvety finish. Tha largo Pure Tone In-Dullt Woud Furn, with long Tone Travel, is placed above the set compartment and fronted with an attractire grille-worked panel. The middle section proVides a space 21 in . wide, $181 / 2 \mathrm{in}$. high and 13 in . deep. It will accommodate panel size $7 \times 18$ inches and a blank 3 -ply panel is furnished on a sliding pull-out mounting board. Below the set compartment is an extra large sized section for all batteries and power units. Two swinging front dours completely enclose set comparinents. Outside dimensions: 26 in. wide, 17 in . deep, 48 in . high. Shlpping weight, 00 lbs.
I6EI $\$ 379$-List, with Purb Tone Wood
Horn, $\$ 60.00$. NET, EACH,

## Massive Spanish Design

This magnificent cabinet is a true reproduction of a flne old Eighteenth Century Spanish design. It is the kind of fumiture that will enrich the appearance of the most finely fitted home. It is unmatched in value in the markets anywhere. Constructed of choice Anerican walnut with selected veneered doors, rich bird's-eye maple overlay in antique high lighted finish. The horn is built into the top section. The middle section is for the receiver and in size is 24 in. wide, $81 / 2$ in. high and 13 in . decp. It accepts a panel size of $7 \times 18$ inches and a plain 3 -ply mounting panel is furnished on. a sliding pulloout mounting board. Below set is large compartment for power units. Outside dimensions, 28 in. wide, $171 / 2 \mathrm{in}$, deep, $541 / 2 \mathrm{in}$. high. Shipping weight, 110 lbs. I68II 380 -List, with Pure Tone Wood Horn
with Long Tone Travel, $\$ 85.00$. NET, EACH
 $4-1-$


## High Boy Type Console

Of a very pleasing dealgn, this elgant cabinet has quickiy established itself as a very momiar number in thif fino liuo of duisules. It is distlngulshed by the unusual antlque, high lighied turnings on the legs, the overlay on the doors and the attractive inlay work. Made of solooted Amorican wulnut in the rich, neutral, velvet-like lactuered finish. The long doors open onto beautiful grille work, behind which is housed a large Long Tone Travel Wood Horn. The center section is given over to the recelver and has an uncut 3 -ply panel $7 \times 18$ inclies on a sliding pull-out mounting board. This compartment measures 21 in. wide, $81 / 2$ in. high, 13 in. deen. Below the receiver section is a large compartment for batteries and necessary power units. The outside dimension of cabinet is 26 in . Wide, 17 in . deep, 49 in , high. Shipping weight, 100 lbs.
16BII381-List. with Pure Tone Wood Horn with Long Tone Travel, \$70.00. NET, EACH.
\$4115
Froight charges allowed for most states east of Rocky Mountains on orders for over \$50.00. See our offor on page 3.

## Massive Orthophonic Type Console

Thls k one of the finest and rlchest looklni radio cabinots of the Orthophonie type cyor mado. In its deaign an ine spiration lias been taken from the gorgeous creations of the frmalasence masrive make it most gracepul and appealing in Its aprearance Panel doors of selectod butt walnut creslald with figured maborany and inlay designs in Leautifully shate: Wifects. Finied antlque tinlen hosts, heavy scruil ruh, thutone frleze top and bottom. Linicrncath the recelver compartment is an arm rest flise, Behmin the two frim is pro-
 ressories. Outside measurements: 35 in, Whide, to in. deep, $441 / 2 \mathrm{In}$. high Accommodates any slze panel up to 30 thelhes Xide, $81 / 2$ inches hich and $131 / 2$ inches deep. A blank uncht mounting janel is furnisneu to alrape to any slluulth mized lus boord. Shipplng weight, 175 lus.
168 if 382 -List, whith larno sized Pure Tono Wood Horm with 60 Inch Tone Travel. \$165.00. NET. EACH
$\$ 89.50$ 16 B 1383 - bamu will famuibe Farime Matar Pisen Hory WIth 72 -linch Tone Traval. List, $\$ 180.00$.
NET, EACH ................................................... 98.50


## Magnificent Spanish Design

Ond if struck with the thought that this magnillont ebbinot, in Its verfection of design and the harmonious co-ordination of tincil and trlm, lins all the nohle bearink, gracioualiess, corcliality and wirmth of the true Spanish Gramkee, is of select butt walnut, panelcal radlu furmiture! The fuur-door front is of setece rich wood iniay deand beautifully ghated. Two upher doors have rithe finish turminas. slmas. The entire front ha crnarugntet with aitique beantirul es the shaded and high liglited. Tlie invite is quite as ecarn or aponker out. With a rich Spalish deglgil Erile in front of the horn or phenker compartment. The center section is alven orer to the set fioncr and measurte 31 In , whic, 9 in. high and $141 / 2$ In deop. whis gertion is flted with blank uncut 3 -ply mounting panel, whin maj be cut to fit smaller slzod panels. Selow the chassis comparment as a commodious space sufficient for all batteries, power units and 0 incr accessories. Outside measures $34 / 3 \mathrm{In}$. wide, $18 \frac{1}{3} \mathrm{in}$, deep. 60 in. higlı. Shipplisg welght, 250 lbs,
$1881: 384=$ Lint, wh largo sized Pure Tons Wood Herm wilth 60 Inch Tome
NET. EACH
$\$ 108.00$ | 881 \& 386 -List, with famous Fairfax Mastor forne haviris 72 WET. EACH
$\$ 112.00$

## Tasteful Orhophonic Model

Hore we lneve tha meat popular type of rad lo cabimat-The Horephonic-reproduced in a most unusual and pratty design. lather plala and severe iu its contours. This severity is relhartoul by fioh ghndinga fand Inlairl effects. It dis constructed of moloice American walnut plywood with genuine butt walnut frout doors. The upper fall door is beautifuily set off with a rout Aons. mathonany oreriay and atw out on the lower door around a fleld ized border is a soc carried out on the veneers. The two slender of perfectly matched Hanels besido tho fromt doar are atiting earred effect. Two lay scroll and the legs carry a strime carce in the smalles ture high lighted aort rolu-lik planingly deglgned is the rich viow you may see how Fery plearingy designed tome Thls g:the fronthag tha horn and power unlts compartment, to tho grille is also hinged, kiring easy access from the Iront to tro astre iarbs sume behinit th. The ait smangartmant mencourpa aly in. wide. $8 \frac{1}{6}$ in. hish, $18 \frac{1}{2}$ in. deep. An uncut $3-$ pled mounted panel is furnished for adapxing smailer Dinel sized in blgh Shipplag welght. 125 lbs.
$16811386-$ List, with Iarge sized Pure Tome Woed Herm with B0 Inch Tone Travel. \$90.00.
$\$ 49.50$ ET, EACH.


## MAGNIFICENT PIERSON CONSOLES



The magnificent design of this beautiful cabinet brings you back to the days of Old England-a perlod of sturdy Yeomen and Grand Knights-a period of Romanticism. The balcony effect of the cabinet itself, the hearlly carved and turned pllasters, the sturdy toe rails supporting the lower cablnet all blend themselves into a harmonlous whole that is
 very appealing. The front of the cablnet is beautifully figured and matched butt walnut with a Satinwood overlay on the frieze. The mitered mouldings on the doors finished off with substantial antique English pulls and the heavy apron carvings make the Canterbury one of the finest radio cablnets ever built. The small Illustration shows how pleasthgly the beautifully scrolled grille hides from view the great Newcombe-Hawley Orthotype Loud Speaker with the marrelous Baldwin Concert Grand unit. Accommodates radio sets up to 28 Inches In length and 14 inches deep, and also provides ample space for power unlts and batteries In the iower compartment. Diunensions: Set Compartment, 8 In. high, $141 / 2$ in. deep and 27 In , wide; Battery Compartment in base, 21 in . high, 31 int deep, 10 in . wide ; Height of Cabinet over all, 50 in.; width, 3.3 in.; depth, $21 \frac{1}{2}$ in. Shlpplng welght, 175 nounds.
${ }^{5} 102{ }^{\text {oo }}$ 16BII355-List complete with Horn and Unit. \$175.00. NET, EACH. Freight charges allowed to any state east of Rocky Mountains.

## America's Finest Console'

For those who want the very finest. A true classic in Periud Desigu, bealing the motives most nopular lluring Dinglathds Golden Era--the sue of Shakesneare nad Qneen blizabeth. The sturdiness of the old Fnglish craftsmanship is combined with the delicate fufuance ant suhlimlty of Medieval cathedials, ircheri satinsoud nancls and bold overlays in rolief with hand palnted polychroned carvings as the center motises. Constructed throughout of genuhie American walnut. with beautifully figured and matclied butt wainut ply woods. This cabinet cleverly
 units, the large Orthotype speaker horn, the set, and a loge. It is egulpugh wheh the lurgo Noweombe-ILawleg 96-inch Ar Colunm Cuncert Grand Orthotype Lowd speuter, inciuding tise worla's nhest unit-the baldwhin Concert Grand. Outglde dimensions: Width, 53 In : depth, 18 in . Fielglit. 45 in . End Compartments, 1 in in . wide, 31 in . high. $151 / 2 \mathrm{in}$. deep. Set Compartnient. 24 In. wide, 9 in . high. $131 / 2$ in. deep. Hora Compartment. 26 in . wide, 20 in . ligh, $141 / 2 \mathrm{in}$, deep. Mounting pantel for methe slze sets included. Shipping weight, 215 lbs. |6811383-List, \$250,00. NET, EACH.
$\$ 147.00$
I6BII354-Same, except for sots having 26 in. panel. List, $\$ 250.00$. NET, EACH
147.00


## Italian Renaissance Model

The nolseless gliding of the gondola through a Venetlan eanal, with the soothing infuence on harhssed nerses, is the best way to cxpress the effect when one stons to study this Umbrian moilel of Medeval Italy's cabinet artistry. You must glve more than a casual glance at its illustrlous showing-the rich carvings. the Fibmy Inlays and satinwod Overlays, the clean, rich lust rais finiah. It is fashioned from selected American wainut, beautifully lacquered and hand-rubbed, with the handles ln old English silyer. It is oquipped with a special tray drawer which pulls out with no effort for iustant Installation and adjustment of the set at any time. Wil house a radio receiving set up to 24 inches in length and comes with a 3 -ply mounting panel which can be cut to fit smaller aized sets. Behind the magnificent serolled grille is installed a Wonderful Orthotype horn. equipped with the marvelous Baldwin Concert Grand Unit. This Speaker rests on a level with the ear when operating. Batterfes and power units may be placed in the end conppartments, which are epulpped with round filnged doors, and also behind the set in the center compartment, if clesired.
 shipping welght, 195 liss.
16KI 1356 -List, Complete with Horn and Unit, $\$ 250.00$. NET, EACH.



## The "Spanish Treasure Chest"

The spanish Treasure Chest, as the trade knows It, has been widely fraltated but moss imltators have fallen far short of equaling thls original: None equal the little niceties, the careful. painstaking craftsmanship and the masnificent matafials which characterlze The Seville as made by Plerson. In thls new size the Seville houses the larse Orthotype hora, in front of which is installed a beautiful scroll representing a Spanish arcade, The exterior is made from cholce $100 \%$ figured and matched butt walnut. The $81 n i s h$ is left natural. dolng full sustice to the antique brass finlah of the epeciai Spanish deaign hardware. The cablnet is richly ornamented by a Eerles of mitered Feturn mouldings and gengrous spindle curving. Dlmensions: Orerall width. 36 in.: hercht, 42 in . depth. $18 \mathrm{in} \cdot:$ Set Compartmient, 24 in . Wide, 9 in . high, $15 \%$ in. deep; Battery Compartment. $16 \%$ in. deep. 25 in . hlgh, $281 / 4 \mathrm{in}$. Wide. Has 3 -ply mounting panel which
flt smaller sized sets. Shipping wolght, 135 lbs . $18 \mathrm{BI} / \mathbf{3 6 3 - L i s t}$, $\$ 40.00$.

16B1/364-Witheut Hora and Ualt. Llet \$110.00.
NET, EACH.
.364 .68
The MARVELO
Singie Control
Shielded Six
Chassis will Fit
Inito These
Consoles


## A Novel Spanish Period Design

in this charmlan oreatlon, Plerson has combined two vory popular features. First, from the polnt of beauty, the Spanish deaign with its antique Wrought brass hinges and hardware, its carved twists and the beautiful Spanish finish; secondly, the Orthotype construction embodying the long Air Column Born, which brings forth the entire tonal register. Utmost care has beon exercised in the selection of the beautifully figured wainut used in its construction and the soft, hand-rubbed finlsh bringing nut the unusual beauty of the gralit of thls wood. The lines of the cabinet are carrled through in Well carred, twisted pllasters mounted top and bottom by carved members that set it of in a most etrectivo way. Its interior rivals the exterlor in beauty. The large scroll carrles a design that has always been popular, backed by a rich neutral-colored silk. While distinctly Spanish, this beautiful cabinet is not freakishly so. It is the kind of desicn that grows on one and of whlchi one is just as proud after jears of use as on lts day of purchase. Dimensions: Orerall helght, 42 in. ; width, 30 in.; depth, 20 in. Sot Compartment, width. $24 \mathrm{in}$. ; helpht, $9 \mathrm{in}$. ; depth, $15 \mathrm{in}$. Battery Compartment, width, 22 in .; height, $24 \mathrm{in} . ;$ depth, $15 \%$ in. Fitted with genuine Newcombe-Hawley 84 inch Alr Column Loud Speaker with the marrelous Baldwin Concert Grand Unit. Shipping welght. 130 lbs.
16B1 1366 -List, Complete with Horn and $\$ 020$ Únl̂̀ S 150.00. NET. EACH.

QE PAY FREIGHT AS PER OFFER GIVEN ON PARE 3



In this Impoing desion wo find the popular Spentsh effect as exemplified in the antlque brass findshed trimmings and the spindle, carved legs and cross stretcher. It is mado of selected American walnut with 5 -ply walnut top and panels. The front doors have besutifully matched butt wainut veners, as shown, throat to aocept a standard unit, ls placed above the recelrer space and is hloged as a part of the cover top. Maximum panel which pulls forward for testing or edjusting any of the power units used in connection with the recetrer. Bleh plano hand-
 Unil List. $\$ 75.00$. NET. EACH.
$16 \mathrm{~B} 1361-$ Without Horn.
LISt, $\$ 70.00$
NET EACH


Thle beatiful modol is distingulthed by the unurusel dex sign and placement of the horn at the top of the receiver and made so that the amplifying chamber and the top are both hinged, permitung rondy socess to recelver parts when
top la raised. The design ftacif ie a wory pleaskg onee, with charmingly fiuted pllastera and turned legs. Constructed of finest American walnut in a two-tone finish, as shown in the Illustration. The top front doors and end panels of 5 -nly stock. Hand-rubbed and polished Inilsh. The panel space is $8 \times 32$ lnches. The lower chamber prowides armple space for batteries, chargers or socket power uniti. Dimensions: Overall beight. 40 mm . width, 37 in ; dopth, 16 in . Shippligg welght. 120 lbs.
| 6 BI 1359 -List, Complete with Hora but mo Unit, \$57.00. NET. EACH

## Superior Radio Cabinets

## Orthophonic Type Console

There is a feeling of the beauty in richness of the early American In this most pleasing and antistic inodel. It is cistingulshed by taste ful decorations and cutouts and the spiendor of its rencers. It is constructed of selected inierican walnut with beatutifully matehed butt walnut front panels. The richly carred scrol fillle fronting the lower compartment lents a most pleasingly striking eftect. ToD is hinged, giving casy access to the radio set. The large lower compartment prorides generous space both for the long air columen bullt-un horn, as well as all batteries, chargers or power units neces sary It. is finished in the new laçuer haut rumbed to a fine semi-dull finish of velvety smoothmess. Operall size: Height, 43 in. width. 23 in.: depth, 18 in . Athaptable to all sets with panel stze up to 24 inclies and is itted With 3 -ply panel which may be cut to aecommodate sets of smaller panel slze. The sct compirtment measures $25 \times 9 \% \times 12 \%$ inches. Shipping weight 115 lbs , With In-built Horn but without Unit.
NEBI I 300 -List, $\$ 70.00$. \$ $\$ \$ 50$


## Massive Period Design



The impression of this magnificent cabinet is one of rare grace and sym uletry of line, together wihn a stilking massiveness, It is constructed o inmerican walnut, riciny venmernd with perfeet matched butt wamut fron atu striking Burl walint overlass. The Speaker Compartment Grille. ss smph in thin smatler fllusraudun. is made in a richly carred effect, remmscent of the days of the old artist carvers. A sliding tray is wrovided for the radio set and the lower front sranel is also removable for easy access to the lutiery cotip)artment. The fulsh is the new humi-ruhbeal lanacr', auft and rolvötyo Ias a long alr column hom with i metal throat, to which may be thted any of the standard speaker units. It will atcommoxiate sets up to panel sizes $10 \times 24$ arches and is fotled with a walnut 3 -ply panel. which ran be cut to acdayt sets of smaller panel size. The dimensions overall are: Ileiglit, th la.: width. 27 in, ; depth. 16 in. The larue battery compartment measures $221 / 2 \times 10^{1 / 4} \times 14$ inches. Shipping eicht about 125 lhs

 Horn but without Unit. List, s85, $\$ 492$
 NET, EACH.

## Beautifus Spanish Model Console

Reflecting the influence of the Spanish on oresent day designing. this beautiful cabthet is an outstanfing example of how easily the richness and chatm of these old desluns mes be retofined in canting them io modern uses. It inkes its general
 contour from the old Spanish Treature Chest and retaing many of the motives which disthinuish those great old heirlooms handed down from that romantic perlod. In its condoun from that romantic perlod. In its conof superior artisans, Who have fashiloned it from fline American walgut. The front is of butt walhut, selected aud matched with the greatest care and embelished with the moulded grille, carsed sool mourdings, overlays and tornings. Finished in lacquer. hand-rubbed to a smooth semi-dfull surface As shown in the smaller Illustration, the front panel drops, exposing the set and forming a convenient arm rest when tuning. This set compartment measures $25 \times 83 \times 141 / 4$ fneheg and accommodates receiving set panels up to 24 inches in length. It is furnished with a 3 -ply wainut panel for adapting to smaller sized panels. Above the set is a roomy compartment $15 \% 5183 / \times 9$ finches. which prondes space for thi long air column horn fitted with a metal throat. Into which any standard speaker undt hay be adapted. On each sfde of horn is ample space for batteries and power uintts. Dimensions overall : Height, $50^{1 / 2}$ in. ; wldth, $30 \%$ in.; depth, $18 \%$ in. Bhipping welght about 150 los. Price includes
Irom but no tinit
T6BII302-List, \$95.00. NET
$\$ 3375$


## An Amazing Value in a Beautiful Spanish Console

## Hare aman ma heve the alluring tharm and romsntio

 sugsestion of the dashlug rluh uld Spanlsh lesgalig. Moro than fine wood and craftsmenship has gone into the making of this fine console-the Inspiration to make the romantictam of the period it. rempanents tal live rgain in the actuallty of this gem of radio furniture. It is made of finest American waluut veneers with choice matched grain burl walnut front. The doors and battery compartment of all have polschrome overlays. Decorative antinue hardwora arifs to the tastefil ampearante. The base la distligulslied by perfectly tumed lega and a srace. ful braco aongtruction. Behind the charming grille at top is a lons tone travel horn of scientifc design and perfect repruluctive cliaracterlatles. Tlié scit compart ment accommodates sets with chassis up to $8 \times 81 \times 10$ Inches. A blank panel for sualler slze sets is furmished. The battery compartment is $1: 1$ inches high, 21 inctes wide and 12 inches deep. The console measures over all 48 inches high, 25 inches wideand 15 inches deep. shipping
woight, 150 lbs. No unit in-
cIuded.
I $6 \mathrm{~B} \mid 192$-List, 597.50 . NET, EACH.


## Arm Chair Model Console

The dain, chaste unics, togethor with the coloalal fout, frasplrad the Colonial days. This cabinet splendidly combinas - the popular Arm Chisir Moitel design and the orthophonic Horn arrangement. It is made of the finest American walnut plywood, beautifully finished in the new velvety, suooth lacquer with charming touches of antlane hifh ilighting on the wood turnings. The unusual design of the grille erves It a very striking aptoarance. It will house any radio sot fiting into space 21 in whele, $8 \% / 2 \mathrm{in}$. high, 13 in . deep It 18 flled with a 3 -ply mounting panel $7 x 18$ inches on sliding pulj-out mounting hoard. The outside dimensions are: 25 in . wide, $15 \% \mathrm{in}$. deep snd 43 in . high. Behind the grinle is housedia very effictent bulltin waod horn, to whind the grine is housed-a very encien untu. The entire front is hinged. allowing easy access to the large compartment around the horn. hinged. allowing easy access to the all batterles and power units. This compartment is 22 fn . wide. 13 in . high and $131 / \mathrm{in}$ in. deep. This is. unguestlonably, one of the very best values In fine racilo cablnets ever offered. It is characterked by the finest workmanahip
in every detafi. Shlppling weight, 115 pamas wisil391-Litat, with Buft - lo W00d Hown, $\$ 39.00$. NET. EACH.

Marvelo Radio Chassis Fit These Fine Cönsoles

## The Choice of Those Who Want Tasteful Modern Design

This beautiful cableot is inghly favorad beause of its instant acoeptadilly and the vory retined and fleasing appearance it presenif. A rtrikin feature is the round grille siling the entre lower compertment, placed in an ofrsot efrect. Cutaway posts with flutes ending in charming carted pllagtor effect. An air of solldily end strength is given by the spectalts arched design of the lower eross stretcher across the front. Cabinet is substantlally máde by cabinet-makera of national renown nid beintifuty finished in the soft natural walnut color, rubbed to a reirety smonthneas.
All panels are reneered with cholce select walnut stock. The outside dimensions are: Helght, 44 Inches; width. 80 fnches; depth. 15 inches.
 in aches, and comes with a blank penel for accommodating smaller sized inetas. The large compartment at the bottom measures 22 inches high. 28 inches wide, $12 \%$ inches deap, provid-
Ins ample space for elther cone or horm and, power unith. Shipping wetght, $65 \pm$,
pounds. 168) $1389-L$ Lst, witheut Horn, 80000 I6EII 390 -List, with 20 -inch Uitan cone spenker, \$72.50. NET. EACH.
$\$ 32.70$



## Beautiful Speaker Table

An attractive rich appearlng table, fine enough for the most expensive set yet very moderately priced. Genuine fise thy walnut veneer top and front iti eingant hand rubbeit finish. Top size 36 inclies wide. 16 lnches deep. Helaht, if: inches. Fine toned buitt-in speaker in center. Hoony side compartments provide ample space for batterles, jower units, etc. Sturdy, strong constructlon insures years of satisfactoly service. Shipping wright, 70 pounds. \$ $\$$ NET

## We Pay the Freight See Offer Page 3

## Colonial Style Radio Table

A neat attractive table. Has slielf below for wet or dry, $A$ and $B$ batteries or rower unts. Radio rower minits. Ratito placed on top. Very reasonably friced. Fine dull walnut finislı.
Ifength, 38 in .; width. 16 in. ; height 33 in. Shipping weight, 20 lbs.
16Bi|375-Llst Price. $\$ 15,00$.
NET.
 Net
$\$ 780$


## Radio <br> Bench

for use with all Consoles

Attractive appearance. Just the right size to place besIde consolo for convenient and comfortable tuning. H1gh quality material a $n$ d
 enowert to match up) with the inest console or cabinet.
Mr . Dealer, here is $\mathfrak{a}$ bif seller. One should go with every console.
In lacquer finish Mahogany or Walnut. 18 Inches high. Top, 1世x20 inches. Shipping weight, 35 lus.
|68||377-Mahngany.
|6B I 1378 -Walnut.
List, $\$ 7.50$. NET...

## Hepplewhite Period Style Consoles

The five beautiful period style cabinets Ilsted below and In first column on next page are specially built for radio consenience and to completely and compactly house the set, batterles, charger and miscellaneous equipment. Nothims neell be outside the console. These practical features added to beauty make this furniture most popular.

Adam Brown mahogany finish lacquered and hand-rubbed with antique trim. markings and hardware to match. Fire-
 mounting panel sumplied with consoles wa whleh dials may the mounted or janel may be cut to take bakelite panel of recelving set. Guaranteed workmanship and materials.


Artistic brown mahogany finish with lacquered and handrubbed gold striping with hardware to nadeli. Will aceommotate any set up to 24 inches long by 9 fuches high and 11 inches deep. Top lifts up. Battery compartment with knobled doors below with sufficient roon to house all batteries, eliminator, Current Supply Units, ete. Has built-in speaker with silk-lined mille. No unit included. Moantlus panel sumpled ont whirh dinds may be mounted, or manel hay be cut to take batilite pantel of receiving set. cabinet measures 30 inches wide, 42 inches high, 16 inches deep. shipping wetrht, 90 lbs .


Add $\$ 3.95$ extra for loud speaker horn.
With outside speaker, it will take a $\mathbf{3 2}$-inch wide pansl. If ear-level sjeaker is desired, will take set to 24 inches. Lift top. Mounting panel supplied. Width, 36 inches; depth, 16 inches; height, 39 inches. Beautiful mahogany lacquered and hand-rubbed Polychrome finish with antique trim. Shipping weight, 90 lbs.


Provides space for set up to 26 Inches wide: height, 39 Hnches: depth, 16 inches: width, 30 inches. Intended for usc where horn or cone speaher is used on outside. No speaker inclueled. Shipping velght, 80 lhs.


## 

## A conventent perlod design table. Set and speaker go on

 top, batteries into the two lower compartments, out of the way. Solld back 1 ODens from front. Mahomany finish, solld striping. Leneth. 30 inches; depth, 10 inches; hetrht, 29 inches. A real buy at our low price. Shipping weight, 50 lbs .

Battery Table With Speaker Grille and Commartment
Has sllk backed grille compartment for bullt-In speaker.
No horn nor unit included. Batteries so into the two com. nartments at the side. Set goes on top. Mahogany finishl. antique trim, Length, $30 \mathrm{in} . ;$ heigit, 29 in .: depth, 16 in. You can't beat this dilality for the money. Shipping weight. 55 lbs.


An attractlve radio table at a very low price, finished in Walnut two-tone, with gold veining stripe sejarating finishe: Front is one plece. rcinct amd gruored in two-tone to lytre it the appearance of two separate doors. The back is entirely the sppearance of access for battery adjustments. etc. While apen, this table is priced rery ron is hand rubbed. selected fum. As our hagher pricesinion is concerned lias the exact finish of and in so far as sulid Walnut. 1)IMENSIONS-ICight, 30 inches $141 / 2$ ivelies bial, $251 / 2$ inches wide.

Plice the set and speaker on top. Lots of room in compartment below for batterles, charger, eliminator, power units, ete. Sirong, sturily construction. Will last a lifetime. Slipwing weiglt, 50 lbs.
|6B | 374 -Sheraton Radio Table. Llst Price. \$18 00. NET


## Sturdy

 Radio Table
## A well made prac-

 tical radio table which adapts itself to small space and to small space and at the same time is capable of accomniodating set and all accessorles, Set Roes on top, batteries on middle shelf conreniently out of the way. Top and shelf are constructed of heary trunk fibre board with hardwood side rails. All parts are well braced, strong and sturily. Wood parts all finished in dark mahogany varnish top and shelf covered with dark green leatherette. Cornerg and with woutactire iron caps. Heloht, 26 anclics: Corners bound with protective iron caps. Hesmpint inches; Width. 29 inclies; depth, $161 / 2$ inches. parcel poit. 16 Ci I 372 -NET
##  <br> Monroe Portable Radio Case



Here is a strong, sturdy portable radio case larese enjugh to take a panel size of $7 \times 18$ inches. room enough for all necessary batterles, yet light in weight. Built wke a trunk or carrying case, with rigid frame over which is a long wearling, fine quality leatherette corering in black color. Corners reinforced with nickeled metal corner pleces. Overell size is 25 inches long. $15 \%$ ant size wide and $10 \%$ inclies inches wide and $B$ ot front and back are himbed. The rear $11 d$ has brackets for winding in a generous size loop an'enna.

In-built is a splendid complete cone speaker of excellent design. Gires uniusual volume and true tones. In front of speaker is attractive grille filled with cloth mesh. Case weighs only 10 pounds and has a strong grip handle. it is most convenient in size and easy to carry aloout. Shipping weldht. 12 lbs. 168 I 1373 -List price, $\$ 22.50$. NET.

.$\$ 13.25$

## Magnificent Overlay Distinguishes This Strikingly Beautiful Console

The design is taken from the rich old period style cabinets which graced the mansions of the old world decades ago. It adapts itself Ideally to radio use. Made of genulne walnut plywood with stripe mahogany overiays on the front as shown. Ebony finished moldings add further to thls striking effect. The set compartment accommodates panel sizes to $7 \times 21$ inches with blank panel for smaller sizes. Swinging doors completely close In set and gralle. On page 9 you may see picture of the richly designed grille which is removable, giving access to batterles and power unlts without moving console. Rich, rubbed finlsh. Inbuilt is a long air column speaker with genuine Utah speaker unit. Outside dimensions: $241 / 4$ inches wide, 18 inches deep, 41 \%/4 Inches high. Battery section measures 21 inches wide, $141 / 2$ inches deep, $10 \mathrm{~g} / 4$ inches high. Shipping weight, 100
pounds.

## I6BI3066-List complete with Horn and Unit, \$59.00. NET. $\$ 33.75$




> SemiHigh Boy Console

One of the newest designs. Made of genuine walnut plywood in rich rubbed तilish. Hus large inbuilt air column speaker with genuine Utah loudspeaker unit. Ample space for batteries and power units. Accommodates sets up to $7 \times 21$ inch panel size. Top ralses. Stands $381 / 4$ inches high, 22 inches wide, $149 / 4$ inches deep. Lower compartment inside, $101 / 2$ inches high, $201 / 2$ Inches wide, $13 \%$ inches deep. Snipping weight, 70 pounds.

I6B13067-List, with Horn and Unit, ,
\$35.00. NET.....................................

## Symphonic Type Console A Beauty!

An ideal design and widely favored as the perfect style of radio console. The richly designed grille front and the striking inlay offect on the fall leaf glve this model a most distingulshed and aristocratic appearance. Made from choice American walnut plywood, beautifully finished, with high light and two-tone effect. LDower compartment houses a long air column, deep-toned horn. Ample space for batteries and power unit. Takes sets up to $7 \times 18$ inch panel size. Top raises. Outsido dimensions: Helght, 36 inches; width, $231 / 2$ inches; depth, 18 inches. Lower section inside is 21 inches wide, 15 inches deep, $10 \frac{3 / 4}{}$ inches high. Shipping welght, 80 lbs.

I6BI3068-Llst, with Horn, but
wll hout Unit, $\$ 49.50$. NET.........


A beautiful piece of furniture with genuine walnut top and


## Sheraton Two-Tone Walnut Cabinets

Elegantiy finished solid walnut top and sides

 Full ton inches dern back of nanel. Fille: Full ten inches derp back of


$\qquad$ | 1681601 |
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| -1., | - 2 $^{1}$ ? | 1500 | 73 |
| Tx | ? 31 | 15.50 | 8.22 |



# Wainrite Quality Cabinets <br> The body is Solid Walnut (not vineer). Bark 



## Weston Model 519 Radio Set Tester



A compact portable "trouble shooter" for complete and rapid servicing of both battery and battery eliminator operated sets. Designed for measuring all voltages used in a radlo set both at the battery terminals and at the tube sockets; for quickly checking tubes and for testing continuity and condition of circuits. It's a bly time and money saver for the radlo serviceman. A complete check up can be made in a very few minutes.
Fitl scale deflection is produced on the instrument with a current of only one milliampere. Testing can be aope while set is in operation withont change in connections or the use of auxillury batteries.
The instrument has three voltage rangesVoltage ranges have a resistance 1000 ohms per yolt. Extremely accurate Each set $1 s$ provided with a plug and socket of the UX type together with adapters for use on other types of connections. Shipping wt.. 6 lbs.

## Master Craft Tube Renewer

A undversal tube rejuvenator that operates direct from the " $B$ " batterles. lirings back paralyzed 100, 201A, 200A, 112, 171, or any tube with thorlated fllament. Simple to use. No AC current necessary. Get one and keep your tubes at full efficlency. Shpg. wt., 6 oz .
$386551-L i s t$
price, $\$ 1.00$. Net... $64 C$

## Aluminum Shields




Thefamous Alcoa shields so popular with set builders. Spectthed in many kits. Highest grade aluminum. 386553 WLur Shields 4. shpg. wt $t$ is shpg. Wt..

## $\$ 1.75$. <br> Net.

$386554-1.01,14$ Shpe wt 31 List $5 \times 9 \times 6$ tnches. 3.50. Wt. Net. $1 / 2 \mathrm{lbs}$ List, each $\$ 2.28$ 386555 -junior Box shields. $412 x$ $412 \times 5 \mathrm{~m}$. 386556 -Junlor 130 x shieids in single lots. Shpg. wt. 2 liss. List, $\$ 1 / 40$
$\$ 2.00$. Net.............. 410

Our Special Aluminum Shields
A high grade wing type shleld. This type is used in many well known circults. Size $31 / \times 31 / 2 \mathrm{in}$. Shps. Wt., 1 lb . 386557 -List, per phir, $30{ }^{\circ} \mathrm{c}$. Net

1928 Mode! Marco Dial


Beautiful Finer Smarter
This is undoubtedty beautiful dlal ever de truly a 1928 model of greatly ad vanced design. The double tuning scale tells at a glance exactly where scale thell is at a Elance seale is marked every 10 divisions while lower scale reads each division. Trses the celebrated Marco frictlon drive that baln ishes lost motion and inakes tuning easier. It is the true vernier dial, far more preclse, far speedler and more beautiful than the dials of the past. Sither illuminated or not us preferred. 38656 Wh. 112 Ibs .
386561 -Marco Dim
1,ist, \$2.50. Net.
386562 - Illuminated
$\$ 1.50$
Type. List, \$3.00. Net

## X-L Vario-Denser-Model G



IIas varlable capacity range. Easlly cets value of grid cuparlty best sulted for a particular tube or circult. With grld leak cllos. Shpg. Wt., 402 . $383182-.00002$ to $.0001 \mathrm{M} . \mathrm{F}$. $383104-.0003$ to $.001 \mathrm{Mi.F}$.89 C
List price. $\$ 1.50$ Net.....

Neutralizes grid and plate capacity In tuned radio frequency sets. Mlcronicter adjustnient.
$383105-M o d e l$ N.
List,
59c

## Muter Variable Condensers

 Condensers with adjustable capactles. Black
moulded bakelte shell $2^{\text {a, }}$, inelte long, $1 \%$ inches wide. Iloles for mounthg tí inch, 2 iz whec. fromes for mounting center to center. Shpg. wit. 4 inches.
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## Barawik Mogul "B" Power Unit <br> Fixed

 Greatest Value Ever OfferedThe Barawik Mogul "B" Power Unit supplies the long folt demand for a " $B$ " ellminator that is really good and that wifl perform its part in a highly efficient way. Aiter a long search through the radio market we finally found an eliminator deserving of the Barawik name. We offer it as the best that can be obtained. One evening's test will thoroughly convince you of its superiority.

It has long been known that the most vital part of a "B" Eliminator is the fliter and that the most important unit of the filter is the condenser block. Therefore we obtained a condenser of the finest quallty-one that will handle any "B" Unit and still have a very wide margin of safety. This block is made by the most advanced methods and made to last.

Thus, we have developed an eliminater that is as nearly perfect as can be made by skilled radio-electrical engineers. It is undoubtediy the best value on the market today.

To make certain that no trouble would be experienced in voltage control we selected one of the most modern methods of obtaining voltage taps. Fixed resistors replace the old variable type because they have been found to be best. The speclal high grade fixed resistors are accurate and permanent, assuring constant voltage at all times. Sufficient taps are provided for
 ail conditions and all sets. This combined with the wonderful filter gives a current flow that is constant, noiseless, humless, steady and powerful. The fliter smooths out every ripple and hum. Every part in the device is manufactured by skilled workmen and from the very finest materials. After manufacture all parts must pass very severe tests to gain admission to this product. We offer it to anyone on a strictly qualityperformance basis.

It employs efther a half wave or full wave rectifler tube insuring long life and stablity. The rating is 40 mils at 150 voits and it delivers 180 volts to the power tube. Easily handles up to ten ordinary tubes, including power tubes. We invite sou to compare it to any other eliminator on the market regardless of cost or make.

Very attractive ln ap.earance, the case of metal with brown lacquer finish and black Bakelite front panel. Size $61 / 2 \mathrm{in}$. wide, 7 in. high, $81 / 2 \mathrm{in}$. long. Shipping weight, 20 lbs.
$2 B 5288$-For Raytheon Tube. List with tube, $\$ 39.50$. NET
2B8298-For UX280 Tube. List with tube, $\$ 41.00$.
NET

# Barawik Supreme "B" Power Unit 

## Unitomon. Constamt, Untilimit-ane kreatost 

Variable Resistor Type

A fustable , Any litions
$t$ Any Time

No Hum
No
Motor
Boating

No<br>"Sizzling" Noises



Always Quiet in Operation

Super Power for Sets Up to and Including 10 Tubes<br>Compact -Fits Most Consoles

Costs Less to Operate

An Amazing Value at the Special Barawik Price

We believe this to be the lowest priced, high fuality, successful, B socket power unit on the market. After perfecting the design, establishing its unfailing power and operation we collaborated with the factory in its mass production, in supplying our thousands of dealers, to the end that its cost might be brought to the minimum.
Vhile it takes but minimum space, this compact.
has teen accomplished simply through the inmous arrangement of parts. The units of constro on are in themselves actually oversize. Here is - ere example that merchandising and manufact ing genius may be combined to produce products of istounding merit.

Made especially for us with the very latest ex, clusive hook-up. It brings to the set that smooth, even, powerfu! flow of current needed in amplification, that brings out clearly and strongly every tone. It handles all sets up to 10 reguiar tubes or their equivalent in regular and power tubes. Variable resistances cuntrol the current input to Detector, Intermediate, ard Amplifier tubes.

The filter system is of extra capacity, smoothing out every ripple and hum from the alternating light socket current. There is nothing to deteriorate, we.r out, or replace-it will last a lifetime. Extraordinary large capacity, rating 60 mils. at 180 volts-
sufficient reserve for all conditions and ranking with the largest, finest units made.

The case is of a shane to fit easily into the new compact consoles so much in rogue. Only $41 / 2$ inches wide, it may be set in beside horns or other units. Only 13 inches long including the knobs and 6 inches high. Beautiful dark crystalline finish. Taps plainly marked-Neg., Det., Int., Power, the variahle resistances, Det., Int. and Power, making the installation and operation easy for even the most inexperienced operator
We can frecly recommend and guarantee this splendid, perfected, advanced "B" power unit. Due to the precision and care with which the filter circuit has been devised and constructed, enormous power is rrovided without the slightest hum or noise of any kind. Even with the most sensitive receivers and speakers, under heavy load, its operation is absolutely quiet. When rroperly adjusted, it will not "motor boat"-its current delivery is even and. constant! Shipping weight, 15 lbs
2B5289-Complete with Raytheon or $Q$.
R. S. 85 Mil. Rectifying tube.
List, $\$ 32.50$,
\$1695
Net, each

# Barawik Sets the Pace in Radio Set Values With This New Line of Receivers 

Beverly
Model
Console

## Marvelo

6-Tube Illuminated Single Dial Shielded Receiver

Manufuitured under patent u' Radiu Curpolution of Amenra, Westinghouse Electric and Munufacturing Company, General Electric Company, and American Telepione and Telegraph Com-pany-Icensed

No longer need the family of modest means be denied the privilege and delight of ownership of a fine, efficient and beautiful console recciver! In this Beverly Model of the great Marvelo Single Control completely shielded six tube receiver, we find the very utmost in value and efficiency in radio reception equipment. Its offering





[^0]:     1 Carter Si-20M Resistor: ${ }^{2}$ SM
    3 B6307-Complete set of parts.
    LIst, $\$ 50.90$.

