

# Allied Radio corporation <br> 833 WEST JACKSON BOULEVARD CHICAGO, ILLINOIS 

19:10
Complete
Index On Pages
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# MERES BADIUS BIGGAST VALIE! Mone- Chinc Ghound with the 

R.C.A. 8 hazeltine lICENSED

*BuItt-In"AirMagnet". No aerial No boground required. with outside wires. Just plug in like any electrical appliance, and enjoy powerful radio reception anywhere. Here's a 1940 deluxc feature you'll
really appreciate.

- Push-Euttom Tuning. "Feather touch type-just tip fine button with your your station! Tunes any four favorite sta tions in a fash, easily accurately. Easily ad iusted from front. A wonderfully convenfent, tuning feature.

Mewisomil Tubes. The perfected R.C.A, and Hazel tine lieensed circuit uses the new 150 mil ubes. No ballasts, no The new tubes assure more sensitivity more sensiti Yity notice the difference the moment you tune this 1940 model.

- televison connection
- P. M. DYNAMIC SPEAKER
- FULL-ACTING A.Y.C.
- FUll I $1 / 2$ Watts output
- large airplane dial



## Rinigh

5 tube ac-nc superhet

Here's our Value Leader for 19401 Here's the year's ileal "utility" radio with every new feature with outstanding performing ability, with the last word in cabinet styling priced amazingly ow Heres versatile operation from AC or DC with five tubes that work like seven. You can' cat the qualty or the looks or the price anywhere! Just compare these value-giving features.

- BUILT-I N "AIR-MAGNET", No aerial-no ground required! The Knight 5 has the perrected built-in "Air-Magnet, which does away with outside aerial connections, trailing wires tc. Just plug the set in like any appliance, and yoll get perfect reception. Always ready for im merliate operation. You can play it wherever 110 volt, $40-60$ cycles A.C. or D.C. current is avail ble. And you can take it with you any where; it's compact; carry it anywhere, play it anywhere Also plays from 220 Volts A.C. or D.C. when used with the special arlapter listed below.)
- PUSH-BUTTON TUNING. Enjoy "Feather-Touch' Push-Button Tuning for any four aljust right from the front; it cart get out of order; it's and there's your prosrand It's easy to o Push-Button Tuning, the Knight 5 offers easy regular mane and vision illuminated Airplane Dial. Indicator travels quickly across dial face to permit easy station ogging. Tuning range covers 540 to 1730 kilocycles for powerful reception of all standard Broadcast American and Canadian programs, plus many Police Calls.
- 1940 CIRCUIT. Licensed by R.C.A. and Hazeltine laboratories, the circuit of the Knight 5 rings you radio's finest engineering skill. Uses the latest type 150 mil tubes as iollows: 12 SA 7 GT 501.6GT as Power Output; 35Z5GT as Rect. This brill 12 SO 7 GT as Det.-1st Ausio (dual-purposc); power output and splendid tone auality. It means bore radio circuit assures higher gain, greater lay the receiver from A.C. or D.C or whether you are radio ent
- "EXYRA" FEATURES. The Knight $\mathbf{5}$ is ready for Television when it comes-has connection for Television Sound I Incorporates full-acting A.V.C. for uniforin volume and to prevent fading. Uses the latest type 5 -inch P.M. dynamic speaker for full volume-handling capacity and natural, realistic tone. Develops surprising $11 / 2$ watts power output. Only the finest standard index-you're really getting outstanding quality and splendid value in this new $\mathbf{1 9 4 0} \mathbf{K}$ Kight 5 !
- NEW PLASTIC DESIGN. You will be proud of the appearance of the molded plastic cabinet of the Mnight 5. It is harmoniously proportioned, with sleek, soft lines and special louvre grille design for best acoustical results. Push-Buttons are conveniently placed for easy access. The Knight 5 is available in soft, appealing ivory finish, or in warm mottled walnut. Measures: $91 / 2^{\prime \prime}$ long, $7^{\prime \prime}$ high, $5^{\prime \prime}$ deep.
* KNIGHT AC-DC 5 COMPLETE. The Knight 5 Tuhe AC-DC Superhet comes complete with tubes, as illustrated and described above, For operation from 110 volts, $40-60$ cycles A.C. or D.C. Shpg. wt. 8 lbs.
A10830. Walrut. Retail Value, \$14.95 NET EACH, \$8.45. YOUR PRICE LOTS OF 3, EACH. Retail Valie Ivory. NET EACH, $\$ 9.25$ YOUR PRICE
$\$ 075$ LOTS OF 3, EACH

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## 

 and it hasa the "AIM-MAGNET"!

## With New ROTOR-DIAL and ALTOMATIC TUNING

## $\mathcal{K}_{\text {night }} 5$ tube ac;-dC superhet

We're excited about this $1940 \mathrm{Knight} 5-$ and we've a right to be. It's entirely new-from its perfected Superhet circuit to its striking cabinet-packed with new and valuable features. You'll get excited about it, too, once you try it, once you listen to its power and its wonderful tone. You'll be amazed at our ability to sell a set of this quality at so low a price

- Carries Anywhere-Plays Everywhere. You cant beat the Knight 5 for convenience, No more need to worry about attaching aerial and ground wires. The new "Air-Magnet"-built right into the cabinet-picks up stations from near or far with equal ease. All you have to do is plug the line cord into the nearest electric outlet, and you re ready to enjoy perfect reception. Operates with full efficiency from 110 volts 60 cycles A.C. or D. C. . and in addition, from 220 volts when Used with adapter listed below. Play the Krsight 5 anywhere; ta
you travel. You"ll never want to be without this ideal "companion" radio. you travel. You'll never want to be without this ideal "companion" radio.
- Push-Button Tuning. Get any of your four favorite stations by just tipping a button with your finger. The new "Feather-Touch" Push-Button Tuning System has an effortless $3 / 8$ " stroke it's easily adjusted from the front and tunes right on the head each time Regular manual tuning is almost as easy. too, by means of the giant 5 -inch piastic-molded Rotor Dial. Gets Your stations in a jiffy. Tuning range covers 535 to 1720 kilocycles, including the entire American and Canadian Broadcast band and the popular 1712 K .C. Police channel.
- Superhet Circuit for 1940. The R.C.A. licensed circuit of the Knight 5 brings you the latest and finest engineering developments. New tubes actually give you tube power and eff ciency. Used as follows: 12A8GT as Cons. Osc, (dual-purpose); 12K7GT as I. FP 12Q7GT as Diode Det.-A.V.C.-1st Audio (triple-purpose); 35L6GT as Power Output; 35Z5GT as Rect. This combination furnishes surprising power; you'll get what we mean when you listen to the amazing tone quality and power output of the receiver.
- Additional Features. The KnIght 5 is ready for Television when it comes; it's equipped with connection for Television sound. Has full Automatic Volume Control to maintain steady unwavering volume level on all programs. Full 2 watts output is superbly handled by the 5 P.M. Electrodynamic speaker, and that means the best tone you 've ever heard from a compact radio. The new 150 mil tubes give more power, and do away with ballasts and heater cords.
- New Style Sensation. You've never before seen such beauty, such lines, such flawless plastic-molding, You've got to see the cabinet to appreciate it fully. Beautifully molded along sweeping lines, the KnIght 5 is available in a choice of soft, creamy Ivory, smooth Walnut, or handsome Onyx. Size: $111 / /^{\circ} \times 63 / 4^{\circ} \times 61 / 2{ }^{\circ}$
- Set Complete. Supplied complete with "Air-Magnet" and tubes. Exactly as described, For operation from 110 volts, $40-60$ cycles A.C. or D.C. Shpt. wt., 8 lbs .

A9145. 220 Volt Adapter for operating set from 220 volts A.C. or D.C. NET

Builtin, "AIrmagnet.". Alt-
 Say ce or bother. to trailing booby"
 wires. The un d in "Air-Magniteliminates Mas net for aerial meed in like around. Just and appliance, any electrical wheres Y from enjoy 1940 feature th like this real radio comet means


Push-Button Tuning.
Tune any four favorite
cations just by pressing unions just by the new a buetoll. Touch" syst with - Jus finker-and sheasily. your hat ion tuned cine! yourisely adjust; easy conEasy to Enjoy the Auto lenience at act.

TH Es Plus
theine features

- FUUIISION CONNECTION
- full-action a. vic.
- new 5 " Rotor dial
- full 2 watts output
- Pom. DYNamic SPEAKER
- TUNES POLICE CALLS


To thousands of wlse radio buyers everywhere there is only one sind $\Rightarrow$, dependoble source of supply for overything in the rodie fisld. This source is ALLIED RADIO-the house that is firss Cheie wherever high-grade, low-cost radio equipment is requ red. Tree simple reasons account for ALHED'S consistent leadorahips
Rast Amber hioh stondards of quality are your assurance thot gow cae lyy with confidence. . . thot every hem you order fram us will meet the most exacting stondards for performance and dependabliry.
SECOMD-AMIED'S low prices always assure you of fullesp value for your mency, You gef more . . . you save more . . . you prefir more on sver 1 purchase.
TH1Rs-Musis prompt, careful service savos you time and affor. Our central locction and our officiont shlpping mothads meas the your orders are always dellvered quidkly and safely. In every fich dot radio, the ALbIED Gatalog ls recognlzed os the foremost Buy n. Culde. Whotovor your partlcular interestTadic recelvers, Sound oquipment, Amafour geor, Sorvise inseruments, Rep'acement paris, Experimontal appararus-you will fnd es a somplate, dependable source of supply. By consoliduting you purchases and by orderlng all your radio aulp: ment from on- source, you can ofiect considerable aavings in the and trumportaton sosts. Follow tho lead of thousands of setisfled radio buyors-make ALLIED Your First Choice, too.

## 4 тиве $\int \mathcal{K}_{\text {might }}$ ac-dC superhet

- Dynamle Speaker


## - Attached Antenna

- Tunes Pollce Calls
- Plays Anywhere
- Superhet CIrcuit

Here's a new "TIny-Knight" style sensation that sets the radio-vogue for 1940 ! It's a real Superhet recelver that delivers remarkable tone quality, with surprising power and sharp selectivity. It's smal enough to hold in the palm of yous hand you can carry it anywhere and play it anywhere with rea that you'Il be proud of. Just check these outstanding value features that bring you real performance:

- play It Anywhere. You can play the Knight 4 practically anywhere. Its versatle design permits operation with equal efficiency from 110 volt, A.C. or D.C., $40-60$ cycles. The complete set weighs only $41 / 2$ ibs. Attached 20 foot antenna wire permits 4 the ideal travelling companion or "personal" radio in the home. Use it as a trecond:" radio at home; take it along with you wherever you go. You can't beat the versatility of the new Knlght 4;
- Tunes Police Calls. The extended tuning range of the Knight 4 covers 535 to 1720 kilocycles bringing you strong and enjoyable reception of al standard Broadcast programs plus upper channel Police calls. Has easy-to-tune full-vision plasticmolded dial. You'll like the way this compact set reaches out and pulls in the distant ones; you'll like programs. Develops and rich tone quality on al programs. Develops unusual power, bringing in sta tions from near or far with consistently uniform assures you of a brilliant quality of cone you'll meldom find in so compact a set. Youll enjoy every program you tunein! - New Superhet Circuit. The Knight features an unusually efficient Superhet circuit licensed by R.C.A. New type 150 mil tubes -fully equal in per formance and dependability to big set tubes are
used as follows: 12 A gGT as Conv.-Osc. (dual-pur used as follows: 12A8GT as Conv.-Oac. (dual-pur pose): 12 SJ7GT as Det. and 1 st Audio (dualpurpose); $\operatorname{Rect}$. The use of dual and triple-purpose tubes actually achieves 6 tube get results. The new 150 mil tubes do away with ballasts and heater cords. Every tube works at top efficiency, developing an undistorted output of $11 / 2$ watts-more than enough for fine powerful reproduction of all programs.


## 4 TUBE " $\tau_{\text {iny }}, \mathcal{K}_{\text {night }}$ "

- Dynamle Speaker - Plays Anywhere
- Bulf-in Antenna
- Smart Cabinet - Welgirs Oniy 4 Lbs.

We bring you in this beautiful new AC-DC model America's smallest radio with big set tone and radio is so small that wou your hand 80 low-priced that anyone can atford it -yet so cleverly engineered that in power output and in performance it is equal to models ten to twelve times its size.

- Plays Anywhere. The "Tiny Knight" 4 is outstanding for its unusual versatility, You can carry it and play it wherever 110 . or D.C. current is available. So small is this A.C. or receiver. that you can pack it into any size suitcase or overnight bag and take it along when you travel. You can enjoy fine radio entertainment wher ever you go. A built-in 20 foot aerial wire on hank permits instant operation.
- Powerful New Circult. An expectionally efficient new. R.C.A. licensed circuit accounts for the splendid performance of the Tiny Knightw 4 . The latest Amp.; 12 J 7 GT as Det.; 50 L 6 GT as Audio Output Amp 3525 GT as Rectifier. Every tube works, contributing to strong, thoroughly enjoyable reception. The 50L6GT Output stage develops an undistorted output of 1.2 watts ( 1.5 watts maxl muma)-more than enough for fine reproduction of all programs-and achieves strong volume seldom found in compact sets. Both voice and music are delightully recreated through the newly deaigned full Electro-dynamic speaker. The new 150 mi
- New Easy-To-Tume Dlal. The large molded dial of the "Tiny Knight" 4 is clearly marked and eany to operate. Calibrations in kilocycles are large and easily legible. covering an extended range of 535 to 1720 kilocycles for reception of all standard Broadcast programs plus many Police calls. Molded finger-grip on dial makes tuming unusually con venient. You'tl enjoy the almost miraculous way in which this tiny receiver picks up programs from near and far and brings them to you in a thoroughly enjoyable manner, Tone quality. distance-reach. and efficiently has this new set been designed that even many larger sets cannot offer such fine performance.
- Tunes Pollee Calls. In addition to the standard Broadcast band, the Knight 4 covers the 1712 K . C Police band. You get extra tuning, coverage and extra refinements at an amazingly low price. No other low-cost receiver brings you so much for your money
- Smart Cabinet Styllng. You get a new and enjoyable kind of radio beauty in the Knight a plastic-molded cabinet. It is flaw lessiy designed and beautifully molded, with a graceful duai-touvre grille bleading into or corners; the whole effect is harmonious and pleasing. The large round plastic-molded and pleasing. The large round plastic-molded cabinet design is acoustically perfect and enhances tone quality. Available in a choice of beautiful colors: soft Ivory. mottled Walnut or rich Onyx. Here is one of the most beautiful plastic-molded radio cabinets ever created-you'll be proud to own this model!

A10803. Walnut.
$\$ 1295$ alue
NET EACH, $\$ 7.50$.
LOTS OF 3 .

575

- Mnight 4 Complete. The Knight 4 Tube AC-DC Superhet in its beautiful plastic-molded cabinet is offered complete With tubes, Dynamic speaker and attached 40 antenna. For operation from 110 volts, $40-60$ cycles A.C. or D.C. Here's 1940 s in size, but a real giant for radlo results in size, but a real giant for radto results one can afford this fine performer which will make an ideal personal receiver or "second" radio in the home. Three models Ivory, Walnut, or Onyz, are listed below, You ve never before been able to buy so much radio for your money.


## 2

A 10805.0 onyx.
Retall Value,
Retall Value,
$\$ 15.95$.
SIS.95.
NEACH, S EACH,
S9.1O.
LOTS OF 3,
EACH......

- Beautiful Tone quality. No other receiver as small as the new "Finy Knight"4, approaches the superb tonal quality it offers. You'll be amazed at its strong volume, its beautiful tone. Definitely not a novelty, not a toy, the "aliny Knight is Americas smallest quality radio-deliverin
- Striking Now Cabinet. An entirely new and beautiful cabinet has been especially and beautifuis cabinet has been especialy of one-piece Bakelite along smooth, simple lines. Louvre grille is both attractive and practical; it supplies enlarged baffle area. greatly enriching the tonal quality. Cablnets are available either in soft, rich Ivory, or in attractive Walnut. Size is only $61 / 2^{\prime \prime}$ wide,
 you can carry it with you anywhere.

- Set Complete. The "Tiny Knight" 4 tube AC-DC receiver is supplied complete with tubes in handsome Bakelite cabinet as described at left. For operation from 110 volts. $40-60$ eycles, AC or DC Shpg. wt., 5 lhs. A wonderful value in a com Dact receiver of real quality
A10806. Walnut.
Retail Value, \$9.45.
NET EACH, $\$ 5.85$



## A10807. Ivory.

Retail Value, $\$ 10.45$
NET EACH, $\$ 6.60$
NETPRICE, LOTS OF 3,
${ }^{5} 635$

R.C.A.


## Ready for television

The two new Knight Rarlios shown at left and right are all ready for Television when it comes. Both Incorporate bullt-in connection for Television
attachment-a 1940 ex tra-value feature.

## Kinght 5 tube aC SUPERHET

This brilliant new Knlght receiver in a cabinet of the latest modified upright trend is a pace-setter in radio styling. performance, and value Incorporating latest circuit refinements. built to offer splendid reception
and superb tonal quality, the Knight 5 Tube A.C. Superhet is a top and superb conal quaits, the Knight $\mathbf{q}$ tube A.C. Super het is a top looking, richer-toned, more powerful receiver anywhere at our stnashing low price. Just check these outstanding 1940 radio features:

- Push-Button Tunlng. Tune any fonr of your favorite stations in a flash at the miere touch of a button. It's easy it's convenient it's accurate. The automatic tuning system used in the Knight $\mathbf{s}$ is easily adjusted from the front when the receiver is installed, and no further rexulating is necessary. Youll enjoy this periected method o
- New Pearlold Dial The big new alide-rule dial sy"xil the head
- New Pearfold Dial. The big new alide-rule dial. $53 / 4$ " $\times 47 / \mathbf{n}^{\prime \prime}$ is an unusual combination of beauty and utility Translucent pearl-ilike background shows up all calibrations clearly and legibly. Needle-pointer travels horizontally to show you exactly what sector of the tuning range
is being coverred. Dial face and automatic luning unit are Integrated
into a handsome one-piece plastic-molded escutcheon into a handsome one-piece plastic-molded escutcheon.
- The All-Purpose Radio. The Knight 5 is the ideal all-purpose radio for living-room, den, bedroom, or office. Its tuning range covers the full Standard Broadcast band plus upper channel Police calls to bring you all your favorite programe. The built-in "Air-Magnet" offers extra convenience because it eliminates all bother with aerial and ground connections. Just plug in the Knight 5 to any 110 Volt A.C.
outlet and it's ready to give you powerful, true-toned, enjoyable radio outlet and it's ready to give you powerful, true-toned,
entertainment. Here is an outstanding 1940 radio buyl
- Full A.V.C. Action
- Powerful Superhet CIrcult. The Knight 5 Tube A.C. is built around an advanced R.C.A. licensed Superhet circuit employing the lateat tube types for greatest efficiency and fullest power. Tubes used are: 6A8G as dual-purpose Conv.Osc.; 6K7G as 1.F. Ainp.; 607G as triple-purpose Diode bet.-A.V.C.-1st Audio; 6 K 6 G as Power Output; put. rarely achieved in low-priced 5 tube radios.
- Extra Circult Features. Full Automatic Volume Control assures uniform volume and freedom from fading. Built-in connection will accommodate Television attachment or Record Player. All circuit components are of the highest quality, critical points are fully shielded.
- Wonderful Tone. The latest type of 5 -inch dynamic speaker cleverly mounted for increased baffle area, smoothly handles the 2.5 wats power output. bringing you tonal quality remarkable for its
fidelity and rlehness. You'! never tire of listening to the Knight 5 ,
- Advanced Cablnet Styling. The beautiful new walnut cabinet which houses the Knight 5 combines luxurious walnut veneers into a design of striking new beauty, Especcially attractive and outstanding is the unique new oversize speaker grille. The dial escutcheon is plasticmolded in a harmonizing finish. The entire cabinet is beautifully rubbed to a lustrous finish. Size: $121 / 2^{*}$ wide, $111 / 4^{\prime \prime}$ high. $75 / /^{\prime \prime}$ deep.
- Kolght 5 Complete. The Kright 5 Tube A.C. Superhet is supplied 60 cycles A.C tubes for operation from 110 Volts.
A10810. Retail Value. $\$ 20.95$. Corle: DANCE.
NET PRICE, EACH, \$1 5,45 ,


## Kinglit 5 tube actol SUPERHET

Here's a real leader for value-a splendid 5 tube AC-DC Superhet bringing you more beauty, more quality, more fine performing ability than you've ever seen at so low a price. Here'o the set giving you versatile operation, true Superheterodyne performance, and charming cabinet beautyl

- Push-Button Tunlmg. Fully automatic, the push-button tuning system in the Knlght AC-DC 5 brings you any of four favorite local stations at the touch of a button. It's precise and fool-proof; there's nothring to $g e t$ out of order. In addition to automatic tuning, the Knight 5 includes a large alrplane dial for manual tuning of all Standard Broadcast programs ( $540 \mathrm{~K} . \mathrm{C}$. to $1730 \mathrm{~K} . \mathrm{C}$.) and many Police Calls.
- Carrles and Plays Anywhere. Needs no aerial, no crailing ground wire. The bultt-in "Air-Magnet" picka up stations all over the dial with equal ease. The Knigha 5 operates with in addition, from 220 volts A.C. or Cy.C. with adapter below,
- Newert Superhet Circuit. Fully R.C.A. and Hazeltine licensed, the Superhet circuit in the Kilght 5 uses the very latest tube types as follows: 12SA7GT as dual-purpose 1st Det-Osc.; $12 \mathrm{K7GT}$ as $1 . \mathrm{F}$, Amp.; 12 SQ 7 GT as Diode Det. Rectifier. This tube line-up assures bigzer power out as Rectiber This tube line-up assures bigger power output, greater discance reach, and better tonal ndelity. Full Auto-
matic Volume Control, and features. Can be adapied for Television sound recepuion. The newly designed 5 -inch Permanent Magnet Dynamic speaker aivea you exceptional tone qually oas every program.
- Set Complete. The Knlght 5 Tube AC-DC Superhet, in table cabinet descibed at left, is supplied complete with cubes for 110 volts, $40-60$ cycles. A.C. or
A 10832 , Retail Value, $\$ 19.95$.
NET PRICE, EACH, SH1.35
A9 145,220 Volt Adapter for above sei......

The Kinght 5 Tube AC-DC Superhet is supplited in the beautiful table model cabinet shown above. Measuring $11^{\prime \prime} x$
 bode desion. Wich horizontally charmwalnut is set off by contrasting bands of darker tones. Push-buttons are con-

- WITH "AIR-MAGNET"
- FULL-ACTING A.V.C.
- has tone control
- NEW P.M. SPEAKER
- PLAYS ANYWHERE


## Model Dalues!



A

## . Kinghtit $\mathbf{6}$ tube AC-IC SUPERHET




## Ḱmight f tube 2 band ac--nc: surerhet

For wonderfully versatile operation. for power ful two-band reception. for rich, faithful tone quality, and for striking cabinet beauty, this new Knight 6 Tube 2 Band AC-DC Superhet can't be surpassed at our exceptionally low price Compare it with ordinary sets costing up oo $\$ 40$, then check comparative features one by one, and you'll agree that the Knight 6 has no equal at this wrice.
Push-Button Tuning. Simple, casy-working, hccurate. You can tune any four of your favorite stations with a touch of your finger. Front-adjusted buttons with effortless $1 / x^{\circ}$ stroke have novel magnifying-glass button face. Regular manual tuning, too, is exceptionally easy with the new $53 / 4 \times 47 \%$. Pearloid slideRule Dial. This beantiful dial has a separate
scale for each wave-band.

- Tunes 2 Full Bands. The powerful tuning range of the Knight 6 covers two full wavehands. The 535 to 1720 kilocycle ranke covers the entire Standard Broadcast band and also includes upper channel Police Calls. The 5.65 to 18.1 megacycle band covers popular foreign and domestic Short-wave stations, Here is channels, at a price anyone can afford!
- Bullt-In "Air-Magnet." Exceptional ver satility is built into the Knlght AC-DC 6 . Includes the wonderful new ' Air-Magnet" which does away entirely with ratling aerial and ground wires and assures exceptionally fine signal response on both wave bands. The Knight 6 will play perfectly almost anywhere for it operates with equal efficiency from 110 voles, 60 cycles, A.C. or D.C. and (with adapter listed below) also operates from 220 volts
- New Superhet CIrcuit. A powerful R.C.A. licensed Superhet circuit employs latest tube types as follous: 12 A 8 GT as Conv.; 1215 GT as Osc.: $12 \mathrm{K7GT}$ as IF. Amp. 12 Q7GT as triple-purpose Diode Det.-A.V.C.- 1 st Audio: 35 Lafit as Power Output; 3575GT as Rectifier. A generous 2 watts out put is develojed. efficiency and all-around dependability efficiency and all-around dependability
- Additional Features. Here are 'extravalue" features seldom offered in sets priced so how: the new Television Connection will accommodate Television Picture attachment or any Record Player, full Automatic olume Control maintains uniform volume level on ail progran. To mot to select the tonal emphasis you prefer.
- Beautiful Tone. You'll always enjoy listening to the Knight 6 Tube 2 Band AC-DC Superhet. Every program is richly and faithSpeaker. Clear mellow tone quality such as this receiver offers will delight you always. - Handsome Table Cablinet. An unusually tasteful new table cabinet has been selected-tohouse this splendid new receiver. Choice "alnut veneers are used in a modern streamlined motio. Contrasting two-toned bands, rounded corner, and choice grille cloth contribute an air of grace and refinement to this design. Cabinet
measures $181 / 0^{\circ}$ wide, $101 /{ }^{\circ}$ high, and $83 / 4^{\circ}$ deep measures $181 / 4^{\circ}$ wide, $101 / 4^{\circ}$ high, and $83 /^{\circ}$ deep.
- Set Complete. The Knight 6 Tube 2 Band AC-DC Super het is offered complete wit $h$ tubes in table cabinet illustrated above. For operation from 110 volts. 60 cycles, A.
A10812
Aetail Valce, $\$ 39.05$.
NET EACH, $\$ 19.45$.
NET PRICE, LOTS
OF 3, EACH.
A9145, 220 Volt Adapter. NET
59c

R.C.A. \& HAZELTINE LICENSED

The heautiful table cabinet illustrated above houses the Knight 5 Tube AC-DC Superhet. Buile of choice walnut vencers in handsome striped walnus set off by clarker band extendin striped walnut set off by clarker band extending wide, $71 / 4^{\prime} \mathrm{high}$. and 7 . deep The ideal "utility" set for living-roorm, bedroom, den, or office, the Knight 5 is easily portable and is ready to play instantly when plugged into any electric outlet. An exceptionally fine 6 radio that will enhance any setting.

FEATURES:

- WITH "AIR-MAGNET"
- NEW PEARLOID DIAL
- FULL A.V.C. ACTION
- 2 WATTS OUTPUT
- P.M. DYN. SPEAKER
- READY FOR TELEVISION


## 5TULBE ACIICSUPFRHET

Here's the kind of value that has made ALLIED famous with radio buyers everywhere. Big in power. rich in tone - DC packed with features, the Knight 5 Tube AC-DC Super het is truly a quality-built radio at a this splendid performer brings you all of your favorite programs with velvet-smooth, full-bodied tone

- Bullt-In "Air-Magnet." Here's real radio versatility! The amazing new "Air-Magnet," built right into the Knight 5, picks up programs from near and far with surprising case. eliminates the old-time fuss with trailing aerial and ground wires. This new set is truly bortable and self-contained. It is ready to perform perfectly the minute you plug it in to any 110 volt, 60 cycle. A. ${ }^{\text {a }}$ or D.C. outlet. Will also operate (with adapter below) from 220 volts, A.C. or D.C.
- Powerful Superhet Circult. Licensed by the worldfamous R.C.A. laboratories, the Superinet circuit of the Knight 5 uses the new 150 mil tubse (no ballast, no heater cord required) as fcllows: 12A8GT as dualpurpose Conv.-Osc.: 12 KiGT as 1.F. Amp.: 1207 GT as as Power Output 3525 GT as Rectifier, 2 watts output is developed and is splendidly handled by the new 5 -inch Permanent Masnet Dynamic speaker
- Wonderful Performance. The tuning range covers the entire Standard Broadcast band plus upper channel Police Calls. Tunes 535 to 1720 kilocycles. Full AutoTratic Volume Control prevents fading or distortion. I'icture attachment when Television reaches your community. The Knight 5 will also accommodate any Record Player (see pages 22-23) for fine reproduction of your favorite recordings.
- Set Complete. The Knight 5 Tube AC-DC Superhet is supplied complete with tubes in cabinet describerl at left. For operation from 110 volts, co cycles, A.C. or D.C. Shpe. wt.. 10 lbs . Code: MARSH A10813.
Retail Value $\$ 24.50$.
NET PRICE EACH,
NET PRICE,
A9145. 220 Volt Adapter. NET

All four of the new Knight Radios shown on these two pages are ,equipped with the built-in "Air-Magnet." No more fuss with trailing
antenna and ground wires antenna and ground wires no more bother every time you want to move the radio. Just plug in like any elecradio is ready to play! your
raditand

## "AIR-MAGVET"

## रerighle 5 tube ac-nc superhet

We challenge you to match this Knight 5 any where at our amazingly low pricel Here are the finest and newest featuresi Push-Button Tuning, Stide-Rule Dial, "Alr-Magnet" and Static Shield; plus big power, wide reach, and truly magnificent tone. And look at the beautifully designed and finished table model cabinet I You won't find a better radio value than this new 5 tube AC-DC Superbet anywhere

- Push-Button Tuning. Just tip the button and there's your station! No pressing or pushing with new "Feather-Touch" Automatic Tuming. Glves you your choice of any four of your favorite stations-accurately, instantly.
- Silde-Rule Dial. The large full-vision SlideRule Dial makes regular tuning easy Clear legible scales are etched on glass and lighted from behind. The Knight 5 tumes 535 to 1630 k.c. covering all American Broadcast stations, far with plenty of power and enjoyable tone.
* "Alr-Magnet" And Static Shleld. No aerial, no ground needed with the mew built-in "Air-Magnet." Just plug in and play! Gives
more versatility, more convenience. The Static Shield assures pure tone and clear reception even in noisy localities. Enfoyable performance
- Powerfut 1940 Circuit. Operates equally well from either 110 volt $40-60$ cycle current A.C. or D.C. or, with adapter listed below. from 220 Volts A.C. or D.C. You get radio's most important improvements in the powerful R.C.A. and Hazeltitte licensed circuit of the Knight 5. Latest tubes are: $6 A 7$ as 1 st Det.(Dsc. (dual-purpose) ; 6D6 as I.F.; 75 as 2nd Det.-A.V.C.-1st Audio (triple-purpose); 25 L 6 as Ausio Output ( 1.7 ivatts); 2525 as Rectifier; L49B as Ballast. Powerful 6 -inch dynamic speaker gives you amazingly life-like tone.
AC fas full Automatic. Volume Control for unifotm volume. The dual- and triple-purpose unform give added tube nower and efficiency. Rubber-foated tuning condenser assures greater uning stability; and the louvre-type grill opening assurés better acoustical reaults. Order the Knight 5 today! It's a truly remarkable value at our amazingly low prices See page $\$ 1$ for
- Thrilling Beauty. You will marvel at the modern beauty of the cabinet of the Knight 5 ! It sets a new high for superb radio styling! It mut, with top and bottom trim overlays of contrasting grain. Features a gracefully-fiowing louvre-type speaker opening. The plasticmolded dial escutcheon has harmonizing walnut finish to blend skillfully. All surfaces are hand rubbed to a lustrous piano finish. The set measures $121 / 4^{\prime}$ long, $71 / 4^{\prime}$ high. $71 / 2^{\circ}$ deep. It is one of $1940^{\prime}$ s outstanding cabinet designs.
- Knight AC-DC 5 Complete. The Knights Knight AC-DC 5 Complete. The Knight 5
$A C-I C$ Superhet is offered in cabinet illustrated above, complete with tubes. For operatrated above, complete with tubes. For opera-
cion from 110 volts, $40-60$ cycles A.C. or D.C Here Is an opportunity to own a fine-performing versatile AC-DC set at a low price. ing versatile AC-DC set at a
A10840.
Retail Value, $\$ 23.50$
NETEACH, $\$ 1.95$.
YOUR PRICE. YOUR PRICE.

A9145. 220 Volt Adapter. HET....59c

## G TUBE A. С. SUIPERHET

You'd never believe that so little would buy so much radio! Look what you get 1 A real 6 tube Superhet circuit tuning many more stations than ordinary sets selling at this price, Built-in type Aerial so that you can carry the set from room to room type Aerial so that you can carry the set from room to room added convenience and accuracy in tuning. A full 5-inch Dynamic speaker for better cone quality. An amazing 3.5 watts. And that's not all. Just check these features:

- Blg Airplame Dial. The Knighe 6 Tube A.C. Superhet is exceptionally easy to ture because it includes a big 4-inch Airplane full-vision dial. Dual-calibrated in kilocycles and meters, with large, clear markings for easy-reading. Tunes 540 band plus the popular covering the entire Standard Broadcast iently located populat 1712 K.C. Police Channel. The convenstation is perfectly in tune.
Outstanding New Cireuit. An advanced R.C.A. and Hazeltine licensed Superhet circuit incorporates newest tube types for bigger power, better sensitivity, finer selectivity. Tubes are used as follows: 6SA7 as duai-purpose Osc.-Mod. 6 . SK 7 as Audio: 6F6G as Power Output; 5 Y4G as Rectifier; 6 US Electric Eye. The $6 F 6 G$ atage develops a sensational 3.5 watts output. - AddItlonal Features. The Built-in Aerial ends alf your trouble with aerial and ground wires. Picks up mare stations trouble with aerial and ground wires. Picks up more stations
with less noise than ever before. Full Automatic Volune Con
trol maintains steady volume level on all programs; prevents fading and blasting. Tuning condenser is rubber-mounted. - Sparkling Tone Quallty. In tone quality, too, the Knight 6 far surpasses other radio sets usually sold at this price. A est design reproduces each program with life-like clarity and brilliance.
- Sot Complete. The Knight 6 Tube A.C. Superhet is supplied complete with tubes in cabinet described at right. For operation from 110 volts, 60 cycles. A.C. Shpg. wt., 14 ibs. Code: RIGHT


## A10865.

$\$ 1595$
NET PRICE, LOTS OF NET PR


FEATURES:

- with electric eye
- FULL A.V.C. ACTION
- 3.5 WATTS OUTPUT
- has builtiln aerial
- $4^{\prime \prime}$ AIRPLANE DIAL
- 5" DYNAMIC SPEAKER
- TUNES POLICE CALLS

The new Knight 6 Tube A.C. Superhet is offered in the \&racefully designed table cabinct illustrated above. Front falnut veneer with smoothly shaped edge. Attractive beading at the base on both sides, shaped speaker grille bars, and neat dial escutcheon blend into a harmonious whole. Cabinct measures: $141 / 2$ wide, ${ }^{\circ}$ high, and $63 / 4^{*}$ deep. A cabinet of perfect size for bookshelf or end table. Offers the last word in outstanding utility coupled with beauty. Will give years of merfect entertainment.


# 194U's SENSATIUNAL RAIIIU VAIILE! 

EACH IN IOTS OF THREE

## PUSH-BUTTON TINNNG

You'll enjoy the convenience of getting the program you want simply by pushing a button. The push-button tuning system used in the Knight 7 is accurate, fool-proof, and instant in operation. Six station buttons are easily set to tune any six favorite local stations autorm tically. instantly and precisely!

## television connection

The Krilght 7 is ready for Television when it comes. It is built to receive lelevision Sound; when Television arrives you can simply attach the picture receiving unit and double the
utility and enjoyment of this set.

- big slide-rule dial
- has tone control
- full a.v.c. action
- PHONO CONNECTION
- 3.1 WATTS OUTPUT
- $6^{\prime \prime}$ DYNAMIC SPEAKER
- beautiful cabinet


## the $\mathscr{K}_{\text {night }} 7$ TIUE 2 AAN a.c. Supferlet

Here's a handsome new 7 -tube Knilght receiver you'll be happy to own. such beautiful styling. splendid tone quality, and powerful reception have Built togive years of enjoyable service, the Knight 7 Tube 2 Band A.C. Superhet includes all of the latest features that mean more dependable, more satisfying radio periormance. Just check what value you get for your radio doliar.

- Two-Band Reception. The Knight 7 offers you unusually fine reception on two bands from 540 to 1550 kilocycles and from 5650 to 18100 kilo cycles. The Broadcast Station Band covers all of your favorite American and Canadian programs,
and the Short-Wave Band bringes you the popular, and the Short-Wave Band brings you.the sopular, thrilling forelgn and romestic Short-Wave stasigned two-band radio receiver at a price which ordinarily buys only a Standard Broadcast set
- Blg Silderule Dlat. In addition to Automatic Push-Buttont Tuning (described at left). the Knight 7 Tube Receiver includes the latest type of Slide-rule dial for greater ease and accuracy in manual tuning. Measuring $63 / 4$ "wide by $23 / 4^{*}$ high for the Broadcast and Short-Wave bands Dia has illuminated translucent scales and horizontaltravelling pointer so that you always know which band and which frequency you are tuning.
- Latest Superhet Circuit. A new Superhet circuit. licensed by R.C.A. and Hazeltine, empioy the newest tube eypes for powerful reception and strong output. Tubes used are: 6A7 as Conv. 6 D 6 as I.1F. Amp.; 75 as dual-purpose Det.tst Audio; 76 as Phase Inverter; $2-41$ tubes for push pull output; and 80 as Rectifier. The $2-41$ tubes in push-pull circuit develop an exceptional output of 3.1 watts, more than sufficient for splendir condenser and chassis adrl to stability tunin

Added Circult Features. You set more for your money when you buy the Knight 7 Tube 2 Band A.C. Superhet, for its fine circuit includes important extra-value features. There's full Autonevel withme Control to maintain uniform volume linuously variable fading or blasting. There's con sonal choice of crebls or bass emphasis. There's built-in connection for or bass emphasis. There s Any of the Record Players shown on pages 22-23 can be used with the Kright 7 to give you rich faithful reproduction of your tavorite recorded selections. You get more for your money in features in performance-when you buy the Knight 7 the radio of tomorrow, here for you today !

- Rich, Falthful Tone Quallty. Few table model receivers can surpass the tone quality offered in the Knight 7 Tube receiver. A full 6 -inch dynamic speaker capably handles the big 3.1 watts output and recreates every progran with splendid fidelity and tonal depth will thrill you!
- Beautiful Table Cabinet. The richly styled table cabinet lousing the Knlght 7 Tube Superhet is built of fine walnut-finished woors, hand-rubber to a kieaming piano finish. Horizontally-gtriped trimat top and bottom and by a rich speaker grille trimat top and bottom and by a rich speaker grille $173 / 4^{\circ}$ wide, $111 / 2^{\circ}$ high, and $91 / 2^{\circ}$ deep.
- Set Complete. The Knight 7 Tube 2 Band A.C. Superhet is offered complete with tubes and 60 cycles A.C. Prove to operation from 110 volts cives you more for your money. 15 days under our liberal money-hack suarantee (see page 11). Shpg. we., 17 ths. Code: CAMEO. A10836.
Retail Value, $\$ 39.95$
NET, EACH, Si9.95.
NET, LOTS OF 3 , EACH
\$/895


## $\mathcal{K}_{\text {righl }} 7$ TIIBE 3 BAND А. С. SUPPERHET

Beautifully styled in the latest mode, this 1940 Knig ht way ahead with everything that's new and best in the radio industry. Its exceptionally attractive cabinet it marvelously clear tone, its powerful reception range, all combine to give you one of the season's most luxurious table model radios at a popular price.

- Tunes 3 Bands. The tuning range of the Knight 7 covers three wave-bands for unusually enjoyabie re ception of Broadcast, Medlum-Wave, and Short-Wave programs. Tunes 535 to 1720 kilocycles for all Standard Broadcast programs plus many Police calls; 7.5 to 2.2 megacycles for Police, Amateur, and domestic and foreign stations; and 24 to 7.25 megacycles for foreign ShortWeter Short-Wave sector. On each band the Knight 7 brings in stations powerfully and dependably for finer and more enjoyable radio entertainment.
- New Pearlold Dial. In addition to tuning any four favorite local stations by push-button, you can cover al three wave-bands with unusual ease by means of the new Pearloid slide-rule type dial. This tri-colored. illuminated dial ( $53 / 4$ " $x 4 / 4^{\prime \prime}$ ) is built into an integrated one-piece dialface and escutcheon such as you hand ony on more expensive radios. D.alhas three separate scales,
- Latest Superhet Circuit. The powerful new Superhet circuit, licensed by R.C.A., incorporates newest tube types and extra refinements. Tubes used are: 6A8G as
dual-purpose Conv. Osc; 6 K 7 G as I.F. Amp.; 607 G as Diode Det.-A.V.C.-1st Audio (triple-purpose); 6J5G as dual-purpose Phase linv.-2nd Audio; 2-6K6G as pushpull power output; 80 as Rectifier. This tube comblnation gives you extra power and extra sensitivity comparing In adidion this fine circuit includes: full Automatic In addition, this fine circuit includes: full Automatic Volume Control, continuously variable Tone Control; individual coils on each waye-band; buitt-in connection for
Television or Record Player; full 3.5 watts push-pull power output. The built-in "Air-Magnet" does away with trailing acrial and ground wires.
- Superb Tone Quallty. A full 6-inch dynamic speaker efficiently handles the 3.5 watts output to give you better reproduction and richer tone on every program. Here is modern tonal fidelity you'll thoroughly enjoy
- Set Complete. The Knlght 7 is offered complete with tubes and speaker in the lixurious new table cabinct illustrated above. Choice walnut veneers, unique dual speaker grille, and unusual distinction in design, make this cabinet "a thing of beauty and a joy forever." Size: $201 / 2^{* x 111 / 4 " ~} \mathrm{x} 81 / 2^{\prime \prime}$. Set operates from 110 volts, 60 cycles A.C. Sbpg. Wt., 20 lbs. Corle: LEDGE. A10814. NET, EACH, \$26.85,


## $\$ 2595$



- NEW PEARLOID DIAL
- 6" DYNANIC SPEAKER
- full-acting a.v.c.
- WITH TONE CONTROL
- 3.5 WATTS OUTPUT
- PHONO CONNECTION
- Television Conmection. The Knlght 7 is built with an eye to tomorrow. it's ready for Television when it comes. You'll simply attach the picture recelver for complete ree ception of Television sound and slght. Thus your new Whig he 7 ube sct cannot trecombe timue to get many yeara of enjoyable senvice from this fine radio set. In addition. the Tele. from this hne radso set. In addition. the Tele input for connecting Record Player.


## With the AIR-MAGNET

Perfect reception without aerial, without ground, without trailing wires! Just plug in like any electric spplance and you're ready to

## AITTOMATIC TINNNG

Tune any four of your favorite stations automatically: Just press a button... and there s your pro

## Xright 6 TIIBE 2 BAND A.C. SUPFRHET

This 1940 Knight 6 Tube Superhet brings you powerful two-band coverage together with beauty of design and exceptionally enjoyable tone quality. Cleverly engineered o incorporate latest circuit features, the Krimht 6 is its real value.

- Push-Button Tuming. You can tune any four favorite local statıons as quick as a flash merely by touching a button. Buttons are easily set from the front. Effortless $1 / 0^{\circ}$
stroke and magni-glass button face add to convenience of stroke and magni-glass butwon face add to convenience of automatic tuning. In addition, the Knlght 6 includes a s-parate scalea for each wave band.
- Two-Band Coverage. Two wave-bands cover all Standaud Broadcast stations, plus foreign and domestic Short1720 kilocycles and 18.1 to 5.65 megacycles. Vou get better more powerful reception on both bands because the Knight 6 has been quality-cngineered and built.
- New Superhet Clrcuit. A newly designel, R.C.A. licensed Superhet circuit employs latest tube types as
follows: 6 A 8 G as Conv.-Osc. 6 K 7 G as I.F Amp. 607 G as
 triple-purpose Diode Det-A.V.C.-1st Audio; 25 C 6 G as Doubler; 2576 G as Rectifier. Added features: full Automatic Volume Control, continuously variable Tone Control, built-in "Air-Magnet" (no acrial or ground required). Individual coils on each band, built-in connection for Television or Record Player, etc.
- Superlative Tone Qually. The conal performance of the Knight 6 Tube 2 Band A.C. Superhet gets a nev standard for so low-priced a 6 tube set. The full 6 -inch dynamic speaker reproduces every program with richness, depth, and reallsm that will surprise and delight you. - Telavislon Comnection. The Knight 6 is truly an up-to-the-minute receiver; has connection for Television when it comes. May also be used with any Record Player shown on pages 22 and 23 .
- Set Complete. Presented in the lovely table cabinet illustrated and described at left, the Knight 6 Tube 2 Band A.C. Superhet is supplied complete with tubes and
$6^{\circ}$ dynamic speaker. For 10 volts, 60 cycles A.C. Shos. wt, 17 lbs. Code: GLINT.


## A10815

Retail Value, $\$ 39.95$ NET PRICE, EACH, 520,95 .

The charming new table cabinet which houses the Knight 6 Tube 2 Band A.C. Superhet is a pleasing adaptation of the with curved speaker grille, rich walnut with curved speaker grile, rich wainut band at bottom. Pearlold dial and pushbutton panei are integrated for more attractive appearance and greater ease of operation. Cabinet measures $181 / 5^{\circ}$ wide. 10 $1 /{ }^{\prime \prime}$ high $83 / /^{\circ}$ dece. A spiendid product of fne cabinet craftamanship.

- 3 Wotts Output
- Television Connection

FEATURES:

- With "Air-Magne1"
- Push-Bution Tuning
- New Pearlaid Dial
- Full A.V.C. Action
- Has Tone Cantrol



# Brings 2 Jou Lusury Ractios at pupllan prices... 

The new 1940 KNIGHT Radios give you more for your money: more performance, more beauty, more features-at prices lower than ever!

KNIGHT Radios cost just as much to make as the most expensive sets. Into each model there have gone months of careful research, painstaking planning and designing, skillful craftsmanship and rigorous production standards-so that we might bring you the finest radios that modern science and skill can produce, at prices that set new value standards.
We ask you to check the features of any 1940 KNIGHT Radio. Check its tuning range, tube lineup, speaker size, features, power output, appear-ance-check its price against any other set in the same class-and then judge for yourself. We know you'll find more real quality, more solid value in KNIGHT every time! We know you'll buy KNIGHT every time!

And now, so certain are we that you will be thoroughly pleased with any KNIGHT RADIO you may buy-that the new 1940 KNIGHT models will bring you more brilliant performance, finer tone, more luxurious beauty, and more exclusive features-that we make the liberal MoneyBack Guarantee Offer below - the fairest and squarest you could ask for.
Buy any KNIGHT RADIO on our regular terms. Try it out for fifteen days-give it every test for tone, power, convenience-you be the judge! We make this offer so that you can prove to yourself-what we already knowthat KNIGHT RADIOS are 1940's best buys!


## READY FOR TELEVISION When Ot Comes!

Most KNIGHT Radios for 1940 are equipped with built-in Television provision for future connection to Television attachment. The same provision also serves as Phono Connection. Here's proof that KNIGHT for 1940 is Tomorrow's Radioready for any new developments -but here-now-ready for your complete eniovment Today!

with the $\mathscr{D}_{\text {e }} \mathscr{L}_{\text {uxe }}$ AIR-MAGNEI


A great 1940 featurel No aerial-no ground requlred. Built-in "Air-Magnet" does away with outside aerial. Just plug in and playl Electromade noise and static even in noisy locations!

## $\mathcal{O}_{\text {ush }}$ - $\mathcal{B}$ Button T UN N IN



Tune any six favorite stations just by touching a button "Feather-Touch'" Push-But ton Tuning is easy to adjust. right at the front; once set, it's fool-proof, precise, instant and autornatic. You il tike the Push-Button way of tunthe button-and there's your program! There's nothing like Automatic Tuning.

## \$2995

EACH, IN LOTS OF 3

# AND THESE <br> EXTRA <br> FEATURES 

- Television Connection
- with Tone Control
- Full-Acting A.V.C.
- Big Dynamic Speaker
- Giant Slide-Rule Dlal
- Electro-Static Shield
- Phono Connection


## -

The Knight 7 Connole Radio is styled to appeal to discriminating tastes, yet it is priced within the reach of everyone. lncorporating every t940, quality-built for superior and lasting radio enjoyment, we honestly feel that the Knight 7 gives you the most for your money. Try it out on our Liberal Trial and Money-Back Guarantee (mee page 11)


## 8 TUBE CONSOLE MODEL

$\mathcal{K}_{\text {right }} 8$ tube 2 band a.c. suppahei

With Electric Tuning Eye

- Has Giant Slide-Rule Dial
- Automatic Volume Contral
- Television Connection - With Tone Control - Phomo Connection

Here's a value-giving 8-Tube Receiver without a competitor! On every count, the Knight 8 scores with the latest feat ures io assure absolute ease of oneration, powerful reception and heautiful tone, It's an exciting new model with good looks and a performing quality you can't beat anywhere at the price!

- Built-in "Alr Magnet". Forget about aerlal and ground wires you won't need them any more with the new built-in "Air Magnet. Does away with outside aerials and installation problems. Put the set where you want it; plug in like a lamp-and play
- Push-Button Tuning. Tune any six of your favorite stations automatically just by touching a button. It's delightfully easy-Push-Button Tuning is easy to adjust, right from the front.
- Giant Sllde-Rule Dial. Even manual tuning ls easy with the new $71 / 2^{\circ} \times 3^{\text {. Slide-Rule Dial. Has separate scales for each wave band }}$ Valuable Electric Eye incorporated afords precise visual tuning.
- Foreign Reception. The Knight 8 tunes two full bands for thrilling reception. Covers $5800-18200$ K. C. For all of the important 1600 K.C. for coast-to-coast standard American and Canadian Broadcast programs. Covers all the important channels.
- 1940 Superhet Circuitt. Fully licensed by R.C.A. and Hazeltine laboratories, the Knight 8 uses these tubes: 1 . $68 A 7$ as Mod-Osc. (dual-purpose): $\begin{gathered}1-6 S K 7 \\ \text { (triple-purpose) ; } \\ 1-6 S 55 \\ \text { as }\end{gathered}$ Output; 1-5Y4G as Rect.; 1-6U5 as Electric Eye. The use of dual and triple-purpos: tubes achieves 10 tube efficiency
- Additional Features. Ready for Television when it comes-has plug-in connection for Television attachment; same provision may be used for phono connection. Has A.V.C. uniform volume level. Tone Control permits bass or trethle emphasis to personal tastes. beautiful. consistently enjoyable tone by the $6^{\circ}$ dynamic Speaker. - Luxurious Table Model. A cabinet of outstanding beauty. Fashioner of rich. selected walnut veneers with handsome roll-over top effect. Speaker grille has attractive classic design. Altoget her a masterpiece of cabinct-work. Sizelete. The Knight 8 is offered complete as illustrated above. with 6 -inch Electro dynamic speaker and tubes. For 110 volts. $50-60$ cycies A.C
Shp\%. wh. 36 lus. Code: AZURE
A10866.
Retail Value, $\$ 54.50$.
NET PRICE, EACH. S27.45. ${ }^{2}$.




## WITH THE DE LUXE AIR-MAGNET

New built-in Super Aerial System eliminates aerial and ground wires. Absolutely no installation problem. No fuss or bother with outNo fuss or bother with out-
side aerials; no more unsightly ground wires. The "Air-Magnet" built right into the cabinet means that you just plug in the set like an electric lamp - and you're ready to play! And the Static Shield means pure, undistorted tone even in noisy locations. Overcomes man-made static and interference. Exclusive Knight 1940 feature!


RCA \& HAZELTINE LICENSED


Tune everything that's important on domestic stations and all $t h e m o s t$
important foreign channeis!

## Ruts muns PuSh BuItows

Automatic Tuning-just like a piano keyboard-is an outstanding feature of the Mnight 11. 12 Push-Buttons are provided: six are used for tuning favorite stations automatically; three are for adjusting Tone Control to Bass, Treble or Medium, one is for "on" position; one is for "off" position; one is for Phono and Television connection. Here is the last word in luxurious and dependable radio reception. Another outstanding de luxe Knight feature for 1940 that brings you radio entertainment at its very best!

#  

\author{

- has television connection <br> - fullit watts output <br> - $12^{\circ}$ DYNAMIC SPEAKER <br> - 3 GANG CONDENSER <br> AUTOMATIC VOLUME CONTROL <br> - WITH TONE CONTROL <br> - WITH BASS AMPLIFIER <br> - PHONO CONNECTION
}

We know of no other console radio at this price that offers so much value! You be the judge-here's Automatic Tuning, De luxe "AirMagnet", Electro-Static Shield, Television Connection-every important 1940 feature-at a price that's amazingl Add the promise of consistently glorious entertainment and up-to-the-minute st yling -and you'll understand why we're proud of this 1940 Knight 11.

- Amazing Automatic Tuning. You've never before seen or operated such a radio! It's almost human in its automatic operation. You can tune any of your six favorite stations just by touching a button. It's uncanny in its speed and accuracy. And it's easy to set, foolproof and precise. Tone Control is automatically controlled, too, by Push-Buttons, one for Bass, one for Treble, and one for Medium emphasis, as personally desired. There's also button control for "on" and "off" and for Television-Phono connection. Even a child can tune the Knight 11 perfectly.
- "Alr-Magnet" and Electro-Static Shleld. Two great 1940 features! The built-in "Air-Magnet" aerial system does away forever with roof aerials and unsightly ground wires. Brings in stations powerfully from near or far; eliminates all installation problems; permits placing the console wherever desired. The Electro-Static Shield eliminates man-made static even in noisy locations.
- Tunes Foreign Programs. Experience the thrill of dependable Short-Wave foreign reception as well as powerful domestic-Broadcast programs. The Knight 11 tunes $5650-18100 \mathrm{~K} . \mathrm{C}$. for all important Short-Wave channels, and $540-1550$ K.C. for coast-tocoast American and Canadian Broadeast programs. Manual tuning is easily accomplished by the giant $7^{\prime \prime} \times 3^{\prime \prime}$ Slide-Rule Dial. Each band is clearly indicated; important channels and station call-letters appear right on the dial for quick and easy location.
- Brilliant New Circuit. The very latest efficient tubes are used in the R.C.A. and Hazeltine licensed circuit of the Knlght 11 as follows: $1-6 A 8$ as Conv.; 1-6K7G as 1st I.F.; 1-6K7G as 2nd I.F.; 1-6J5G as Sig. Det.; 1-6J5G as Audio Amp.; 1-6J5G as 1st Bass Amp.; $1-6 J 5 G$ as 2 nd Bass Amp. 1 1- 655 G as A.V.C.-Det. (dual-purpose); $2-6 \mathrm{~F} 6 \mathrm{G}$ as Power Out put; $1-523$ as Rect. There's real teamwork in this advanced Superhet circuit; each tube contributes its full share to make the Knight 11 a marvel of power, tone beauty and matchless efficiency
- The Television Connection. The Knight 11 is ready for Television when it comesl Has provision for connecting Television attachment. The same provision also serves as phono connection and accommodates the addition of a record-playing attachment to the receiver. The Knight 11 is truly the Radio of Tomorrowhere for your complete enjoyment Todayl
- Additional Features. Other noteworthy features of the 1940 Knight 11 include: Full Automatic Volume Control for uniform volume on all stations and freedom from fading; R.F. Preselector for added sensitivity and selectivity; rubber-floated 3-gang tuning condenser for sharper, more dependable tuning; two 1.F. stages for more dependable reception on each band; "on-off" Push-Bution control for convenience, etc.
- Glorlous Tone Quality. The Knight 11 has an amazing power output of 7 full watts. This giant volume is beautifully handled by a newly developed 12 -inch Concert Dynamic Speaker, and is reflected in thrilling tone that reproduces the entire tonal register to perfection from highest treble to lowest bass. Special Bass Amplifier is built-in for added tone enjoyment. Tone Control is of Amp Push-Button type with Bass, Treble, and Medium positions, permitting instant choice of tonal emphasis as desired. A special Tone Chamber provides for proper acoustics and contributes immeasurably to the superior tone of the Knight 11.
- Beautiful Console Grande. The Knight 11 is handsomely presented in a magnificent new console in the latest 1940 vogue. Has outstanding appeal and perfect acoustical properties. Features a sloping dial panel of choice vertically-striped walnut veneer, with curved side pilasters in rich two-tone finish. The console measures $40^{\prime \prime}$ high, $28^{\prime \prime}$ wide, $16^{\prime \prime}$ deep.
- Knight 11 Complete. The Knight 11 Superhet is offered complete in the magnificent console illustrated at the left, with 12 -inch Dynamic Speaker and tubes. For operation from 110 volts, 60 cycles, A.C. Shipping welght, 95 lbs. Code: SABLE.
A 10845.
Retail Value, $\$ 99.95$.
NET PRICE EACH, 549.95.
YOUR PRICE, LOTS OF 3, EACH


## THE KNIGHT 11 GIVES YOU THE MOST FOR YOUR MONEY

We invite you to make this test: Order the Knight 11 on our regular terms and play it under your own operating conditions for a full 15 days. Enjoy its convenient, entirely automatic Push-Button control system; thrill to its luxurious reproduction of every program, both foreign and domestic; examine the rugged precision-built, over-sized chassis. And then-if you do not agree with us that it is the finest de luxe radio ever offered at so low a price-if you are not entirely satisfied that this is the radio set you have always wanted, you may return the receiver to us under our generous Trial Offer and Money-Back Guarantee (see page 11 for full details) Wie make this offer with full confidence that the Knight 11 will delight the most critlcal and exacting listener-that it will give an entirely new conoeption of modern radio eniovment.



No aerial-no ground connection required. Just plug in Ilke enjoyable radio reception, anytime, without fuss or bother.
AUTOMATIC TIINING
Tune any six of your favorite stations just by touching a but-
ton. It's easy to tune the Knig ht Automatic way; and it's easy to adjust, too, right from the front.
 button to get your favorite
station tuned in perfectly.

- Full-Actling A. V.C.
- 12" Dynamic Spaker
- Phono Connection
- Bass Compensation

Here's our answer to the demand for a luxurious multi-tube console recelver at a moderate pricel You can't get a greater rad lo value anywhere. Just compare the features, the tuning our enthusiasm for this, new Knight 11! try it out in your own home-we know you'll share

- 3 8and Range. The Knight 11 brings you full coverage of the world's most important stations and channels. Tunes distance standard Broadcast American programs. You'll get a real thrill out of the power and reach of this "Air Giant." You'll enjoy everything of importance that's broadcast! - Automatic Tuning. Tune any siz of your favorite stations automatically, easily, instantly - just by touching a button. Easy to adjust; foolproof and dependable. Manual
tuning is delightfully easy, too, with the slant $8^{*} \times 4^{*}$ Side-Rule Dial. Each tuning range is separately indicated; has wave-band indicator; horizontal-traveling pointer moves quickly and accurately. You can't conceive of an easler or more delightful type of radio tuningl
- Bullt-in "Air-Magnet." No aerlal-no ground wires-no installation problems. Outplug the set into any light socket as you do with any appliance-and you're ready for enjoyable, Broadcast band reception. It means you can place the receiver wherever you desire!
- 1940 Superhet Circuit. Thelatest radio developments are Incorporated in the R.C.A. and Hazeltine licensed circult. Tubes used are: ${ }^{1}-6 \mathrm{~K} 8$ as Mod.-Osc. (dual-purpose), I
 ponents are used throughout to bring you dependable, luxurious radio performance.
- Outstanding "Extras," The Knight 11 is ready for Television when it comes. Has special connection for Television sound; also serves as phono consection for use with any record player. Has variable Tone Control for individual bass or treble emphasis to meet porsonal tastes; bass Compensation is also incorporated for extra tonal pleasure. Automatic sharpest selectivity. Power output is full 8 watts offering pienty in reserve. This power is adequately handled by a speclal 12 -inch Concert Dynamic Speaker with high-fidelity reproducing qualities. It's a thrilling experience to listen to the tone quality of the Knlght il:
- Console Grande. The console of the Knight 11 is of simple but striking design. It has roll-sides of choice horizontally-grained walnut with instrument panel of selected stump $321 / 0^{\prime \prime}$ wide, $35 y 4^{\prime \prime}$ high and $14 \%^{\circ}$ deep. It will enhance the fincst survoundings.
- Kmight 11 Complete. The Knight 11 Tube 3 Band Superhet is offered complete with A.C. Shpg. wt., 97 lbs. Code: GLIDE. A 10870 . Retail Value, $\$ 109.50$.
NET PRICE EACH, $\$ 54.50$.


11 TUBE CHASSIS
You couldn't buy a better chassis than the Knight 11 for replacement of an obsolete set of Tomorrow- here for your enjoyment today; Just check the features; bullt-in "Air-Magnet," Television Connection; 12-inch Dynamic Speaker; 8 Watts Power Output; Continuously Variable Tone Control; Bass Comrensation; full-acting Automatic Volume Control; 3 Gang feature you can think of. Fully licensed by R.C.A. and Hazeltine. Makes a perfect replacement chassis for olwolete sets. It's a set we're proud to back with our Liberal Trial, wide, $10^{\circ}$ deep, $9^{7}$ high. Comes complete with escutcheon, push-button tuning mechanism, volts. 00 cycles A.C. Shpg. wt., 37 1bs. Code: DREAM.
A 10869 . Retail Value, $\$ 69.95$. NET EACH, 534.50.

A. Wright 12 TUBE
C. SIPERIFI

- television conns
- new slop -rule
- full a.v.c. act
- 12" Dynamic

THE LAST WORD IN LUXURIOUS WORLDWIDE RADIO ENTERTAINMENT

We proudly offer this 1940 Radio Masterpiece for the consideration of those who appreciate perfect musical reproduction and powerful long-distance reception-and or those who want feature, coupled with quality you can't beat and appearance you'll always be proud of -

- Tunes 3 Full Bands. The Knight 12 tunes three full wave bands: $18.3-5.65$ Megacycles. and $5650-1710$ Kilocycles for consistently dependable Short Wave foreign, amateur, police ard Broadcasts. Tunes everything of importance that's broadcast on the air today - Push-Buteon Tuning. Tune any six of your favorite stations just by touching a button. It's easy to adjust, right from the front, and thereafter it's foolproof and precise. you with the prated clearly in kilocycles for standard Broadcast and in megacycles for Short Wave.
* Built-In "AJr-Magnet." Forget all about aerial and ground wires. There's no installalion problem at all. With the built-in"Air-Magnet" aerial system, you do away with aerial dependable reception. No more outside aerial -no more trailing wires to fuss with!
- All These Features. Just check these "extra-value" features in the Knight 12. It's ready for Television when it comes; has connection for Television attachment; connection Tone Control for bass or treble emphasis as desired; includes Bass Booster for added tonal enjoyment. Automatic Volume Control prevents fading and assures uniform volume on all programs. Three Gang Condenser means added stability and sensitivity; separate coils on developed and is largely responsible for the wonderful tonal quality reproduced by the 12 inch Concert Dynamic Speaker. You'll welcome and appreciate these "extra-value" features.
- Advanced Superbest. The following tubes are used in the perfected 1940 R.C.A. licensed circuit: 6 A8GT as Conv.; 76 as Osc.; $6 S K 7$ as I.F. 76 as Signal Diode; 76 as A.V.C. Diode: 76 as list Audio; 76 as and Audio; 66 as Phase Inve
6 F 6 G as Push-Pull Power Output; 80 as Rectifier.
- Rich, Golden Tone. Superb tone is the outstanding characteristic of the Knight 12. It is achieved by the magnificent full $71 / 2$ watt output of the receiver which is beautifully by the continuously variable Tone Control and builtin Bass Boost Amplifier.
- Magnificent Console. Here's a superb console that will rank with 1940's finest. Massively designed; has sloped instrument panel of choice stump walnut veneer; sides are grace-
fully rolled and are fashioned of contrastingly grained walnut veneers. Size: $30^{\circ}$ wide, $37{ }^{\prime \prime}$ high, $14^{\boldsymbol{7}}$ deep. A fine example of cabinet craftsmanship you will be proud of.
- Knight 12 Complete. The Knight 12 is offered complete in connie as illustrated with $12^{n}$ speaker and tubes. For 110 volts, 60 cycles A.C. operation, Shipg. wt., 95 lbs. Code: AL. An outstanding 1 A10820. Retail Value, $\$ 114.50$.
NET EACH, $\mathbf{\$ 5 6 . 8 5 .}$
NET PRICE, LOTS OF 3, EACH.


12 TUBE CHASSIS
The chassis model of the Knight 12 makes an especially desirable replacement for obsolete sets or for your own console. Incorporates all of 1940 's demands for peak radio performance. power and tone at a morlerate price, it will give come. Features include: builtin "Air-Magnet." Automatic Tuning. 3 Band Range, Television Connection. Slide-Rule Dial , Dynamic Speaker; $71 / 2$ Watts Output, ton. Automatic Volume Control, Tone Cont-
trol, Bass Boost, 3 Gang Condenser, etc. Here's a chassis we're confident of, and proud to back with our Free Trial Money-Back Guarantee! Licensed by R.C.A. -your assurance of the newest developments and tested refine-
meats. Every feature Included is an advantents. Every feature Included is an advan-
tageous one, making for greater radio enjoyment. no matter what program you tune. A really wondering chassis value. Chassis meascures: cutcheon, $12^{*}$ Dynamic Speaker and tubes. For operation from 110 volts 60 cycles A.C. Shag. wt., 35 lbs. Code: SATIN. A10821. Retail Value, \$74.50. NET PRICE EACH, 537.85. S? 885

"AIR-MAGNET"

## 5 tube phovo-ranio

This new Knight 5 Tube Phono-Radio incorporates a remarkably efficient 1940 Superhet Radio Receiver with high-quality phonograph components to produce a combination of phonograph recordings.

- Brilliant Phono Reproduction. We have Incorporated the finest phonograph equlpment into this new Knight 5 . The phomo portion uses the latest $110-120$ Volt 60 cycle with rubber-cushioned rim-drive or nolseless operation. Has Astatle Crystal pickup on angent head insuring, exceptionally clear tonal quality 12 records with cabinet lid closed - Exceptional Radio Circuit. The powerful new circuit of the Knight 5 is fully licensed by R.C.A.; uses the following tubes: $12 A 8 G T$ as Conv.-Osc, (dual-purpose); 12 K 7 GT as 1.F. Armp.; 1207 GT as Diode Det.-A.V.C. -1 st. Audio (triple-purpose); 35L6GT as Power Output; 3575GT as Rectifer. Has full-acting A.V.C. to maintain uniform volume on all programs. Radio has an extended tuning 1712 K.C. police channel. Has square full-vision peartoid airplane dial. A heavy-duty 5-inch Dynamic mpeaker handles the 2 wattn output with amazing fidelity.
* Bullt-in "Alr-Magnet." An outstanding mew feature! "Air-Magnet" which is built into the receiver eliminate. the need for botitersome outside aerial and ground wires. Just plug in like any electric appliance-and play 1
- Handsome Cabinet Styllng. The Knight 5 cabinet is made of choice selected walnut veneers finished in a high lustre. Has dual speaker grille effect with roll-over design lustre. Has dual speaker grille effect with roll-over design. - 5 Tube Combination Complete. The Knight 5 Tube AC Phono-Radio is offered complete in cabinet as de scribed. For operation from $110-120$ Vol
A10816. Retail Value, $\$ 42.50$.
NET PRICE EACM, $\$ 22.95$.
YOUR PRICE, LO'S OF 3 , EACH
$\$ 2185$


## Kiniglit 7 tube Phovichaph-hallo

A distinctive new 1940 musical instrument that provides Complete Home Entertainment. Brimgs you the dual enjoyment of powerful Two-Band Radio Reception and hawless reproduction of Phonograph Records. Retna

- Foreign Reception. The Knight 7 tunes two full bands to bring you the world's most important stations. Covers $5650-18100 \mathrm{~K} . \mathrm{C}$. for thrilling Short Wave foreign, amateur channels) ; tunes $540-1550 \mathrm{~K} . \mathrm{C}$. for all standard American Broadcast reception
- Push-Button ruming. Tune any six favorite stationis just by touching a button. Easy to adjust; absolutely precise and foolproof. Manual tuning is child's-play, too Side-Rule Dial with individual bands.
- De Luxe "Alr-Magnet." Say goodbye to outside aerial, ground, and unsightly wires. The Knlght 7 has the new de luxe "Air-Magnet" built-in. No aerial, no ground needed; Electro-Static Shield which reduces static and distortion
- 1940 Superhet CIrcult. Fully licensed by R.C.A. and Hazeltine. Uses: $6 A 7$ as Conv; $6 D 6$ as I.F; 75 as Det A.V.C. (dual-purpose); 76 as Phase Inv.; $2-41$ as Push-pul output: Continuously Variable Tone Control; full-acting output; Continuously Variable one Control full-acting tion; 12 , Dynamic Speaker in acoustical chamber, etc.
- De Luxe Phonograph Equipment. For tuxurious ohonograph record reproduction, only the finest phonograph components are employed. Includes a new type silentand dependable; has high quality Astatic Crystal pickup. - Beautiful Tone Quality. The new full 12 -ineh Concert Dynamic Speaker used in the Knlght 7 is housed in a Dynamic Speaker used in the Knight 7 is housed in a scientifically const ructed resonance chamber and repronucea both phonograph and radio with rich, fuliabod Tone Control adds greatly to tonal enjoyment by permitting bass or treble emphasis to personal tastes.
- Luxurlous Console Grande. The Knight 7 is buile Into a splendid new console cabinet of outstanding beauty. Front panel is of select stump walnut veneer, with rolleffect side pilasters in contrastingly grained walnut. Grille area has pleasing posts. The entire cabinet is meticulousiy Top has hinged lid for easy access to radio and phonograph.
- The Knight 7 Phono-Radio is presented complete with tubes as illuatrated and described. For
volts, 60 cycles A.C. Shps. wh., 92 lbs
A10844.
etail Value, $\$ 84.50$
NET PRICEEACM, $\$ 42.85$
NETPRICE EACH, S42.85.


# Gor. Glorious Musical Retreotuction! 

Weith r.c.A. Alliomatic RECORD ChANGER
R. C. A. A HAZELTINE LICENSED


## OKight 5 TUBE Phova-hanIIO

Here is a new double-duty musical instrument that brings you splendice far below what you would expect to pay the joy of records radio reception plus superb reproduction of all phonograph been designed new Knignt 5 Tube Bhono-Radio combination has ben designed to meet the demands of music lovers who want high quality performance at low cost.

- R.C.A. and Hareltine Licensed Circult An efficient new circuit. fully licensed by the farmous R.C.A. and Hazeltine laboratories incorporates latest radio developments. The Knight 5 tunes 535 to 1730 kilocycles for enjoyable reception of all standard Broadcast American or Canadian programs as well as upper channel Police
 purpose); 25L6G as Outputit 2525 as Rectifier. and $1,49 \mathrm{~B}$ as ballast.
- Latest Phono Equipment. All standard 16 -inch and 12 -inch records are played electrically and are beautifully repoduced through
the capable amplifying system. User new Crystal lickuo and cong speed Phono motor. All records may be played with the lid constant A newly developed five-inch Dynamic speraker provides for lid cosed. rich tone quality on both radio or record reproviluction.
- New Bullt-in usitard reprofluction.
right into the cabinet. eliminates the annoyance of new feature, built ground wires. Other special features of the Knight 5 inclucial and Automatic Volume Control for maintenance of constant 5 include; Full and convenient phono-radio switch.
- Set Complete. The Knight 5 Tube

Set Complete. The Knight 5 Tube Phono-Radio is supplied complete with tubes in a handsome cabinet measuring $141 / 2^{2} \mathrm{x} 101 / 2^{2} \mathrm{x}$
$141 / \mathrm{m}^{\circ}$. Of horizontally grained walnut with two-tone trim and tive louvre grille. For operation from 110 voltas. 60 cyctes A.C. (Kadio tive louvre grille. For operation from 110 volts, 60 cycles A.C. (Kadio
only may also be operated from 110 Volts D.C.). Shps. wt. 19116.
Code: CORAL. A 10841 . Retall Value, $\$ 39.95$. NET PRICE, EACH, $\$ 20.95$. LOTS OF 3, NETEACH.
\$1995

## 5 tube portable phovo-railio

This new double-purpose instrument is so cleverly designed, so versatile, and so easily portable, that you can't help saying. "Why didn't vomeone think of this before?" And, yet, with all of its splendid features, the Knight 5 Tube Portable Phono-Radio is priced anazingly low

- Radio or Records at the Filek of a Switch. The new Knighe Portable Phono-Radio offers remarkable reproduction of both phonograph records and all standard Broadcast raflo programs. Tunes 535 to 1730 kilocycles for American or Canadian stations as well as many Police calls. New R.C.A. and Hazeltine licensed circuit employs latent tube types: 6 A 7 as Conv Osc.; 6D6 as 1.F. Amp.; 75 as Det.-A.V.C.-18t Audio; 25 L GG as Audio Output; 25 ZS as Rectifier; $1,49 \mathrm{~B}$ ballast.
- Latest Phono Equipment. A new crystal pickup and a powerful silent-operatigg 78 R.P.M. motor provide for unusually life-like and enjoyable reproduction of all 10 -inch or 12 -inch phonoeraph records Convenient record compartment built into the lid will accommodate up to six 10 -inch records.
- Sparklling Tone Quallty. A specially designed five-inch Dynamic unusually enjos.able programs with remarkable efficiency and provides - Bultt-In "Alr-Magnet" This from radio

Built into its case is the marvelous new ile instrument is really portablef with trailing aerial and ground wires. The Knight 5 is ready to play the instant youplug it in.

- Deluxe Carrying Case. The Knight 5 is presented in a new fabricoidand durable. Case measures $141 / 2^{*}$ wide, $14 y^{*}$ deep and unusuaily sturdy and durable. Case measures $141 / 2^{\prime \prime}$ wide, $141 / 4^{"}$ deep. $101 / 4^{*} \mathrm{high}$
- Set Complete. The Knlyht 5 Tube Portable Phono-Radio the house-parties is supplied complete with tubes. For operation from and Volts, 60 cycles A.C. Shapg. wt., 25 Ibs. Code: FIELDD. A10842. Retail Value, $\$ 42.50$.
NET EACH, \$22.95
LOTS OF 3 , EACH.
\$2 ${ }^{95}$


This new deluxe Knight "Wireless" Record Player will give you splend id phonograph record reproduction when used with any radio. Requires almolutely no connection to radio set. May be placed anywhere in the oom and will reproduce all records through radio aret amplifying system. Incorporates lateat deluxe features including self-starting 78 R.P.M. notor, ofset head crystal pickup of highest quality; full e-inch turnmatic stop. Equipped with input jack for plugging in home microphone if desired. The Kright Deluxe "Wireless" Player is presented in the beautiful roll-top walnut case illustrated above. Lid closes over all records, including 12 -inch size, to reduce surface noige and add to your records, including measures: $131 / /^{\prime \prime}$ wide, $101 / 2^{*}$ deep, $7^{\prime \prime}$ high. For operation from 110 volts, 60 cycles, A.C. Shpg. Wt., 12 libs. A10057 Krlght Deluxe "Wireless* Player. AET EAC'H, S. 15.95 . E .
§ $15 \underline{25}$

## Deluxe Wined player

In the same cabinet illustrated above, we also offer the Knight deluxe Record Player as a wired model for connection to any radio set. Plays all recordings through the radio set amplifying system with the full tone and volume ordinarily obtained from your radio. Deluxe features include: constant-speed 78 R.P.M. rim-driven motor; new offeet-head Crystal pickup; -inch turntable for all standard 10 - and 12 -inch re-
cordings; combination on-of switch and volume control; two needle cups; automatic stop. Supplied in walnut case with lid that closes over all records, exactly as described for model athove. This deluxe Knight Record Player will add to the utility of your radio set and will give you hours of delightful entertain.
A 10050 . Knlght Delure Wired Record Player.
NET EACH, SII. 35 .
s/095


## LOW-C:COST PORTABLE PLAYER

This fine quality portable record player will bring you hour after hour of fine entertainment. It may quickly and easily be attached to any radio set or amplifier to provide brilliant reproductlon of all 10 and 12 -inch standard phonograph records. The sturdy, self-starting 78 R.P.M. The high-quality magnetic pickup has unusually wide tonal response The high-quality magnetic pickup has unusualy wide gonal respothe features include smooth-acting volume control. pickup arm rest, and built-in needle-cup. These features assure you of convenience in operatlon and of splendid record reproduction. The entire unit is built into an attractive leatherette-finished case with hinged lid. Lid closes over all records, including full 12 -inch size, thus keeping surface noise to the minimum. Case, with carrying handle, measures $15^{\circ}$ wide, $12^{\circ}$ deep, $61 / 4^{"}$ high. For operation from 110 voits, 60 cycles, A.C. Works with any radio set. An unusually fine value at this very low price. Ideal for home entertainment use, also can be used as phono attach-
ment for public addrese work. Shpg. wt, 10 lbs .

## A10993. Krlght Low-Cost Portable Player

NET, EACH, S8.95 ©
S845

Here's a real radio miracle-a new Knight 'Wircless" Record Player at exceptionally low cost, Requires no connection to radio, but plays all records through radio amplifying system with full tone and volume regularly obtained from radio. The Knight "Wireless" Record Player operates perfectly with any A.C. set. May be used as far as 50 feet from receiver. Will not interfere with your rexular oberation of radio when Record Player is not in use. Includes latest features for fine reproduction of all 10 - and 12 -inch recordings. Has new 78 R.P.M. phono motor ; ofset head Crystal pickup; needle cup; automatic stop; 9-inch turntable. Fquipped with connection for plugging in home microphone. Presented in a very attractive walnut-finished case as illus$10^{\prime \prime}$ deen, Case has graceful roll-top design. Dimensions: $12^{\circ}$ high. For 110 volts, 60 cycles, A.C. Shpg. wt. 10 lis A10998, Knight Low-Cost "Wireless" Mlayer. S 195 NET EACH, \$11.35'
s 1095

## Low Cost wired playen

An alternate choice in a fine new lowecost Knlght Record Player, imilar to the model above, but designed for direct connection to any A.C.-operated radio set. Includes such desirable features as: constantspeed 78 R.P.M. Ifim-driven motor; offset-head Crystal nickup; 9 -inch turntable to hold all 10 - or 12 -inch records; combination on-off switch and volume control; built-in needle cup; automatic stop. etc. This attractively-priced Record Piayer will give you hours of delightful entertainment. It will open to you the whole vast library of recorded entertainment by your favorite artists. Supplied complete in attractive walnut finished case as illustrated above. Case measures: $12^{\prime \prime}$ wide. $101 / 4^{\prime \prime}$ deep. $41 /{ }^{\prime \prime}$
A10997. Knight Low-Cost Wired Recond Player.
NET EACH, 58,1 R ACH.
5765


## NEWIA VOLT PORTABLE PHONO-RADIO

Here's a new dea in radio entertainment. This new Knight 4 Tube Here's a new ldea in radio entertainment. This new Knight 4 Tube
Phono-Radio Combination is completely portable and sell-contained. Phono-Radio Combination is completely portable and sell-contained. Carry it anywhere play it anywhere. It brings you your favorite
radio programs and offers enjoyable record entertainment played radio prograins and offers enjoyable record entertainment played a new Superhet circuit using latest 1.4 volt tubes for greatest power and remarkably low operating cost. Uses: 1-1A7G, 2-1N5G. 1$1 Q 5 G$. Tunes 540 to $1730 \mathrm{~K} . \mathrm{C}$. $t 0$ cover the entire Broadcast band. Features include: built-in "Air-Magnet"; full Automatic Volume Con Features include: buit-in Air-magnet ; ful Automatic Volume Confrom self-contained batteries which give 150 hours or more of service. - Phomograph equipment includes strong mechanical motor of spring-wound type. Plays both 10 - and 12 -inch records; will play $2-10^{\circ}$ records on a single wind ing. Handsome luggage-type case has storage space for records, hinged lid, and front-face
A108899. Retail Value, $\$ 57.50$.
NEI PRICE, EACH, $\$ 29.95$ CH
$\$ 2845$
Replacement Batteries for above set. NET
$\$ 2.95 \quad 23$


You can convert your radio set or amplifier into a luxurious Record-
Reproducing Instrument with this de luxe Automatic Record Changer Unit. Requires only simple connection to radio set or amplifier. Available with either R.C.A. Record Changer or Garrard Changer built-in. or as cabinet only. Table model design. beautifully-styled and exquisitely bullt; may be placed on radio top, on end table, etc. Fashioned of fine woods with front panel of select butt walnut veneer and side panels of hardwood. Measures $21^{\circ}$ wide, $163 / 4^{*}$ deep. $121 / 4^{\circ}$ high.

## WITH R.C. A. CHANGER UNIT

The beautiful table model cablnet illustrated above is offered complete with built-in latest type 1940 R.C.A. Automatic Record Changer Plays seven 12 -inch records or eight 10 -inch records automtatically and repeats the last record. Records of any size may be played manually. A reject lever is incorporated which automatically feeds in the next record Foolproof mechanism. With heavy-duty dependable 78 R.P.M. motor ejector and cup. Ofiset needle reduces wear on your S 50 records, Por 110 volts, 60 cyeles A.C. Shpg. wt.. 46 Ibs.
trated.
A15202. NET PRicE..............................................

## WITH GARRARIL CHANGER UNIT

The table model illustrated above is also available with the latest Garrard RC10 Automatic Record Changer built-in. Plays either elght 10 -inch or eight 12 -inch records automatically. Records of any size may be played manually. Has powerful 78 R.P.M. motor and tangentarm Crystal pickup. Has automatic record rejection feature, non-slip spindle, speed regulator, automatic stop, etc. (See detailed
description on page $90^{\circ}$.) Complete in cabinet illustrated above. For all A.C. voltages. Shpg. wit., 42 lbs. A15203, NET PRICE - Cabinet Oniy. The table tnodel cabinet as described above. is also avallable separately without clanger. A15201. NET PRICE.

## ALHIM COUSIILE MIIEL

Here's a marvelously luxurious presentation of a complete Automatic Record Changer Unit in a handsome and convenient console model cabinet. May be used with any radio set or amplifier for complete phonograph enjoyurent. Available with either R.C.A. Record Changer or Garrard Record Changer built-in, or as console only. Beautifully designed; has butt walaut front panel and choice hardwood sides. Has storage compartment for eight 12 -inch record albums. Geautifully built and handsomely finished. Measures $31^{\circ}$ high, $21^{\prime \prime}$ wide, $16 \frac{1}{4}{ }^{*}$ deep.

## WITH R. C. A. CHANGER UNIT

We present the attractive and convenient console model Illustrated above with built-in R.C.A. Automatic Record Changer. Plays seven 12 inch records or eigot lo-incs records automatically; repeats the last record. Records of any size may be played manually. Changer mechanIsm is simple and foolproof-nothing to go out of order. Has heavy-duty 78 R.P.M. motor; includes top-loading R.C.A. Crystal pickup with automatic needle ejector and cup. Assures minimum needle wear on records. (See detailed description on page 91. Com60 cyclen C Shpr A15206. NETPFRICE.
${ }^{5} 42^{50}$

## WITH GarRARD Changer UNIT

We also offer the console illustrated above with built-in Garrard Record Changer. Plays either elght 10 -inch or eight 12 -inch records auto78 R.P.M. motor, tangent-arm easy-loading. Crystal picikup. and automatic record rejector feature, non-slip splndle, speed regulator. automatic stop for last record, etc. (For complete description, see page 91.) Complete in console described above. For ali A.C. voltages. Shpg. wt., 54 lbs . A15207. NET PRICE.
$52^{51}$

- Console Oniy. Available separately, without Changers. Has record compartment Supplid A 15205 . NET PRICE (less albums)
\$18.50



## AUTOMATIC RECORD CHANGER WITH 20-WATT AMPLIFIER

Here it is at last - a high-fidelity Complete Electric Phonograph with Automatic Record Changer, Amplifier, and Speaker, all built into a simple but beautiful console cabinet. Enioy phonograph entertainment at its luxurious besti Learn the meaning of true high-tidelity tone quality of even the most critical muslc-loverl Check these specifications:

- High-FIdellty 20 Watt Ampllfier. Not an ordinary radio amplifying circuit, but a custom-built amplifier of superior engineering design and precision construction. Develops a full 20 watt output undistorted, with a frequency response of 40 to 7500 C.P.S. with matched speaker. Hum is inaudible. Incorporates Inverse Feedback-a desirable new feature which permits greater output with less distortion, hum and noise, attaining highest fidelity of tone. Has dual Tone Controls-one for bass and one ior treble to provide tonal emphasis as desired and to compensate for varying 6 acoustical conditions. User the iollowing tubes: $\mathbf{~ B e a m ~ P o w e r ) ~ a n d ~} 1=523$. Other important reatures include: extra input channel for adding another phono turntable-ideal for home movies, etc.; Fader type master volume control; Speaker Selector Switch for automatically matching additional extension speakers, if desired; Remote Control provision write us for details; A.C. switch and pilot light. The amplifier is licensed by E.R.P.I. under patent arrangements with Western Electric and A.T. \& T.
- Genulne Jensen Speaker. We've matched the superb amplifier of this instrument with a genuine Jensen full 12 -inch P.M. 12 H Dynamic Speaker-one of the finest made. Assures perfect conal reproduction.
- R.C.A. Automatle Changer. The latest type-plays eight 10 -inch or seven 12 -inch records automatically. Records of any size may be played manually. One of the most dependable Changer units made. (See p. 91.)

Handsome Console. You'll like the simple, attractive console we've chosen for this fine instrument. 1t's fashioned of finest walnut veneers and is beautifully finished. Measures $31^{\circ}$ high, $21^{\prime \prime}$ wide, $1614^{\prime \prime}$ deep.

- Complete Phonograph. The Kright De Luxe Custom Phonograph is offered complete with amplifier, speaker, tubes, and
R.C. Record Changer, as described. For operation
irom 110 volts, 60 cycles A.C. Shps. wt., 94 lis. AISTPRICE $\qquad$
- With Garrard Changer. Complete Knlght Plonograph as described above but with Garrard Changer (as described on opposite page) instead of R.C.A. Chanker. Complete with amplifier. apeaker and tubes. For all A.C. voltager. Shps. wit., 90 ibs. A15TRPRICE
'99․
- Console Only. Available separately, without Amplifier, speaker and changer. With speaker grille opeaing and blank panel.
A15204. NETPRIEE.
$\$ 19.95$



## TABLE TYPE ALBUM HOLDER

A beautifully constructed and practical table for holding record album Qually built throughout of choice woods to give sturdy service and to harmonize with the furnishings of any room. Fashioned of choicegrained walnut veneers and hardwood. Design is modern with rounded corners and beaded top edge. Richly finished in a high lustre. Holds up to eight 12 -inch record albums or will accommodate 16 svmphonic type record albums. Measures $271 / 2^{\prime \prime}$ high. 201/2" wide and $151 / 2^{\circ}$ deep. Here is the answer to the demand for a rood-looking, practical alburn holder table. Top of table may be used for small phono-radio. lamp. books, etc. An ideal low-priced album holder table that will store and preserve your records and at the same time serve as a tractive and convenient table. Shipping weight, 25 lbs. (Albums not supplied.)

## IWI-SHELF MODERNE TABLE

Here is a beautiful two-shelf album table of fine proportions that will look at home in the finest room. Sturdily built to last-a real masterpiece of cabinet-making. Utilizes the finest walnut veneers and hardwood in a modern design of good taste. Hand-rubbed throughout to a high plano finish. Holds sixteen 12-inch record albums to provide convenient compact storage. Measures $351 / 2$ high, ${ }^{2} 1 / 2$ wide. $151 / 2$ deep. ToD compartment has partitions to separate abums; lower compartment is left open to accommodate poctery, knicx-knacks, etc. until used ior ture. Top of table may be used for holding small phono-radio, lamp, etc. Attractively low-priced so that you need no longer be wthout suitable storage space for your record collec-
tlon. Own this beautiful table now. Shpg. wi., 34 lbs. (Albums not supplied.)


## Hrunswirk-Voralion Phovalihaph recounls

> A once-in-a-lifetime offering of genuine Brunswick and Vocalion Phonograph wick Phonograph Records ofered in low a price Brand 25 ( 1939 Brunsoriginal prige. All your favorite orchestras and leaders, including: Horace Heit Red Norvo, Kay Kayser, Russ Morgan, Jan Garber, Duke Eilimeton, Teddy Wilson, Phil Long, Gus Arnhelm, Emery Deutsch, and others. Popular hityswing and sweet. All are 10 -inch dises recorded both sides. Notice: these are all brand-new records, never before played, and regularly sold at much higher prices. Because these assortments reach us already packed, we cannot determine what titles are in each package. But the individual records in each assortment are entirely different-there are no duplications. Take advantage of this recordbuyds opportunity. Orde your assortments now while our supply lasts. You'll purpurese records ideal or public Address "fill-in" work and test Vocalion records will be shipped. Shipping wt., $\$$ lbs. per assortment A9990. Assortment of 10 Records.
> GOUR SPECIAL PRICE
> A9991. Assortment of 25 Hecords. Same as above, except 25 records to the package. Shpg, wt., 13 lbs
> YOUR SPECIAL PRICE

Take advantage of these wonderful Record Values!


## STANDARD

 ALBUMA sturdily-made. simple, but atrractive hold your recordssafely Has heavy brown kraft pockets for holding twelve 12 -inch records. Black fabrikoid binding with two aluminum screw posts. A low-cost. A Ali 290 .
$75 c$
Aut holds As above, inch records. $\quad 55 \mathrm{C}$


FLAT.OPENING TYPE De luxe flat-opening
album. Has solid wood back and slotted steel back and slotted steel are eyeletted and strung on metal collar can be removed fromi slots at will. Album is stamped in gold on back. Holds twelve 12-inch records. A122292. SI. 05 A 12293 . As above, but holds twelve 10-
inch records.
NET......... .96


DE LUXE ALBUM
An art library album. Has the same inside features as Flatbinding type, but the binding is of red mo-occo-grained leather abric, elaborately stamped ingenuine gold leaf. Holds twelve 12 nch records. Attractive and curable. Our finent album.

A1 2295 . As above. but holds tivelve 10 inch records. S. 12

## PORTABLE CASE

A new and attractive portpermits you to carry phonograph records conveniently and safely. Sturdily made: has black fabrikoid covering and hinged top lld. loock and key are provided A12296
$\$ 1.65$ A 12297 . Same as above Heavily felt-lined. 22.95
NET............. A 12298 . Felt-lined case as above.
NET.
NECords.


POPULAR HOLDER Here is a clever new record holder conveniently and safely. Measuring only $13^{\text {a }}$ wide by $10^{\text {- }}$ deep. his new holder accommorlates fity records of 10 - or 12 -inch size. Wires are covered with silk so that records cannot be harmed or scratched. Base is made of plied with handy index card and plied with handy index card and atically so that they can quickly be located. Neat and compact this practical holder fits unobrusively into any small space. Priced attractively low. AETZPRICE
$\$ 2.95$


PHONOGRAPH NEEDLES
Fig. A. Permo-"Round'' Point Needles. Two are furnished on sspeed-checker" eard. Each needle plays over 1000 records. 6SC Fig. B. Bamboo Needles. Good quality, finely polished; properly A8OOO. Pkge of 100 . 550


Enable you to play records through any radio-with any record player or pickup. Connects to antenna and ground poets of radio. Records are thus reproduced through radio circuit and speaker Equipped with switch for changing from radio to phonograph or back, as desired. Comes complete with tubes and attachment cord. In small metal case $6 \times 6$ x $2 / 2$, which may be tucked away. in radio cations for instruck and easy installation. Shpg wt $21 / 2 \mathrm{lhs}$. A won derful phome ogcilator value.
26 ATG27PiICE

Fig. C. RCA-Victor Steel Needles. Noted for minimum wear on records. 100 neerlles in cach package.
A 7613 . Soft Tone. A7606. Full Tone AZGOG. Full Tone. Fig. D. RCA-Victor Red Seal for Red S. Developer especially A7619. Pkge. 50. NET. . 25C

Fig. E. Walco Sapphire Needle. Genuine sapphire shadowgraphed needie of exceptional quality. Plays 2500 records. Gives long record life. Especially ideal for Automatic Changersice. 98C Fig. F. Actone Transcription Needles. Shadowgraphed. Will not harm records; give good tone quality. Package of 100. 38C


## PHONOGRAPH RECORD ACCESSORIES

Fig. A. Record Cleaning Cloth. The only satisfactory record cleaning accessory. Specially treated felt cloth removes grease and ceans phonograph records and electrical transcriptions.
A8061. $4^{\circ} \times 6^{\circ}$ Cloth. NET
ig. B, Nash Record Cleaner. The orlginal record cleaner. Cleans, Enews and provides smooth lubrication for the needle in the grooves A807-inflammable non-greasy. Harmless to records. 2 oz . 2|c
Fig. C. Nash Record Polish. A record accessory that quickly retores the original appearance of recordings and transcriptions. A8064. NETPRICE.

Fig. G. Garrard Chromic Needles. Long-playing semipermanent needie. made for the makers of the famous Garrard Record Clanger. Each needle will play at least 10 records. A8066. NET........... 96 Fig. H. Kacti Needles. Will not harm records. Long-playing: excellent tone. 10 to a package. 29 S.


For radio sets without phonograph pickup connection. Enables you to connect any phonograph player or pickup to your radio set. A8087. Flg. A. For sets using. 5 prong tube (without grid cap on top) as detector or first audio
amplifier. Fig. B. For sets using netal or metal glass octa! base tubes, such as $678,6 F 6,616$ as first audio ampllifier.
A8089, FIg. C. For sets using ureen grid cap type of tube, such NET EACM.

# AMAZING EEOIMOYY WIIH THE NHM IA, VOLT TURES 

## Xémighe 4 TUBE 1.4 VILI BATTERY SUPEBHET

Here's the most economical Farm Radio ever ment, at a cost of less than two cents a day. Set built! Cuts operating cost almost in half yet it's the equal of many five and six tube sets for beautiful tone quality. long-distance reach and wonderfully dependable nerformance. It saves and saves $60 \%$ less current yet attain astonishing efficiency. - Latest 1.4 Volt Circult. The powerful Superhet circuit with extended tuning range covers 535 to 1740 K .C. for enjoyable reception of American and Canadian stancard Broadcast programs plus mazeltine licensed and uses the following i. 4 volt tubes: i-1A7G as Mod.-Osc. (dual-purpose); tubes: 1 -1A7G as Mod.-Osc. (dual-purpose); Audio (eriple-purpose); 1-IASG as Power OutDut. Four tubes actually do the work of six; you'll notice the difference immediately.

- $\mathbf{1 0 0 0}$ Mour Battery LIfe. An amazing performance record unheard-of battery radio economy. 8 A" drain is only .2 amps.; "B" drain is only tery sets. With the current than ordinary bat can play the Knight 41000 hours before replaclng batteries 1 Think of it! A full seamon of radio enjoyment-with set playing as long as 10 hours a day-at a cost of less than two cents a dayl
- Beautiful Tone Quallty. You get more than economy from the Knight 4 . Youll enjoy to the fuilest its rich natural tone. The s-inch P.M. Dynamic Speaker reproduces each program with splendid clarity and brilliance of tone.
"New "AB" Power Pack. ALLIED offers the new Knight $11 / 2$ Volt Superhet with a special single unit "AB" battery power pack that will give 1000 hours, or a full season of radio enjoy ${ }^{1}$
has npecial plug for power pack. Regular $11 / 2$ volt
batteries and two standard 45 volt $B$ " "A" batteries and two sta
- Additional Features. Full-acting Automatic Volume Control maintains uniform volume level on all stations and eliminates fading. The Knight 4 is exceptionally easy to tune by means of the 4 is exc
new eas
- Beaut - Beautiful Plastic Cabinet. The Knight 4 is fittingly presented in a new plastic molded
cabinet of beautiful design. Has louvre type grille cabinet of beautiful design. Has louvre type grille opening and features soft harmonious lines throughout. Available in soft lvory or mottled Walnat Size $10 \%$, deep. Volt Superhet is offered complete with tubes 4 Th Volt Super het is offered complete with tubes, but less "AB" pack. Shpg. ut., 10 lbs.
A 10880 . A10880. Retail Value $\$ 19.95$,


## A10880B. As above but complete with 1000

 hour AB' pack. Shpg. we., 31 ibs. A10879. Ivory. Less "AB" pack. Retail Value $\$ 21.50$.$\$ 12.25$
 OVET PRICE" Pack
515.70


## MOOD HOUIR BATIERY IIT:

 G0\% Ifrs CIIRRENT DRAIII$\square$
TTHRFRIOTHEWORKOFG

## BETIER POWER AND TOUTE <br> FEATURES

- P.M. TYPE SPEAKER
- FULL-ACTING A.V.C.
- TUNES POLICE CALLS
- NEW PLASTIC BEAUTY
- FULL-VISION DIAL
- "AB" POWER PACK


## 1.4 volt self-centannen battery manel

The Knight 4 Tube $11 / 2$ Volt Battery Superbet is available also-with circuit and features exactly as deacribed above-in a larger new type walnut table model cabinet which will convemiently hold the AB Power Pack or cabinet is a masterpiece of fine workmanship. It has an especially attractive front panel and top of one-piece exquisitely striped walnut veneer with pleasing roll effect. Features darker toned sides and bottom edge. Has handsomely designed speaker grille cut-out with bar overlays. Cabinet measures: $171 / 2^{\prime \prime}$ wide, $95 / s^{*}$ high, and $121 / 2^{\prime \prime}$ deep, and has plenty of space to accommodate batteries or Power Pack. Circuit features include: $540-1730 \mathrm{~K}$. C . tuniug range, large $31 / 2$ " $\times 41 / 4$ " Airplane Dial, "On-Of" Indicator, new 6 " alloy P. M. Dynamic speaker, full A.V.C. Superhet circuit employing new 1.4 volt tubes, etc., as described in detail above, Leas "AB" pack. Complete as descrived, in walnut cabinet with tabes and 6 -inch speaker. An extraormade. Shog. wit. 14 l bs. Code: HOLLY. A10882.
Retail Value, $\$ 29.95$.
NET PRICE
S15 85
A10882B. Tlye Knight 4 as above, but complete with special 1000 hour Ray-O-Vac "AB" pack. Shpg. wt., 35 ibs.



The 1940 Kmight 5 Tube 1.4 Volt 2 Band Superhet is presented in the lovely nev. table cabinet pictured above. Front and sides are Has rich, horizontally striped walnut veacers. speaker grille overiay. Rounded corners add a note of modern streamlining. Finished in charming two-tone walnut effect; hardrubbed to a high lustrous piano finish. Cabinet measures: $18^{\circ}$ wide, $101 / 2^{\circ}$ high, $11^{\circ}$ deep. Here is a tastefully designed cabinet that sets a ne. standard for Farm Radio beauty.

FEATURES:

- NEW SLIDE-RULE DIAL
- FULL A.V.C. ACTION
- with tone control
- G-INCH P. M. SPEAKER
- USES 1.4 VOLT TUBES
- beautiful cabinet


## $\mathcal{K}_{\text {nightit }} 5$ TUBE 1.4 volit 2 bani superhet

This wonderful new Knight Farm Radio offers you an entirely different conception of amazingly economical operation, powerful two-band tecep tion, and thrilling, life-like tone. It is not only one of the most economical Farm Radios ever built, but in dependability. beauty of design, and all-around value, it can't be beat at our low price.

- Tunes Two Bands. Enjoy the thrills of Short Wave reception as well as regular Standard Broadcast reception with this new set. Tuning range covers 540 to 1730 kilocycles for complete coverage of the Standard Broadcast band; tunes
5.9 to 18.0 megacycles for exciting reception of 5.9 to 18.0 megacycles for exciting reception of foreign and domestic Short Wave.
- New 1.4 Volt Superhet Circuit. A wonderful new R.C.A. and Hazeltine licensed Super het circuit employs the new money-baving 1.4 Volt low-drain tubes as follows: 1 A 7 G as dual purpose Mod.Osc.; INSG as I.F. Amp.; 1NSG as 2nd I.F. Amp.; 1H5G as triple-purpose Diode Det.-A.V.C. -1 st Audio; and 1A5G as Power Out put. Economical battery drain is only 25 amperes rom $A$ and oniy 8 miliamperes from "B
Dial (53/Value Features. Big, neiv Slide-Rule Dial $\left(53 / 4^{\prime \prime} \times 2^{\circ}\right)$ with a separate scale for each waveband and with built-in "on-off" indicator; full volume level on all stations; variable Tone Control volume level on all stations; variable Tone Control to let you select the conal range you most enjoy
- Beautiful Tone. For finest cone quality the Knight 5 includes a special new G-inch Permanent Maight 5 includes a special new o-incli Permanent magnet witharmic speaker which han
Set Complete. The Knight 5 Tube 1.4 Volt Superhet is offered in the table cabinet described at left, complete with tubes but less "AB" pack Code. CLOAMS
A10884.
Retait Value, $\$ 37.50$. A10884-B. The Knight 5 as above, but complete with Ray-O-Vac "AB" pack. Shpg. wt. NET PRICE EACH
$\$ 22.40$



## $\mathcal{K}_{\text {night }} 5$ TIUBE 2 BAND I.4 VOLI-IIO VOLT SIIPERHET

This new Knight 5 Tube 2 Band Superhet is so cleverly designed that it's really two radios in one. It s the ideal choice for camps, cottages, trailers, and farms where the high line is on he way. Works perfectly elther from an "AB" battery pack with remarkable economy resulting from the use of the new 1.4 Volt tubes, or from 110 volts. 60 cycles. A.C. Use or from batteries when there's no $A$. C handy You take no risk when you buy this new settry it out for yourself under the liberal terms of our 15 Day Trial and Money-Back Guarantee

- Powerful 2-Band Reception. Enjoy the uxury of more-than-one-band radio. This new wo-Way Knight tunes two fuli banda from 540 to 1720 kilocycles for splendid reception of all Standard Broadcast programs and 5.9 to 18 megacycles for thrilling reception of foreign and domestic Short Wave programs, Both bands are alive with marvelous entertainment that will thrill and delight you. You will always enjoy the way in which this sentational new recelver pulls in the programyou want full-voiced tone quality

Wew Superhet Circuit. The Knight TwoWay 5 Tube Superhet is built around a new R.C.A. and Hazeltine licensed Superhet circuit employing latest tubes as follows: 1 A 7 G as dual-purpose Mod.-Osc. 1N5G as I.F. Amp. 1 HSG as triple purpose Diode Det. A. V.C.-1at Audio; 1 A5G as Power Output; and 2526 as Rectifier. On battery operation this tube combination assures you of erceptionally low drain - only .2 amperes from A and 9 milliamperea from "B ; on AC operation, these tubes develop all the power you need

- Two-in-ome Versafllity. Get the convenlence of either battery operation or A.C. operation at the flip of a switch. The 1.4 vol tubes mean amazing econowy when usetion ow bat
- Added Features. Other features include: a big new Slide-Rule Dial- $61 / 2$ long by $41 / 2$ high-with large, clear calibrations, and a separate scale for each wave band; full Automatic Volume Control to maintain uniform volume level: a new 5 -inch Permanent Magnet quality; highest quality components; etc.
- Rich Tone Quallty. Vou'll aluays enjoy listening to this new Knight Radio. No matter what program you tune, you will be delighted with the exceptional faithfulness, the mellow richness, of every sound or musical note. Rich cone quallty is an outstanding feature of this new Two-in-One 1940 recelver.
- Handsome Table Cabinet. Gracefully proportioned, this new cabinet has a rich front face of horizontally striped walnut with inlay trims, distinctive bat overlays across the apeaker krille, and unusually attractive corner treatment. $22^{\prime}$ wide, $11^{*}$ ligh. $11^{\circ}$ deep.
- Two-tn-One Radlo Complete. The Knight 5 Tube 2 Band Superhet for 1.4 Volts-110 Volts is supplied complete with tubes (less batteries) in the table cabinet illustrated above. Slipg. wt., 20 lbs
A 10885.
Alotail Value 55450
Retail Value $\$ 54.50$.
NET PRICE EACH.
s2695
A $10885-\mathrm{B}$. Knight 5 as above, but complete with Ray-O-Vac "AB" pack. Shpg. Wt., 40 Ibs. Code: GRADE.
NET PRICE EACH


## NEVER BEFORE SUCHI BATTERY RADIO ECONOMY!



## $\mathcal{K}_{\text {right }} 6$ TUBE 1.4 VOLT MODEL 2 BAND RAMGE WTH AUTOMAIIC TUNNGG

All of the features of the finest all-electric city radios plus the startling economy of operation offered by the new 1.4 volt tubes combine to make chis brand new Knight 6 Tube 2 Band 1.4 Volt Radio an absolutely unprecedented radio receiver. You ve never seen a set like this tone quallty ... genuine automatic Push-8utton tuning . . . almost unbelievable battery life...new and wonderful cabinet beauty-all this is yours at the lowest price ever asked for a comparable set.

- Automatie Push-Button Tuning. The most popular city radio feature in yearg-now yours in this new low-cost. Knight 6 tube radio. Easy to set up and tune "feather-touch" in operation. Just press the button with your finger-tip and there's your station. Push-Button tuning covers any of your four favorite stations. Even regular manual tuning is much simpler with the big new $4^{\prime \prime} \times 6^{\circ}$ Slide-Rule Dial. Shows
separate scale for each waveband and has unusually large markings. - Powerful Two-Eand Reception. Most sets at a comparable Price give you only Standard Broadcast programs. But this new Knlght tunes two wave-bands from 540 to 1730 kilocycles for exciting Short Wave foreign and domestic programs.
- Rugged Superhet Circult. A powerful, dependable R.C.A. and Hazeltine licensed Superhet circuit gives the key to the secret of Knight 6 performance. Employs the newest perfected low-drain 1.4
tubes as follows: 1A7G as dual-purpose Mod.-Osc. iN5G as 1st I.F. tubes as follows: 1A7G as dual-purpose Mod.-Osc. ; 1N5G as 1st I.F. Amp.; $1 N 5 G$ as 2nd I.F. Amp.; 1ASG as dual-purpose Det-A.V.C.
IHSG as lse Audio: 1 A 5 G as Power Output. So powerful is this tube 1HSG as 1st Audio; 1ASG as Power Output. So powerful is this tube
combination that you'll be amazed at the distance-range of the combination that you'll be amazed at the distance-range of the Knight 6 , so economical that you'll be delighted. Battery, drain is
only .3 amperes from " $A$ " and only 8 milliamperes from "B." only . 3 amperes from " A " and only 8 milliamperes from ' B .
- Amazing \&attery Ltfe. Here's the radio economy you've always looked for. When used with the inexpensive "AB" pack described
below, the Mnight 6 will operate as long as $600-800$ hours before new below, the Winght 6 will operate as long as $600-800$ hours before nev
batteries are required. Operating cost is less than two cents a day!
- Extra-Value Features. Other new features of the Kilght 6 Tube 1.4 Volt Superhet include a special 6-inch Permanent Magnet Dynamic Speaker for glorious tone quality, so realistic that you'll think you're right in the broadcast studio: full Automatic Volume Control to maintain uniform volume level on all programs; variable Tone Control so that you can put the tonal emphasis wherever you desire; smoothacting Bandswitch for instant changeover from Broadcast to Short
- Cher
- Charming Table Cablinet. The Knight 6 is offered in the unusually charming table cabinet illustrated above. Has top and front face of richly figured walnut veneers with pleasing roll-over effect: shaped speaker xrille bars in Classic motif; neat dial escutcheon and
control panel. Size: $21^{\circ}$ wide, $121 / 4^{\circ}$ high, $1^{\circ}$ deep. control panel. Size: $21^{\circ}$ wide, $121^{\circ}$ high, $11^{\circ}$ deep.
- Set Complete. Knlaht 6 Tube 2 Band 1.4 Volt Superhet in table cabinet. Complete with tubew, less batteries. Shpg. we. 22 lbs, Code: HEATH
A10886.
Netail alue. $\$ 42.50$.
A10886-B. As above, but complete with Ray-OV Power Pack containing 1-1.4 Volt "A" battery and 1-90 Volt "B." Shpg, wt., 42 lbs . Code: MERGE.
NET PRICEEACH
$\$ 25.90$


## 6 TUBE 1.4 VOLT CONSOLE MODEL

The new Knight 6 Tube 2 Band Radio with Automatic Tuning is also presented in a deluxe Console cabinet. Has all of the features of the table model, but for even finer tone includes a full 10 -inch P. M. Dynamic
speaker. Beautiful console is built of rich, figured walnut veneers; has speaker. Beautiful console is buitt of rich, hgured walmat veneers, has wide, $141 / 2^{\circ}$ deep. Shpg. wt., 581 bs . Code: PERCH. A10888. Complete with tubes, less batteries. A10888-B. Complete with Ray-O-Vac "AB hours of service. Shpg. wt., 78 lbs. Code: LILAC
NET PRICE EACH.

## b TUBE CHASSIS MODEL

A perfect replacement for obsolete or "battery-killing" Farm Radios. 1 ncorporates all feat ures as above, including $10^{\prime} \mathrm{P} . \mathrm{M}$. Speaker. Size: $10{ }^{\circ}$ wide. $6^{\circ}$ deep, $9^{\circ}$ high. With tubes, knobs, escutcheon, etc. Less battery A10887. Ketail Value, $\$ 3850$.
AET PRICE EACH
$\$ 19.45$
Add $\$ 3.45$ for Ray- Vac "A $\mathrm{B}^{\prime}$ pack as described above.


# Cemightidube 6 voit 2 BAND SIUPRRHEI 

- TELEVISION CONNECTION - TUNES FOREIGN STATIONS - giant slide-rule dial - WITH TONE CONTROL
- FULL-ACTING A.V.C.
- 6 INCH P.M. DYNAMIC


## $\$ 2685$

If we're exceptionally proud of thls new 1940 Knlght 6 Twhe 6 Volt Superhet, it's because we know that it incorporates the finest in battery set engineering skill, exceptional cabinct artistry, and powerful enjoyable tho-band reception-at a price that is unbeatably low. We're backing this model $100 \%$ with our liberal Trial Money-Back Guarantec (see page 11) Try it in your own home get the proof for yourself-if this we'll gladiy refund your purchase pricel 6 volt set you've ever heard,

- Forelgn and American Reception. The Knlght 6 covers two M.C.) for Short Waverfully and dependably: 16.4-51.7 meters (5.8-18.3 M.C.) for Short Wave foreign, aviation, amateur and police reception Channels). The second band covers 173.555 meters ( $540-1730 \mathrm{~K}$. Wave all American and Canadian standard Broadcast stations, as well as upper Police channels. Covers practically everything of importance on the air - Slide-Rule Dial. Latest 1940 type-that makestuning a real pleasure. Has easy-to-read calibrations, marked in kilocycles for the standard incorporated in the dial face. Scientifically precise, it shows you when you are tuned in perfectly. You just watch the shadow in the glowing eye; when it is narrowest, your station is tuned on the head.
- New 1940 Superhet circuit. Tlie circult of the Knight 6 is of the newest Superhet type, licensed by the fanous R.C.A. and Hazeltime laboratories. Every tubz works at full efficiency: 6D8G as Mod.-Osc.
(dual-purpose); $6 S 7$ as $1 . F . ; 6 \mathrm{~L} G \mathrm{G}$ as Det.-A.V.C. (dual-purpose); 6T7G as 1st Audio: 6G6G as Power Output; 605 as Electric Eye. The use of dual-purpose tubea actually makes possible 8 tube nower and efficiency. - Low-Cost Operation. The Knight 6 operates completely and entirely from a single 6-volt storage battery and does not require "B" power output is amazingly strong for a 6 tube battery eet. Here's real economy that saves you money.
- Magnificent Tone. A full-sized 6-inch P.M. Dynamic Speaker is incorporated for a rich bell-like quality of cone not found even in many electric receivers. You'll like the power output and the vivid tonal realism of the Knight 6 . All programs are reproduced with a smoot hness and quality that you will always enjoy. Variable Tone Control permits you to emphasize bass or treble to suit your own tastes.
- Other Value Features. The. Knight 6 is ready for Television when it comes. It's equipped with Television plug-In for Television sound. Also serves as phono connection to accommodate spring-wound phono player. Fult Automatic Volume Control maintains uniform volume in all programe; Continuously Variable Tone Control permits emphasis of bass or treble as you may desire; Wave-Band switch for easy selection of the band you want; rubber-floated heavy-duty tuning condenger for real stability battery cable with clips attached. etc. Only the very finest heavy-duty components are incorporated throughout the receiver
- Beautiful Table Model. A handsome new cabinet houses the Knlyht 6. Has top and front face of one-piece richly figured walnut veneers; speaker grille opening has distinctive Classic motif. Finished to a high most disting uished table model radio designs that will beautify any home.
- A Wonderful Value. The Knight 6 Tube 2 Band 6 Volt Superhet is with $6^{\circ}$ speaker and tubes. 1eess battery. An outstanding value in a one-battery two-band Farm Radio of exceptional power and superb
tone quality. Shpg. wt., 23 lbe. Code: MASON. tone quality. Shpg. wt., 23 lbe. Code: MASON
A 10890.
Retail Value, $\$ 54.50$.
YOUR NET
\$2685
A10458. Knight 6-volt 15-Plate Storage Battery. Shpg. wt. 42 liss.

- 5* P.M. DYNAMIC
- SLIDE-RULE DIAL
- Full-acting a.v.c.
- tunes police calls
- LOW-DRAIN TUBES

The Knight 46 Volt Superhet is presented in a brilliantly styled cabinet made of choice selected two-toned solid walnut. Its simplicity of design assures harmonious appearance in any room. The louvre-type grille gives added beauty and assures best acountical results. Meanures $12^{\circ} \times 71 / x^{71 / 2}$ i makes tuning easy:

## $\mathcal{X}_{\text {righle }} 4$ tube 6 volit LOW-COST SUPERHET

A dependable One Battery Farm Radio unequalled in valuel The tone quality equal to many five and siz eube sete throumance and of auch latest developments as the new syne sets through the use ast dual-purpose and triple-purpose tubes. For such outstanding performance and value its price is amazingly low.

- Economical Operation. The Kmight 4 uses only one 6 Volt Btorage battery and does not require any "B" or "C" batteries. Combines the latest desirable foats you practically nothing to rum. electric type gets with degirable economy of battery oneration
- Full Broadcast Range. The Knight 4 covers 174 to 560 meters ( 535 to $1720 \mathrm{K.C}$. ) giving clear, powerful reception of all American Standard Broadcast stations, plus upper Police channels. The new powerl
R.C.A. licensed circuit using the best 4 has the latest periected R.C.A, licensed circuit using the best low-drain tubes as follows:
6 A8G an 1 st Det., Oec. (dual-purpose); 6 K 7 as 1 .F. Amp 607 G as 6AsG. 1 st Det..-Osc. (dual-purpose); 6 K 7 as $1 . F$. Amp.; 607 G as
2nd Det..-A.V.C.-1st Audio (triple-purpose); 6 G 6 G as Beam Power 2nd Det..-A.V.C.,-1st Audio (triple-purpose); 6G6G as Beam Power A.V.C. for uniform volume and freedom from fading: dual-purpose A.V.C. for uniform volume and freedom from fading; dual-purpose
gynchronous vibrator; rubber-covered battery cable, etc. synchronous vibrator; rubber-covered battery cable, etc.
- Beautiful Tone Quality. We are proud of the tonal performance of the Knlight 4. You can't match its fidelity, purity and mellowness in any other Farm Radio at this low price. Uses a full five-inch new
P. M. alloy dynamic apeaker.
- An Outstanding Value. The Knight 4, in table cabinet as illustrated, comes complete with $5^{\circ}$ P.M. apeaker and tubes. Less battery. Shpg. wit., 13 lbs.
Code: NOTCH.
A108]8.
Retail Value, $\$ 27.50$.
, EACH


## NEW 2-WAY FARM RADIO

## K Kight Jtube -bant 6V-IIOV SUPERHET

- TELEVISION CONNECTION
- foreign Reception
- 6' P.M. DYNAMIC SPEAKER - GIANT SLIDE-RULE DIAL WITH TONE CONTROL FULL-ACTING A.v.c.


## s2785



If you want the last word in versatile Farm Radio design-if you want a receiver that will give you dependable radio reception either from 6 volts or 110 volts A.C. here's the model you'bl buy! The Two Way Knight 5 works perfectiy from either 110 volts A.C. or from a 6 volt storage battery. It's really two radios in one. Just flip a switch for operation from either source. You can't beat this model for economy, power and versatility. Use it in the country or trailer from a 6 -volt
battery; use it in the city on A.C. either way you'll get dependable, battery; use it in the city on A.C.Ceith

- Powerfu! 3-B and Reception. Tune eversthing of importance that's broadcast in the world todayl The Knight Two-Way model tunes
 $121 / 240$ meters ( $7.5-24 \mathrm{M} . \mathrm{C}$. .) and $40-13.1$ meters ( $2.4-7.5 \mathrm{M} . \mathrm{C}$. ) for thrilling world-wide Short-Wave reception of foreign programs, amateurs.
aviation and police calls. $173-520$ meters ( $535-1730 \mathrm{K.C)}$. brings you aviation and police calls. $173-520$ meters ( $535-17$ Coar.C.) brings you Each band is alive with entertainment that will thrill and delight you.
- Giant Slide-Rule Dlal. It's easy to tune the Knight 5. You'll like the easy-reading glant $6^{\circ} \times 4$ " Slide-Rule Dial with its individually calibrated bands. Standard Broadcast is indicated in kilocycles: Short Wave bands are in megacycles. A wave-band indicator shows you at all timer just what band you are tuning. You'll enjoy cuning this clear.
easy-to-read full-vision type dial.
- New Circult Design. Fully licensed by R.C.A. and Hazeltine the brilliant circuit of the Knight Twoway 5 usea the following low-draln tubes: 6D8G is Mod.-Osc. (dual-purpose): 6S7 as I.F.; $6 T 7 \mathrm{G}$ as Det.-A.V.C.-1st Audio (triple-purpose); 6G6G as Power Output; 6ZY 5G as Rece. Dual- and triple-purpose tubes develop extra-tube power and
efficiency for actual seven tube radlo performance.
- Economical Operation. The new Two-in-One Knight 5 is a marvel for economy whether you operate it from 6 volts or 110 volts. Low-
any sacrifice in quality. You can save as much as $\$ 15$ to $\$ 18$ per year on battery operation. 110 volt operation is on a par with the finest ow-drain A.C. sets. "Economy" is more than a word in this model-it is a pleasing fact you wlll be quick to appreclate and welcomel
- Beautiful Tone. Superb reproduction is an outstanding feature of the Knight 5. You'll get a real thrill out of its performance. The big output of the rugged circuit is reproduced fawlessly through the new type -inch P.M. Dynamic speaker, Each and every program is repro-
duced with broadcast studio fidelity.
- Adstionar Features. The Knithe
- Additional Features. The Knight 5 brings you these extra refinements: Television connection for Television attachment-same connection serves for pbono pickup input; Continuously Varlable Tone Control unif hividual emphasis of either bass or treble; Fult A.V.C. to maintain and A.C. extra-value features that mean greater efficiency and enjoyment.
- Handsome Table Cablinet. Here is outstanding styling. Sets a new note in the gracefully curved speaker grille with smart cutout effect Both top and front face are of selected walnut veneers finished flawlessly. Cabizet measures $19^{\circ}$ wide, $10^{\circ}$ deep, $10^{\circ}$ high.
- Two-In-One Radio Complete. The 5 Tube Knight Two-Way Superhet is offered complete in table model above, with $6^{\circ}$ P.M. dynamic speaker and tubes. Less battery. An outstandingly versatile radio at an
A 10871.
Retall Value. \$54.50.
s27 ${ }^{85}$
A10458. Knight 6-volt. 15-plate Storage Battery. Shpg. wt. 42 Ibs.



## PLAY BATTERY SETS FROM A.C. CULRRENT

Here's a new nower unit that will double the utility of any 1.4 volt portable or home type battery set. Permits you to play any 1.4 volt battery radio from 110 volts A.C. It's easy to connect; just plus in as you would batteries. Porta-Power fits the battery compartment of most 1.4 volt sets. Costs less than 5 c per hundred hours to operate. Equipped with composite sockets for all types of plugs used with 1.4 volt radios; also handles octal plug of Zenith portables. Built into a black. crinkle-finished metal case, only $31 / 2^{\prime \prime} \times 6^{\circ} \times 2^{2}$. Supplied with plug, cord and cord switch. Shpg. wt.. 51 bs .
A9 168 . NET PRICE
$\$ 4.41$


## NEW LO-R-VOLTS UNITS

 A new device which enables you to use your2-volt storage battery iostead of dry " $A$ " cells 10 operate 1.4 volt dry battery sets. Saves you money. Sets with lASG output
uge ML 250 unit: seta with 1 CSG output use ML-250 unlt; sets with 1C5G output. use ML-225 unit.
$A 7905$. ML-250. A7905. ML-250. A7906. ML-225. NET


## free power with a wind-charger

Now 1 Get FREE power from the wind with the finest, most reliable Windcharger ever made. This new, perfected Rurlpower Windcharger offers true economy in storage-battery charging costs nothing to operate. Delivers up to $16-20$ amperes of direct 6 -volt current. Employs a nevily-designed, exclusive (or with resigenerator. Efficiently charges any 6 -volt Storage "A" Battery matic cut-outor listed below, charges any $\mathbf{2}$-volt storage battery). Has autoball bearings; cuts in at $\mathbf{3 2 0}$ R.P.M. Has airplane type propeller with coppersheathed leading edges. Turntable brake automatically corrects position for any wind. Easily started and stopped with simple pull-down wlre. To install, mount Windcharger and 10-foot tower on unobstructed roof or inhigh, open place. A10610. Rurlpower Windcharger complete. Includes heavy-duty penerator and head-mechanism, wired and ready to mount; 10 -foot Tower. P'ropeller, Tail Vane, Ammeter on panel. Cut-out. Battery clips, etc. Complete
instructions 8 upplied. Shpg. wt., 75 lbs . instructions 8uppli
List Price. $\$ 29.95$
NET PRRICE WITH 10 FOOT TOWEP
(When purchased with any 6 Volt Knight Radio, only $\$ 17.50$.
A10031. Resistor for charging 2-Volt Storage Battery.......55c


KNIGHT 4 TUBE 1.4 YOLT TABLE MODEL
An amazingly low-priced Farm Radio-Phonograph built around a sensational new 1.4 Volt Superbet circuit for $60 \%$ greater operating economy. Radio tunes 540-1720 K.C., covering all standard Amclude: Large 4-inch Airplane Dial for cannels. Radio feature !nclude:, Large 4-inch Airplane Dial for easy program logging: Dymamic Speaker; 1000 hour battery life with special "AB ' P'M uses IA7G. INSG, 1 HSG , 1ASG. (For full description of set, see page 27.) Finest phonograph equipment is used. Includes heavy duty spring-wound phono motor. 10 -inch turntable, and highest quality Astatic-Crystal pickup. Plays $2-10^{\circ}$ or 1 - $12^{\circ}$ record ai a winding. Has phono-radio switch. Presented in a handsomely designed table model cabinet with gracefully rolled sides and front of striped walnut veneer. With grille bar overlays. Size: $15^{\circ} x 1^{\prime \prime} x$ $131 /$ 月 $^{.}$. Lid closes on 12 -inch records. Complete with tubes. Less "AB" Pack (see below). A fine value in a modern Farm RadloPhonograph. Shpg, wt., 25 lbs. Code: WHITE.
A10892.
Retail Value, $\$ 54.50$.
NET PRICE.
s2745

## LOW-COST FARM PHONO-RADIOS!

ALLIED makes available to the rural market a wide selection of table and console model Radio-Phonograph Combinations at surprisingly low prices. Models available are built for following operation: 1.4 Volt battery operation; 1.4 Volt-110 Volt battery operation and 32 Volt farmplant operation. Each
model is devigned for maximum economy; each employs model is devigned for maximum economy; each employa a powerful spring-wound phono motor; each reproduces records
through radio amplifying circuit and speaker for flawless through radio amplifying circuit and speaker for flawless
phonograph entertainment as well as superb radio reception.

## KNIGHT 6 TUBE 32 VOLT CONSOLE MODEL

 A high-quality Phonograph-Radio Combination in a beautiful Console. designed for operation from any 32 Volt Farm Plant. Brings you wonderful phonograph reproduction as well as powerful ( $5500-18300 \mathrm{~K} . \mathrm{C}$. and $540-1730 \mathrm{~K} . \mathrm{C}$. Glant Airpland reception acting A.V.C. Tone Control; $8^{\circ}$ P.M. Dynamic Speaker; Television and Phono Connection; unusual economy. etc. (For full description, see page 33.) Finest phonograph equipment includes: heavy-duty spring-wound pliono motor with $10^{\circ}$ turntable and guality crystal pickup; plays 2-10 or 1-12" record at a winding. In beautiful floor console of matched wainut woods as illustrated above at right. Complete with tubes. A splendid 32 Volt Radio-
## A10899. <br> A10899. <br> NET PRICE $\$ 99.95$

32

## KNIGHT 4 TUBE 1.4 VOLT CONSOLE MODEL

A wonderful value in a high-grade low-cost complete Farm Radio-Phonokraph Combination. Built around the latest 4 tube 1.4 volt Superhet circuit to achieve enjoyabie Dhonograph and radio entertainment with maximum economy. Radio tunes $540-1720$ K.C.; covers all standard American Broad cast and upper Police channels. 1940 radlo features include: large 4 -inch Airplane Dial for easy tuning; "on-off" indicator; full-acting Automatic Volume Control; 6 -inch P.M. Dynamic Speaker; 1000 hour battery life with special "AB" pack; uses 1A7G, 1N5G. 1H5G. 1A5G. (For full description of receiver, see page 27.) High quality phonograph components include: heavy-
duty spring-wound Crystal plekup. Playg 2-10 or 1 - with 10 -inch turntable and high-quality switch. Presented in the beautiful console illustrateding. Has phono-radio choice walnut veneers with sloping instrument panel. Has hinged lid and compartments to hold records. Size: $28^{1 / /^{\circ}}$ wide, $35^{\prime} 1^{\prime}$ hizh hinged lid and plete with tubes. Less "AB" pack (see below). Shpg, wt.. 65 ibs Code: WATER.
A10896, Retail Value, \$74.50.
NET PRICE
s3795

## 5 TUBE 2 BAND 1.4 VOLT CONSOLE MODEL

Similar in features to above, but of greater power and added tuning range Brings you the finest record reproduction as well as dependable radio reception. Radio includes: 2 Band Reception ( $5.9-18.0 \mathrm{M}$. C. and $540-1730 \mathrm{~K} . \mathrm{C}$.) Arplane Dal, Full-acting A.V.C.; Tone Control; 8-inch P.M. Dynamic
 full description of set. see page 28.) Incorporates the very finest phonograph equipment; heavy-duty spring-wound phono motor with 10 -inch eurntable and Astatic Crystal pickup; plays 2-10号or 1-12 $12^{\circ}$ record at a winding. Presented in the beautiful large console illustrated ahove. Has compartments for storing records. Fashioned of choice walnut woods, hand rubbed to a hly lustrous linish, Complete with tubes. An outstanding value. Less "AB pack (see below). Shpg. wt., 67 Ibs, Code: FEAST A 10897 . Retail Value, $\$ 84.50$. NET PRICE

## 5 TUBE 1.4 VOLT- 110 VOLT CONSOLE MODEL

Here's an amazingly versatile Farm Radio Phonograph designed for Complete Entertalnment. Features a wonderful new circuit which gives you equally fine radio and phono results either from economical 1.4 Volt pack or from 110 volts A.C. Actually two instruments in one. Radio includes: 2 Band Recedtion ( $5.9-18.0$ M.C. and $540-1730 \mathrm{K.C)}$. , large full-vision Airplane Dial; full-acting A.V.C. Tone Control; 8 -inch P.M. Dynamic Speaker economy circuit. etc. (For full description of set. see page 28.) Uses the motor with 10 -inch turntable and Astatic Crystal pickup: plays 2 - phono 1 - $12^{\circ}$, record at a winding. Presented in Crystal pickup; plays 2-10 or described above. Comes complete with tubes but less "AB" illustrated and Shpg. wt. 75 liss. Code: FAVOR.
A 10898 . Retail Value, 899.95 .
NET PRICE
S4950
A9772. 1000 Hour "AB" Power Pack for above sets. NET.
$\$ 3.45$

## $\mathcal{X}_{\text {night }} \mathrm{f}$ TLIBE 2 BAND 32 VDLT RADIO

Power to bring you the finest radio programs from everywhere tonal brilliance never before obtainable In a 32 volt set-economy of operation that will amaze
you that's the Knight 6 Tube 32 Volt Superhet for you- that's the Knight 6 Tube 32 Voit Superhet for
1940 ! We believe that the Knight 6 is so far superior 1940 ! We believe that the Knight 6 is so far superior
to any other 32 volt set in spite of its extremely low to any other 32 volt set in spite of its extremely low price, that we invite you to try it under one injor he Trial, Money-Back Guaranteel Once you enjoy the beauty and periormance olty, youlil know why we are outstanding, rich tone quality you

- Two Fubl Bands. The Knight 6 covers 16.4 to 55.5 meters ( 5500 - 18300 K .C.) for Short Wave, police, airplane, amateur, and ships-at-sea signals as well as foreign reception on the popular 19. 25,31 , and 49 .
meter bands; and 173 to 552 meters ( $540-1730$ K.C.) meter bands; and 173 to 552 meters ( $540-1730 \mathrm{~K} . \mathrm{C}$.) for long-distance reception of American and Canadian standard Broadcast programs.
- All-Electric Operation. No batteries are required for operating the Knight 32-Volt Superhet just plug it into the nearest 32 Volt D.C. source. and you're of the finest modern A.C. radio receiverse and economy
- Powerful 1940 Circuit. An entirely new superhet circuit has been chosen for the Knlgh 6. Licensed by R.C.A. and Hazeltine, it uses: 6 K 8 as Osc.-Mod. (dual-purpose); 6 SK 7 as I.F. Amp.: 6 SO 7 as Det.-A.V.C.-1st Audio (triple-purpose); 015 G as Audio Driver and 2-25L6G as Push-pull Beam Power Output. These last two tubes contribute greatly to the extruit is designed for greatest efficiency and economy. Total drain is only .8 amps.
- Latest Features. The Knight 6 is ready for Television when it comes. Has provision for Television attachment; also accommodates phono player input. Full A.V.C. for uniform volume and freedom from fading: Tone Control for bass or treble emphasis as desired; rubber-mounted tuning condenser and chassis; Giant $6^{\circ} \times 4^{\circ}$ Slide-Rule Dial; Beam Power tubes, etc.
- Table Model Comolete. The Knight $32-\mathrm{Volt}$ 6 Tube superhet is offered complete with 6 . $P$.M dynamic speaker and tubes. For 32 -volt operation Shpg. wt., 20 ths Code: EXULT. Al0878.
Retail Value, \$54.50.
$5=785$
NET PRICE EACH



## FEATURES:

- Television Connection


## - Foreign Reception

- Glant Slide-Rule Dial
- Full-Acting A.V.C.
- With Tone Controi
- P.M. Dynamic Speaker
- Phono Connection
- Beautiful Cablnet. The cabinet which houses the Knlght 6 is a model of superb craftsmanship and designing. Gracefully proportioned, it has a striking new style note in the curved speaker grive face tasteful cutout. Both tod and ront race ing inlay trims on the front and side faces. The entire cabinet is hand-rubbed to a high lustrous finish. The table model cabo inet measures 19 inches wide. 10 inches deep, and 10 inches high.
- Wonderful Tone Quality. The Knight 6 stands head and shoulders above all ot her 32 volt sets for full-bodied, bell-like tone quality. The heavy-duty 6 P.M. speaker Wificnt Tone Control, resust in unmatched tonal excellence. You'll enjoy the way in which this new Kriuht model reproduces each program with broadcast studio tone quality. Reception is always the equal of the finest A.C. electric receivers.
- A Big 32 Volt Value. Look everywhere. and you won't find a finer 32 Vole Radio than the Knight 6 . You get more features, more truly all-electric convenience, better more truality and greater economy at a lower price. Enjoy all the advantages and pleasure of the finest city type electric radios; thrill to foreign reception and powerful domestic Broadcast programs. Get the Kmight 6 -it gives you the most for your radio dollar in tuning range, tone quality and outstandins appearance!


## $X_{\text {night }} 4$ TUIEE AITIO RAD

An astonishingly compact Auto Radio that performs with the best of them! The Knight 4 will amaze you with its clarity, volume and versatility And it's priced so low that no car owner need be without an Auto Radiol This new set has what it takes for those 20 million American cars with no auto sets. Anyone can install it quickly and easily and it no complicated connections! fust clamp it on where you want it, connect to aerial and battery and you are ready to enjoy the thrill and con venience of fine radio entertainment.

- Easy To Tume. The ingenious slant opening effect on the dial face gives the driver full view of the easy-to-read Spot Dial." Large numerals show clearly through the "Spotlight" opening as you rotate thumb-type tuning wheel at right hand side of case. The Volume Control is also at right.
- Latest Circuit. With the Knight 4 you get a wonderful new Super het circuit, licensed by R.C.A Latest circuit uses following tubes: 6 A8GT as Conv.Osc.; 6 K 7 GT as 1.F. Amp.; 6Q7GT as Diode Det-A.V.C.-Lst Audio; 6K6GT as Audio Output Multi-purpose tubes achieve 6 tube efficiency.
- Fits All Cars. The Knleht 4 is completely contained in one attractive. car-grey, crackie-hinished steel case, only $67 /{ }^{\prime} \times 71^{\prime}{ }^{\prime} x x^{\prime} 1 / 2$. Equipped with special clamp, adapting the set for mounting in any position on steering column or along edge of dash. - Advantageous Features. Other important features include: Full A.V.C. for uniform volume; ful Electro-dynamic Speaker of highest quality, rub-ber-mounted against vibration; 535 to 1600 K . C. range for all standard Broadcast coverage; built-in synchronous vibrator power supply; amazingly economical low' 3 ampere drain; fused "A" lead. etc. - A Wonderiful Auto Radio Value. We are proud to be able to offer the Knight 4 with ite high record of efficient performance. Now everyone can afford splendid Auto Radio entertainment. The Knight 5 is offered as described above. complete A10822.
Retail Value, $\$ 19.95$.
NECH, \$11.35.
NET PRICE, LOTS
s1075
OF 3 , EACH
(For sultable Auto Aerlals, see pages 106-108.)


LATEST AUTO RADIO FEATURES!

## - ALL-ELECTRIC RADIO - NEW "SPDTH

- FULL-ACTING A.V.C. : THU "SPOT" DIAL
- DYNAMIC SPEAKER : LOW DR TUNING
- SUPPRESSORLESS
The Knight A Auto Radio is ingeniously det SIZE
car. Furnighed
lation in any of several pouitionsting clamp which for mounting in an lation in any of several positions on stemp which permits easy in any


Its remarkably low price makes this powerful, highgrade 1940 Auto-Radio entirely unique in its field. No other Auto-Radio offering the convenience and driving safety of perfect Push-Button Tuning combined with the versatility and superb performance of the Knight 5 can be sold at anywhere near this pricel Fits any car perfectly. For high quality and exceptional value, the "Pacemaker" is first

- Automatle Tuning. Don't take your eyes off the road With the Knight 5 you can tune in your choice of five lavorite stations just by pressing a button Positive, accurate tuning is automatic, dependable easy to set, and cannot get out of adjustment. Does not interfere with regular manual tuning.
New Silde-Rule Dial. The new, easy-to-read. easy-to-tune dial of the Knight 5 and entire control panel are inclined slightly to provide full vision and comptete safety while driving. The entire assembly mounts neatly along the lower edge of the car instrument panel - All-Electric Radio. The 1940 Knlght 5 offers supert all-electric operation. Has built-in vibrator power supply. Efficient new Super het circuit, licensed by R. A. and Hazeltine, uses five new fubcs to get the consistently enjoyable performance of ordinary seven tube sets. Tubes used are: $6 A 8 \mathrm{Gas}$ Conv.Ose.; 6 K 7 as
I.F.; 607 G as Det.-A.V.C. 1 st Audio; 6 K 6 G as Power I.F.; 6Q7G as Det.-A.V.C. 1 st Audio; 6 K 6 G as Power
Output; 6 X 5 G as Rectifier. No suppressors are required. You get real quality in the Knighe 5 "Pacemaker." - Outstanding Features. Additional features in clude: Full A.v.C. for unitorm volume; 5 Electrodynamic Speaker for splendid tone quality: full 2 watts power output; 6 tuned circuits; $7-8$ microvolts sensi Civity; 535 to $15.3 \mathrm{k} . \mathrm{c}$. range; plug-type antenna connection on case; fused 5 , ead. etc. The sinple sturdy cracke, house the entir bembly The Knlots cracke, houssisned and buil with. lil the care precision demanded by the highest automotive stand ards. It is made to withstand every vibration and shock and to give maximum stability and enjoyment of performance wherever and whenever you drive
- Ser Complete. The 1940 Knight 5 in offered as described above, complete with tubes. Shpg. wt. 15 lbs. Cone: CADET
A 10851 .
$\$ 24.95$
NET PRICE, EACM, 515.95
EACH


## $\mathcal{K}_{\text {righte }} 6$ tube AUTO SUPERHET

- Alf-Electric Radio
- Suppressoriess

With Tone Contro

- Fing All Make Cars
- Full-Acting A.V.C
- 6* Dynamic Speaker

Our very finest Auto Radio! The Knight Super-Siz Auto Radio incorporates every new car radio feature and improvement and provicles the finest possible radio performance and utility in any automobile. Its tonal brilliance. dependable power, and outstanding extras, insuring most enjoyable esigned demanded by the automotive industry.

- Fits All Cars. The Mnight 6 is completely contained in 3 single tan-colored crackle finished steel case, beautifully built and finished to harmonize with the finest car interior. Measures $73 / 6^{\circ} \times 7^{\prime \prime}$ x $83 / 3^{\prime}$; requires only a single hole mount for quick, easy installation.
- Low Drain Tubes. The powerful R.C.A. and Hazeltine icensed circuit usey the following tubes: 6 K 7 as R.F.; $6 A 8 \mathrm{G}$ Audio: DK6G as Power Output. 6 . 50 G . 5 G as Det.-A.V.C.-1st Aual purpose and ower Output; 6 K 5 G as Rectifier. The use of o achieve efficiency and eight tube auto eats. In additiance equal to that of seven elioninate ignition noises and make suppressors unnecessary Extra-Value Features. The Knight Super-Six Auto Radio incorporates continuously Variable Tone Control for extra tonal pleasure on every program. Automatic Volume Control eliminates fading and assures uniform volume; coupled with the full rich tone of the full-size $6^{\circ}$ Electro-dynamic speaker maximum enjoyment is yours wherever you drive. No-Glare Dial is an extra-value feature added for your safety: makes uning easier and faster, helps you keep your eyes on the road. - New Features. Additional features are: Full undistorte: output of 3 watts; 10 K.C. Selectivity; R.F. Preamplifier for greater sensitivity: 2 Position Antenna Plug for matehing Condenser; Fused "Apacities; 6 Tuned Circuits; 2 Gang Condenser: Fused "A" lead, etc. Tunes 535 to $1550 \mathrm{k} . \mathrm{c}$ - A Great Value. The Knight Super-Six Auto Radio as described above, is offered complete with built-in speaker cubes, flexible shafts, tuning mechanism and hardware Requires either of the tuning control heads listed at left


## Shg. <br> Code: BADGE.

A10852. 39.95
NET PRICE, EACH, $\$ 21.95$
NET PRICE, EACH, $\mathbf{\$ 2 1 . 9 5}$ OF $3, ~$
YOUR
${ }^{5} 20{ }^{95}$
(For suitable Auto Aerlals, see pages 106-108)

## $\mathcal{K}_{\text {night }} 4$ TUBE 1.4 VOLT Sortable SUPERHET

This new "wonder radio" gives you powerful, economical radio reception no matter where you go. It's the ideal companion for camping, motor-trips, hiking, picnicking, and is equally useful as a spare" radio at home, in school dormitorles, hotels, etc. Uses the amazingly economical new 1.4 volt tubes tor remarkable power will play perfectly the minute you turn it ond

- Builf-In "Alr-Magnet." No aerial-no ground-no dangling wires are needed with the Knight 4 Tube Portable. Has buitt-in signal pickup, the newest type of aerial, so sensitive, so strong in along with it in your hand. There is nothing to connect or add. - New 1.4 Volt Circuit. The Knight 4 tunes the entire Standard Broadcast band irom 535 to 1610 kilocycles for splendid reception of Hazeltine licensed circuit uses the new 1,4 volt low-draln tubes as follows: IA7G as dual-purpose Conv.-Ose.; IHSG as triple-purpose Diode Det.A.V.C.-1st Audio; INSG as I.F. Amp.; $1 Q 5 \mathrm{G}$ as Power Output. The two multiple purpose tubes add to efficiency ... they make the Knight 4 the equal of many 5 and 6 tube portables. - Exceptlonal Low Drain. Here's real operating economy! You get 250 hours or more of radio entertainment from this new set Costs only a few cents a day to operate.
- Added Featuras. Other features include Automatic Volume Control to maintain uniform volume level; new $4^{\prime \prime} \times 21 / 2^{\circ}$ full-vision speaker reproduces with. wonderful realism and briliant tone Smapt Luggage-Type Case. You can easily carry the Knight ${ }^{4}$ Tube Portable wherever you go. The entire set is buit into a strikingly handsome compact carrying case finished in airplane luggage the case With convencontras
 $1 / 2$ " deep.
- Set Complete. The Knight 4 Tube 1.4 Volt Portable Superhet is supplied with tubes and batteries, completely contained in carrying case illustrated above. Shpg. wt., 20 lbs. Code: LEAFY A10848.
Retail Value, $\$ 29.95$.
NET PRICE, EACH, $\$ 14.95$.
NET PRICE, LOTS OF 3, EACH wt, 10 ibs NET ............................................. $\mathbf{~} 2.65$


## NEW $\mathcal{K}_{n i g h t ~ P O B T A B L E S ~}^{\text {S }}$

## Kinght 5 TIUBE 2 band 1.4 VILT Cortable SIIPERHET

This brand-now, deluxe Knight 5 Tube 2 Band 1.4 Volt Portable combines all of the features which make for unusual economy of operation together with added developments for powerfin reception on two wave bands. For wonderful tone quitity, enjoyable performance, and sensa--

- Tunes Two Full Bancs. The Kmight 5 Tube Portable tuncs two full wave bands from $540 \% 01600$ kilocycles and from 5.8 to 18.1 megacycles. These bands bring you complete coverage of all standard Froadcast programs plus tions. The big new Slide-Rule dial, 3 有 easy to tune and has separate scal for fach band. - Everything Built-In. No aerial, no grolum, no connections to worry about. The amazing new c ir-Magnet," completely buitein, picks up programs from ? and near
with remarkable response. Batteries, too. are selfend All you do is turn the switch, and there's your promed. Plays even while you're walking. A full S-inck ${ }^{\text {Pram }}$ dynamic speaker gives you exceptionally enjoyalx tone quality and brilliant reproduction of every program. tone - 1.4 Volt 5 uperhet CIrcult. The Knight 5 uses the 1.4 volt tubes in an R.C.A. and Hazeltine licensed Supprhet
 Diode-Det.-A.V.C.-1st Audio: and losG as Power Out out. Battery drain is only, 3 amperes from " $A$ " and only 13 milliamperes from "B"
- Other Deluxe Features. Full Automatic Volume Co trol provides for constant volume level on every prograisa; prevents fading and distorting. Convenient bandswitch lets you shift instantly from one band to another.
- Deluxe Carrying Case. The Knight 5 is supplied complete with tubes and batteries in the carrying case shown at rlght. Finished in smart airplane luggage cloth: has convenient carrying liandle and identification tag. Size: $111 / 2^{*}$ high, $12^{\prime \prime}$ wide $71 / 2^{\prime}$ deep.
Shpy. wt. is lbs, Code: 1 ON: Ahpy. wt.

Retail Vailue. \$37.50.
NET PRICE EACH 518.75 NET PRICE, LOTS OF 3, EACH

A10046. Replacement battery kit, includink $1-1.4$ Nolt "A" and 2-45 Volt "B" batterien. Shpg. wt. 9 lbs.

c:OMBINATION 1.4 volt A. C.--I. C. 2 band
For ewen greater versatility and convenience, ALLIED also offers the Kinhgt 5 Tube 2 Band Portable in a Two-Way model for boilb operation from barteries or from 110 volits, 60 cycles A.C. or D.C. Just plug in where you have curreme and
save on battery cost; when no electric outlet is handy just tinn on the switein for sattery operation. A single knob handles the change. Has all matures of mortel batterg operation. A single knob handles the change. Has all itatures of morlel
descritied at left. Tuben are: $1 \mathrm{ASG}, 1 \mathrm{NSG} 1 \mathrm{HSG}$ A5G and 524 GT . With tubes, batteries, etc. Shpg, wt., is lbs. Code: HUSKY. A1OE73. Retail Value. $\$ 42.50$. A10047. Replacernent Battery Klt. Shpg. wt., 91 lbs . NET... $\$ 2.95$

## PLAYS FROM BATIEHIIES OR FROM 110 VOITS A.C. OR D.C.

## RCA

 HAZELTINE LICERSED
## $\mathcal{K C}_{\text {righlit }} 5$ tube 1.4 voli- lio v. ac-nct partable

## - 2 radios In one - SUPERHET cIRCUIT

 - A.V.C. ACTION - INBEAUTIFUL CASEHere's the last word in Portable Radios-the set you've been looking for! Here's the last word in "dual utility"you can play the Knight 5 anywhere anytimel It's really two radios in one-the most universal set you ve from its built-in batteries-no aerial, no ground, no connections required 1 Or you can play it in your home if you have, electric power, like any other house radio, because it's also designed to work from any electric outlet -not oniy from 110 volts A.C. but on 110 volts D.C. as well! The Knight 5 is truly America's most versatile Portable offered at an amazingly low pricel

- Everything Bullt In. You don't have to make any complicated connections to play the Knight S. There's no aerial or ground to bother with, because it has the realiy reaches out and brings them in. And the batteries are self-contained, too, for amazing compactness.
- Amaring Economy. On both batteries and AC or DC the Kolght 5 is the most economical radto ever made. On AC or DC, all five tubes operate; on batteries, one tube economy, yet performance remains greater operating enjoyable. Batteries are good for 200-250 hours of service before requiring replacement. Costs only a fer -ㅏ - . day to operate. You can't beat it for onlumy.
- Powerful Recoption. The Knight 5 Portable tunes 535 to $1550 \mathrm{~K} . C$. for powerful enjoyable reception of all domestic stations on the regular Broadcast band. You'll like the easy-zu-tune full-view dial. Has 'on-off' indicator and switch for easy change from battery operation to
AC $D C$ operation. Dlal lights up on AC-DC use.
- 5* P.M. DYNAMIC - SAFETY SWITCHING - WITH NAMETAG - ..sN-OFF" MARKER
- Latest Superhet Circuit. The Knight 5 is a powerful performer using the latest low drain 1.4 volt tubes in an R.C.A. and Hazeltine lictssed clrcuit of 1940 design. 1A7GT is Conv.; 1 NSGT is I.F. Amp.; 1H5GT is DetA.V.C. -1 st Audio; 305 GT is Power Output (on batteries) ; 117L7GT is Rect. Pown (on electric operation).
- Extra-Value Fotures. A full 5-inch P.M. Dynamtc Speaker (bigge than you'll find in most portab'r develops exreptionally fine tone quality. Autom, Volume runtrol prevents fading and assures unh so volume $c^{n}$ ath battery pack when power lime cord remoryd from case.
- Spuart Luggage-Type Case. The Knight $\mathbf{5}$ is a real be aty for looks. Has airplane-luggage covering wit ith lid which protects tuning knobs; has hand y carrying indle. Size is only $1314^{\prime \prime} \times 91^{\circ} \times 71 / 2^{\circ}$ Carrying weight i - only 16 lbs . Supplied with genuine leather identification cag for your name and address.
Bnight 5 Complete. The Knight 5 Dual-Utility Portable Radio is offered complete as described, with tubes and batteries. A wonderful value in a versatile portablel A10855.
Retail Value, 8.34 .50.
NET PRICE EACH, $\mathbf{\$ 1 7 . 9 5}$.
YOUR PRICE, LOTS OF 3, EACH.
$\$ 1695$ A10033. Replacement Batteries: 1 General 1.4 volt A". Battery and 2
Shpg. Went., 10 lbs , NET....................... $\$ 2.75$



ROW AFTER ROW and shelf after shelf in ALLIED's stockrooms are packed with the largest selection of fine radio merchandise representing the choicest products of America's leading manufacturers. Walk through these wide, clean aisles, and you will see an orderly arrangement of the more than 15,000 cataloged items (over half-a-million individual parts) regularly carried in stock. Your key to that vast stock is this ALLIED Catalog.

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ALLIED carries all R. C. A.-Radlotrons In stock ready for Imme diate shipment. Take advantage of the attractive quantity discounts ment of tube types you may order at any one time apply for any assort-

STANDARD GLASS TYPE TUBES

| Type | Stock No. | List | NET | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | Stock No. | LIst |  | $\frac{E A C H}{125-U P}$ |  | Stock No. |  | NET | ACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00A | A100 |  |  |  |  |  |  |  |  | Type |  | List | 1-24 | 25-UP |
| 01A | A101 | 1.00 | \$1.13 | . 27 | 20 | A140 | \$1.50 | \$0.71 | \$0.63 | 58 | A171 | \$1.00 | \$0.38 | \$0.34 |
| 1A4P | A102 | 1.50 | .71 | . 27 | 28 | A141 | 3.00 | 1.13 | 1.05 | 59 | A172 | 2.00 | . 94 | . 83 |
| 146 | A104 | 1.50 | .71 | .63 | 224 | A142 | 2.50 | 1.00 | . 92 | 714 | A173 | 1.25 | . 43 | . 38 |
| 184P | A105 | 2.00 | .94 | . 83 | 2525 | A136 | 1.25 1.25 | .48 | . 38 | 75 | A174 | 1.00 | . 38 | . 34 |
| $1 \mathrm{B5}$ | A106 | 1.25 | . 59 | . 52 | 26 | A144 | 1.00 | . 31 | . 27 | 76 | A175 | 1.00 | . 31 | . 27 |
| 1 C 6 | A107 | 1.50 | . 71 | . 63 | 27 | A145 | 1.00 | . 31 | . 27 | 77 | A176 | 1.25 | .43 | . 38 |
| $1 F 4$ | A108 | 1.50 | . 71 | . 63 | 30 | A146 | 1.25 | . 43 | 38 |  | A177 | 1.25 | .41 | . 36 |
| $1 \mathrm{~F}^{6}$ | A109 | 2.00 | . 94 | . 83 | 31 | A147 | 1.25 | . 43 | . 38 | 89 | A178 | 1.50 | . 71 | . 63 |
| 1 V | A110 | 1.25 | . 59 | . 52 | 32 | A148 | 1.25 2.00 | . 82 | . 38 | 80 | A179 | . 80 | . 29 | . 26 |
| $2 A 3$ | A111 | 2.50 | 1.21 | 1.07 | 33 | A149 | 1.50 | . 71 | . 63 | 81 | A180 | 2.50 | 1.09 | . 97 |
| $2 A 5$ | A112 | 1.25 | . 59 | . 52 | 34 | A150 | 1.50 | .71 | . 63 | 83 | A181 | 1.50 | . 71 | . 63 |
| $2 A 6$ | A113 | 1.25 | . 59 | . 52 | 35/51 | A151 | 1.25 | . 43 | . 38 | $83 v$ | A182 | 1.50 | . 71 | . 63 |
| $2 A 7$ | A114 | 1.50 | . 71 | . 63 | 36 | A152 | 1.25 | . 59 | . 52 | $84 / 624$ | A183 | 1.50 1.50 | 1.09 | . 97 |
| 287 | A115 | 1.50 | . 71 | . 63 | 37 | A153 | 1.00 | .43 | . 38 | 85 | A185 | 1.25 | . 51 | . 63 |
| 523 | A117 | 1.25 | . 43 | . 38 | 38 | A154 | 1.25 | . 59 | . 52 | 89 | A186 | 1.25 | . 59 | . 52 |
| 6A4/LA | A119 | 1.50 | .71 | . 63 | 39/44 | A155 | 1.25 | . 59 | . 52 | V99 | A187 |  |  | . 52 |
| 6 6, | A120 | 1.50 | . 71 | . 63 | 40 | A156 | 1.50 | . 71 | . 63 |  |  | 2.50 | . 70 | . 62 |
| GA7 | A121 | 1.25 | .49 | . 43 | 41 | A157 | 1.00 | . 38 | . 34 | 112A | A188 | 2.50 1.25 | .70 | . 62 |
| 685 | A123 | 2.50 | 1.21 | 1.07 | 42 | A158 | 1.00 | .40 | . 35 | WD11 | A138 | 1.25 2.50 | . 4.43 | . 38 |
| 687 | A124 | 1.50 | . 71 | . 63 | 43 | A159 | 1.25 | . 52 | . 46 | W×12 | A194 | 2.50 2.50 | 1.09 | .97 |
| $6 \mathrm{6C}$ | A125 | 1.00 | . 38 | . 34 | 45 | A160 | 1.00 | :35 | . 31 | 874 | A195 | 2.50 4.00 | 1.09 | 1.97 |
| 6D6 | A126 | 1.00 | . 38 | . 34 | 46 | A161 | 1.50 | . 71 | . 63 | 876 | A335 | 4.00 8.50 | 1.98 3.58 | 1.77 3.26 |
| $6 E 5$ | A127 | 1.50 | . 71 | . 63 | 47 | A162 | 1.25 | . 52 | . 46 | 884 | A339 | 8.50 | 3.58 2.12 | 3.26 1.90 |
| 6NS | A129 A130 | 2.00 1.50 | .94 | .83 | 48 | A163 | 4.00 | 1.98 | 1.76 | 885 | A340 |  | 2.12 | 1.90 |
| GU5/6G5 | A132 | 1.25 | . 59 | . 52 | 49 | A1 | 1.25 |  | . 52 | 886 | A341 | 8.50 | 4.25 | 3.65 |
| 10 | A137 | 3.00 | 1.35 | 1.21 | 5 | A165 | 3.00 2.00 | 1.21 | $\begin{array}{r} 1.09 \\ .83 \\ .63 \\ .27 \\ .34 \end{array}$ | SPECIAL VOLTAGE TUBES <br> A385. Type $V R-105 / 30$. Glow discharge type voltage regulator. NET........ \$1.25 A386. Type VR-150/30. Glow discharge type voltage regulator. NET.......... $\$ 1.25$ |  |  |  |  |
| 1247 | A134 | 2.00 | . 94 | . 83 | 55 | A168 | 1.50 | .71 |  |  |  |  |  |  |
| 1273 | A135 | 1.25 | . 59 | . 52 | 56 | A169 | 1.00 | 31 |  |  |  |  |  |  |
| 15 | A139 | 2.00 | . 94 | . 83 | 57 | A170 | 1.00 | .38 |  |  |  |  |  |  |

ALL METAL TYPE TUBES

| Type | Stock No. | List | NET EACH |  | Type | Stock No. | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-UP |  |  |  | 1-24 | 25-UP |
| 024 | A200 | \$1.50 | \$0.71 | \$0.63 |  | A219 | \$2.00 | \$0.94 | \$0.83 |
| 5 T 4 | A201 | 2.00 | . 94 | . 83 | GSA7 | A220 | +1.25 | +0.59 | +0.82 |
| 5W4 | A202 | 1.25 | 59 | . 52 | 6SC7 | A221 | 1.25 | . 59 | . 52 |
| 524 | A203 | 2.00 | . 94 | . 83 | 6SF5 | A222 | 1.25 | . 59 | . 52 |
| 648 | A204 | 1.50 | . 71 | . 63 | 6S 17 | A223 | 1.25 | . 59 | . 52 |
| 688 | A205 | 2.00 | . 94 | .83 | 6SK7 | A224 | 1.25 | . 59 | . 52 |
| $6 \mathrm{C5}$ | A206 | 1.25 | . 59 | . 52 | 6SQ7 | A225 | 1.25 | . 59 | . 52 |
| $6 F 5$ | A207 | 1.25 | . 59 | . 52 | 6V6 | A226 | 2.00 | . 94 | . 83 |
| $6 F 6$ | A208 | 1.25 | . 59 | . 52 | $6 \times 5$ | A227 | 1.50 | . 71 | . 63 |
| 646 | A 209 | 1.25 | . 59 | 52 | $12 \mathrm{C8}$ | A228 | 2,00 | . 94 | . 83 |
| 6.57 | A210 | 1.25 | . 59 | 52 | 12547 | A229 | 1.50 | .71 | . 63 |
| $6 K 7$ | A212 | 1.25 | . 59 | . 52 | $125 C 7$ | A230 | 1.50 | 71 | . 63 |
| $6 \mathrm{K8}$ | A 213 | 1.50 | . 71 | 52 | 12517 | A231 | 1.25 | . 59 | . 52 |
| 6 66 | A214 | 2.50 | 1.09 | 63 | $125 K 7$ | A232 | 1.25 | . 59 | . 52 |
| $6 L 7$ | A215 | 1.50 | 1.71 | .97 | 12597 | A 233 | 1.25 | . 59 | . 52 |
| 6N7 | A216 | 2.00 | .94 | . 83 | 2546 | A234 | 2.00 | . 94 | . 83 |
| $6 \mathrm{CQ7}^{\text {c }}$ | A217 | 1.25 | . 59 | . 52 | 2526 | A235 | 1.50 1.25 | . 71 | . 63 |
| $6 R 7$ | A218 | 1.50 | . 71 | . 63 | 2526 |  |  | . 59 | 52 |

LOKTAL TUBES
The new compact size all-glass tubes with Type Stock

| Type | Stock No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 7AG | A262 | \$1.50 | \$0.71 | . 63 |
| 7 A 7 | A263 | 1.50 | . 71 | . 63 |
| AB | A264 | 1.50 | .71 | . 63 |
| 7 7 | A265 | 1.50 | . 71 | 63 |
| C6 | A256 | 1.50 | . 71 | 63 |
| Y4 | A267 | 1.50 | .71 | 63 |
| 3545 | A268 | 1.50 | . 71 | 63 |
| 3523 | A269 | 1.50 | 71 | 63 |

## RCA TUBE MANUAL

A complete listing of technical specifications for all RCA recelving tube types. hams with complete constants and other important technical data. Also presents a concise discussion of vacuum tube theory. Invaluable to radio servicemen
and experimenters. FREE with order for 10 RCA tubes, or sold separate A395. NET.....25e

## BANTAM TUBES

These ultra-compact, efficiently designed tubes are original equipment in many $1939-40$ sets.
Keep a stock on hand for replacement needs.

| Type | Stocik <br> No. | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-UP |
| 1ATGT | A290 | \$2.00 | \$0.94 | \$0.83 |
| 1D8GT | A291 | 2.00 | .94 | . 83 |
| 1H5GT | A 292 | 2.00 | . 94 | . 83 |
| 1N5GT | A293 | 2.00 | .94 | 83 |
| 105 GT | A294 | 2.00 | .94 | 83 |
| 6A8GT | A297 | 1.25 | . 59 | . 52 |
| 6F5GT | A298 | 1.25 | .59 | . 52 |
| 6.15GT | A299 | 1.25 | . 59 | . 52 |
| 6J7GT | A250 | 1.25 | . 59 | .52 |
| 6K6GT | A251 | 1.25 | . 59 | . 52 |
| 6K7GT | A252 | 1.25 | .59 | . 52 |
| 697GT | A253 | 1.25 | .59 | . 52 |
| 12A8GT | A295 | 1.25 | . 59 | 52 |
| 1217 GT | A254 | 1.50 | . 71 | . 63 |
| 12K7GT | A255 | 1.25 | .59 | . 52 |
| 1207 GT | A256 | 1.25 | .59 | . 52 |
| $25 L 6 G T$ | A257 | 1.50 | . 71 | . 63 |
| 252GGT | A258 | 1.25 | .59 | . 52 |
| $35 L G G T$ | A259 | 1.50 | .71 | . 63 |
| 3524GT | A 260 | 1.25 | .59 | . 52 |
| 3575 GT | A261 | 1.25 | .59 | . 52 |
| SOL6GT | A 296 | 2.00 | .94 | . 83 |

TUBE CHARACTERISTICS CHART
A supplementary pamphlet giving complete characteristics and specifications for newer RCA receiving tube types not listed in the Tube Manual at left. Covers complete data on new Loktals, Bantams, etc. Foseful to Seryicemen and experimenters. FREE on request


OCTAL GLASS TYPE TUBES

| Type | Stock No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | Stock No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OA4G | A400 | \$2.50 | \$1.09 | \$0.97 | 6D8G | A448 | \$2.00 | \$0.94 | \$0.83 |
| OZ4G | A401 | 1.50 | . 71 | . 63 | 6F5G | A449 | 1.00 | .43 | . 38 |
| 1A5G | A402 | 2.00 | . 94 | . 83 | 6F6G | A450 | 1.25 | . 41 | . 36 |
| 1A7G | A403 | 2.00 | . 94 | . 83 | 6F8G | A451 | 1.50 | . 71 | . 63 |
| 1 CSG | A405 | 2.00 | . 94 | . 83 | 6G6G | A452 | 2.00 | 94 | . 83 |
| $1 \mathrm{C7G}$ | A406 | 2.00 | . 94 | . 83 | GH6G | A453 | 1.25 | 59 | . 52 |
| 1 DSGP | A407 | 2.00 | . 94 | . 83 | 6J5G | A454 | 1.25 | . 59 | . 52 |
| $1 \mathrm{IV}^{\text {G }}$ | A409 | 1.50 | 71 | . 63 |  | A455 | 1.25 | 59 | 52 |
| 1E5GP | A410 | 2.80 | . 94 | . 83 | 6 K 5 G | A457 | 1.25 | . 59 | . 52 |
| $1 E 7 \mathrm{G}$ | A412 | 3.00 | 1.47 | 1.32 | 6K6G | A458 | 1.25 | . 59 | . 52 |
| 1F5G | A413 | 2.00 | . 94 | . 83 | 6K7G | A459 | 1.25 | . 41 | . 36 |
| $1 F 7 \mathrm{GV}$ | A414 | 2.00 . | . 94 | . 83 | 6L5G | A461 | 2.00 | . 94 | . 83 |
| $1 \mathrm{G4G}$ | A415 | 1.50 | . 71 | . 63 | 6L6G | A462 | 2.00 | 94 | . 83 |
| $1 \mathrm{G5G}$ | A416 | 1.50 | .71 | . 63 | 6L7G | A463 | 1.50 | 71 | . 63 |
| 1 GGG | A417 | 2.00 | . 94 | . 83 | 6N6G | A464 | 2.50 | 1.21 | 1.07 |
| $1 \mathrm{H4G}$ | A418 | 1.00 | .43 | . 38 | 6N7G | A466 | 1.50 | . 71 | . 63 |
| 1H5G | A419 | 2.00 | . 94 | . 83 | 6Q7G | A470 | 1.25 | . 59 | . 52 |
| $1 H 6 \mathrm{G}$ | A420 | 1.50 | .71 | . 63 |  | A471 | 1.25 | . 59 | 52 |
| $1 / 16 \mathrm{G}$ 1 NSG | A422 | 1.50 2.00 | . 71 | . 83 | 6S7G | A472 | 2.00 | . 94 | . 83 |
| 1 N5G | A423 | 2.00 | .94 | . 83 | 6T7G | A473 | 2.00 | 94 | . 83 |
| 5U4G | A429 | 1.25 | 59 | . 52 | 6U7G | A474 | 1.25 | 59 | . 52 |
| 5V4G | A430 | 2.50 | 1.21 | 1.07 | 6VGG | A475 | 1.50 | . 71 | . 63 |
| $5 \times 46$ | A432 | 1.50 | . 71 | . 63 | 6W7G | A478 | 2.00 | .94 | . 83 |
| 5Y3G | A433 | . 80 | . 29 | . 26 | 6X5G | A479 | 1.50 | . 71 | . 63 |
| 5Y4G | A434 | 1.00 | .43 | . 38 | 6Y6G | A480 | 2.00 | . 94 | . 83 |
|  |  |  |  |  | 627G | A483 | 2.00 | .94 | $\begin{array}{r}83 \\ 52 \\ \hline\end{array}$ |
| 6A8G | A437 | 1.25 | 47 | . 42 | 6ZY5G | A482 | 1.25 | . 59 | 52 |
| GAC5G | A438 | 1.25 | . 71 | . 63 | 25A6G | A484 | 1.25 | 59 | 52 |
| 6B6G | A144 | 2.00 | . 94 | . 83 | 25A7G | A485 | 2.00 | 94 | . 83 |
| 6B8G | A445 | 2.00 | . 94 | . 83 | 25B6G | A488 | 2.00 | . 71 | 83 |
| 6C5G | A446 | 1.25 1.50 | . 71 | . 63 | 25L6G | A489 A490 | 1.50 1.25 | . $\mathrm{}$. | . 53 |
| 6c8G | A447 | 1.50 | . 71 | 63 | 2576G | A490 | 1.25 | . 59 | . 52 |

BOOST TUBE SALES WITH THESE RCA SALES AIDS



Boost your sales of RCA Radiotrons by means of these attractive and useful sales aids. Let your customers know that you stock tubes the tubes with the widest customer tubes-the tubes world.

Fig. A. RCA Service EngIneer's Pencil. An unusually versatile automatic pencil. Barre has sliding drums for standard resistor color code guide. Helps quickly. Handy non-metallic screwdriver value quickly. Fasily accessible beneath the cap. Resistor drums are of special celluloid composition with wear-proof colors. With handy pocket clip.
FREE with order for 50 RCA tubes, or sold separately


## $\$ 1.00$

Fig. B. Tube Test Stickers. A roll of 2.000 perforated gummed labels, $11 / 4^{\circ} \times 13^{\prime \prime}$. Im printed with your name, and dress, and city Have space to mark date and tube condition Will not char on metal tubes. Offer a handy way of recording the condition of your custulyes.
ASET..
$\$ 1.00$
Flg. C. O.K. Tags. A handy way to keep Flack of your radio service work. Each ticket tras a separate line for each operation to be has a separate ine or each opcration the date of repair Also has space for customer's name, address, Alc. These tags will help you to systematize tervice routine. 10 Tags FREE with order for 5 RCA tubes. Give your repair work real stem and save confusion. Ask for A393.


With your next tube order. ask for your iree Copy of the RCA Sales Ald Catalog. Shows you all the materials available and tells how to secure them. Ask for this catalog under number A398; it will be sent promptly.

Fig. D. Decalcomania. An attractive two color decalcomania transfer sticker for window of your store or car. Identifies your shop as an RCA tube dealer. This popular window sign is available FREE with order for RCA tubes.
Ask for A394. Will help bring in customers and Ask for A39
Fig. E. Price Cards. An up-to-date price list for your stock of tubes is a necessity. This RCA Radiotron list shows prices for all RCA tubes. Also includes, on the reverse side, a complete interchangeable tabulation for obsolete types and brands. FREE with order for RCA tubes. Ask for A396.

Fig. F. Dummy Cartons. Ideal for window or counter display use. Exact duplicates in color and size of the famous RCA Radiotron sealed tube carton. 25 of these cartons are offered FREE with your order for 10 RCA
tubes. You can use these cartons for many attubes. You can use these cartons.
tractive displays. Ask for A 397.

Other RCA Sales and Display Aids not illustrated include: Pindex-for locating tube pin connections; Outdoor Slgn-attractive metal type; Ncon Bulb a fine night-time display showing RCA trade-mark; and many otlier productive and useful items available either at low cost or Free with your tube

## TELEVISION TUBES

Here is the complete line of RCA Television Tubes for video receivers. Designed after years of experimentation, these tubes incorporate all of the latest developments of RCAs television. engineers. Complete technical information on
all types is available on request. For television all types is available on request. 2 ar televi
receiver parts, see pages 120,132 and 172 .

A380. 3AP4/906P4. $3^{\prime \prime}$ diameter Kinescope For black and white reproduction of television pictures.
\$13.75
A 382, 5BP4/1802P4. 5 diameter Kinesictures. NET. $\qquad$
A376 - 1804 PH .
A376. 9AP4/1804P4. 9* diameter Kinescope. Produces $51 / 2 \times 71^{\prime \prime}{ }^{\prime \prime}$ b
and white pictures. NET,

A375. 12AP4/1803P4. 12" diameter Kinescope. For brilliant black and white reproduction of pictures in $71 / 2 \times 10^{*} \$ 60.00$
size. NET..................... A301. 2V3G. Half-wave, high vacuum recti-


A373. 6ACT/1852. Television $\$ 1.60$
amplifier pentode tube. NET...... $\$ 1.60$ A3774, 6AB7/1853. Television $\$ 1.60$
amplifier pentode tube. NET.......

A303. GAG7. Television amplifier $\$ 1.80$
pentode tube. NET............... A337. 879. Half-wave, high vacuum rectifier for television receiver circuit. $\$ 1.30$
A370. 1800. Electro-magnetic deflection type with g. screen. Produces picture $\mathbf{6 0 . 0 0}$
with yellowish hue. NET...... A37 1. 1801. Electro-magnetic deflection type with $5^{\circ}$ screen. Produces picture $\$ 40.00$
with yellowish hue. NET.......

A383. 1899 Monoscope. With test pattern for scanning tests of picture $\$ 95.00$
transmission equipment. NET.

A372. 1851. Television pentode metal tube for use in R. F. and I. F. stages of $\$ 2.10$

A377. 1620. A triple-grid detector-amplifier metal tube for applications requiring low microphonic and noise response. $\$ 2.50$
NET................................

A378. 1621. A power amplifier pentode metal tube for use where extremacly low distortion and continuity of service are de- $\$ 2.50$

A379. 1622. A beam power amplifier metal Aube for use where extremely low and continuity of service are re-\$2.75
quired. NET........................

## PRACTICAL TELEVISION BY RCA

An unusually informative new booklet containing a comprehensive discussion or the Covers video receiver design and servicing requirements, television antennas, interference elimination, exc. Has glossary $81 / 2 \times 11^{\prime \prime} .40$ pages.
A 390.
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RAYTHEON tubes are noted for long life, silent operation, and bril faction and good-will use Raytheon tubes for ar sure customer satiscomplete RAYTHEON line, including Resistance and Panel type bulbs is listed on this and the next page. We Resistance and Panel type bulbs, is listed on this and the next page. We stock the complete line.

Take advantage of the real savings offered by our attractive discount prices. Wor Raytheon Tubes. Tubes may be assorted for quantity at all times. Depend on Allled to have avallable all new types of Raytheon tubes as soon as they are released

STANDARD GLASS TYPE TUBES

| Type | Stock No. | List | NET EACH |  | Type | Stock No. | List | ¢ NET EACH |  | Type | Stock No. | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OOA |  |  |  |  |  |  |  |  |  |  |  |  | 1-24 | 25-UP |
| 01A | A501 | \$1.70 | \$0.92 | \$0.85 | 1247 | A534 | \$1.70 | \$0.92 | \$0.85 | 55 | A568 | \$1.25 | \$0.67 | \$0.63 |
| 1A4P | A502 | 1.25 | . 67 | . .63 | $\underline{12275}$ | A535 A536 | 1.10 | . 49 | . 55 | 56 | A569 | . 60 | . 32 | .30 |
| 1A4T | A503 | 1.25 | . 67 | . 63 | 2525 | A536 | . 90 | . 48 | . 45 | 57 | A570 | . 75 | . 40 | . 38 |
| 146 | A504 | 1.25 | . 67 | . 63 | 10 | A537 | 1.70 | . 92 | . 85 | 58 | A 571 | . 75 | . 40 | 38 |
| 184 | A505 | 1.70 | . 92 | . 85 | 12 A | A538 | 1.10 | . 59 | . 55 | 59 | A572 | 1.70 | . 92 | . 85 |
| 185 | A506 | 1.10 | . 59 | . 55 | 15 | A539 | 1.70 | . 92 | . 85 | 71 A | A573 | . 75 | 40 | 38 |
| 1 C 6 | A507 | 1.25 | . 67 | . 63 | 19 | A540 | 1.25 | . 67 | . 63 | 75 | A574 | . 75 | . 40 | 38 |
| $1 F 4$ | A508 | 1.25 | . 67 | . 63 | 20 | A541 | 1.70 | . 92 | . 85 | 76 | A575 | . 75 | . 40 | . 38 |
| $1 F 6$ | A509 | 1.70 | . 92 | . 85 | 22 24. | A542 | 1.70 | . 92 | . 85 | 77 | A576 | . 90 | . 48 | . 48 |
| 1V | A510 | 1.10 | . 59 | . 55 | 24. | A543 | . 75 | . 40 | . 38 | 78 | A577 | . 75 | . 40 | . 38 |
| $2 A 3$ | A511 | 1.70 | .92 | . 85 | 26 | A544 | . 60 | .32 | . 30 | 79 | A578 | 1.25 | . 67 | . 63 |
| $2 A 5$ | A512 | 1.10 | . 59 | . 55 |  |  | . 60 | . 32 | . 30 | 80 |  |  |  |  |
| $2 A 6$ | A513 | 1.10 | .59 | .55 | 30 | A546 | . 75 | . 40 | . 38 | 81 | A580 | . 60 | 32 | -30 |
| $2 A 7$ | A514 | 1.25 | . 67 | . 63 | 31 | A547 | 1.10 | . 59 | . 55 | 82 | A581 | 1.70 | . 92 | . 85 |
| 287 | A515 | 1.25 | . 67 | . 63 | 32 | A548 | 1.70 | . 92 | . 85 | 83 | A581 | 1.25 | . 67 | . 63 |
| $2 E 5$ | A516 | 1.25 | .67 | .63 | 33 34 | A549 | 1.25 | . 67 | . 63 | 83 V | A583 | 1.25 | . 97 | .63 |
| 523 | A517 | . 75 | .40 | . 38 | 34 35 | A550 | 1.25 | . 67 | . 63 | 84 | A584 | 1.70 | . 92 | . 85 |
| 643 | A518 | 1.70 | . 92 | . 85 | $33^{351}$ | A551 | . 7.10 | . 40 | . 38 | 85 | A585 | 1.10 | . 59 | . 55 |
| 644 | A519 | 1.25 | . 67 | . 63 | 37 | A553 | 1.100 | . 48 | . 45 | 89 | A586 | 1.10 | . 59 | . 55 |
| 646 | A520 | 1.25 | . 67 | . 63 | 38 | A554 | 1.10 | . 59 | . 55 | V99 | A587 | 1.70 | . 92 |  |
| 647 | A521 | . 90 | . 48 | . 45 | $39 / 44$ | A555 | 1.10 | . 59 | . 55 | $\times 99$ | A588 | 1.70 | . 92 | .85 |
| 6AB5 | A522 | 1.25 | .67 | . 83 | 40 | A556 | 1.25 | . 67 | . 63 | 1828 | A589 | 1.70 |  |  |
| 687 | A524 | 1.25 | . 67 | . 63 | 41 | A557 | . 75 | . 40 | . 38 | 183 | A590 | 1.70 | .92 | .85 |
| 6C6 | A525 | . 75 | .40 | . 38 | 42 | A558 | . 75 | . 40 | . 38 | 485 | A591 | 1.70 | . 92 | .85 |
| $6{ }^{6} 6$ | A526 | . 75 | . 40 | . 38 | 43 45 | A559 | . 90 | . 48 | . 45 | 950 | A592 | 1.70 | . 92 | . 85 |
| $6 E 5$ | A527 | 1.25 | . 67 | . 63 | 46 | A560 | . 75 | . 40 | . 38 | 951 | A505 | 1.70 | . 92 | . 85 |
| GE6 | A528 | 1.70 | .92 | . 85 | 47 | A562 | 1.25 | . 48 | . 63 | WD11 | A594 | 1.70 | . 92 | 85 |
| $6 F 7$ | A529 | 1.70 | .92 | . 85 | 48 | A563 | 1.70 | . 92 | . 85 | W×12 | A595 | 1.70 | .92 | .85 |
| 6N5 | A530 | 1.25 | . 67 | . 63 | 49 | A564 | 1.10 | . 59 | .55 | 8A |  |  |  |  |
| 675 | A531 | 1.25 | .67 | . 63 | 50 | A565 | 1.70 | . 92 | . 85 | BH | A597 | 6.50 | 3.51 | $3.25$ |
| 605 | A532 | 1.10 | . 59 | . 55 | 52 | A566 | 1.70 | . 92 | . 85 | BR |  | 3.65 2.65 | 1.97 | $\begin{aligned} & 1.82 \\ & 1.33 \end{aligned}$ |
| 1245 | A533 | 1.70 | .92 | . 85 | 53 | A567 | 1.70 | . 92 | . 85 | LA | A598 | 2.65 1.25 | 1.43 .67 | 1.33 .63 |

ALL-METAL TYPE TUBES

| Type | Stock No. | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-UP |
| Oz4 | A600 | \$1.25 | \$0.67 | \$0.63 |
| 574 | A601 | 1.70 | -0.62 | + 8.85 |
| 5w4 | A602 | 1.10 | . 59 | . 55 |
| 524 | A603 | 1.70 | . 92 | . 85 |
| 648 | A604 | 1.25 | . 67 | . 63 |
| 688 | A605 | 1.70 | . 92 | . 85 |
| $6 \mathrm{C5}$ | A606 | 1.10 | . 59 | . 55 |
| $6 F 5$ | A607 | 1.10 | . 59 | . 55 |
| $6 F 6$ | A608 | 1.10 | . 59 | . 55 |
| $6{ }_{6} 6$ | A609 | 1.10 | . 59 | .55 |
| 655 | A610 | 1.10 |  | . 55 |
| $6 J 7$ | A611 | 1.10 | . 59 | . 55 |
| $6 K 7$ | -A612 | 1.10 | . 59 | . 55 |
| $6 K 8$ | A613 | 1.25 | . 67 | . 63 |
| 62.6 | A614 | 1.70 | . 92 | . 85 |
| $6 L 7$ | A615 | 1.25 | . 67 | . 63 |
| GN7 | A616 | 1.70 | . 92 | . 85 |
| 697 | A617 | 1.10 | . 59 | . 55 |
| 687 | A618 | 1.25 | . 67 | . 63 |



TECHNICAL CHART
Latest edition. Invaluable to every dealer and serviceman. Contains complete. up-to-theRaytheon receiving tubes: new base design diagrams, and complete tube characteristics. youror this chart free with A897...............FREE

| Type | Stock No | List | $\begin{aligned} & \text { NET } \\ & \mathbf{1 - 2 4} \end{aligned}$ | EACH $25-U P$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { GS7 } \\ & \text { GSA7 } \end{aligned}$ | $\begin{aligned} & \text { A619 } \\ & \text { A620 } \end{aligned}$ | $\$ 1.70$ | $\begin{array}{r} \$ 0.92 \\ .59 \end{array}$ |  |
| 6SC7 | A621 | 1.10 | 59 |  |
| 6SF5 | A622 | 1.10 | 59 | 55 |
| 6517 | A623 | 1.10 | . 59 | 55 |
| 6SK7 | A624 | 1.10 | . 59 | 55 |
| $65 Q 7$ | A625 | 1.10 | . 59 | 55 |
| 6V6 | A626 | 1.70 | . 92 | 85 |
| $6 \times 5$ | A627 | 1.25 | .67 | . 63 |
| 12 c | A628 | 1.70 | . 92 | 85 |
| 12547 | A629 | 1.25 | . 67 | . 63 |
| $125 \mathrm{C7}$ | A630 | 1.25 | . 67 | . 63 |
| 12517 | A631 | 1.10 | . 59 | . 55 |
| $125 K 7$ | A632 | 1.10 | . 59 | 55 |
| $125 Q 7$ | A633 | 1.10 | . 59 | 55 |
| 2546 | A634 | 1.25 |  | . 63 |
| 2516 | A635 | 1.25 | . 67 | . 63 |
| 2526 | A636 | 1.10 | . 59 | 55 |

## RAYTHEON DATABOOK <br> An education in all receiving type and essential characteristic ratig and essential characteristics. Also active tubes. Includes data on resistance tubes and on panel lamps. Have tube information on hand when you need it. 248 pages <br> A898. NET.... <br> 25

## NEW LOKTAL TUBES

New pee-wee sized all-glass tubes with improved operating efficiency. Elements are directly con prongs. Used in latest sets.

| Type | Cat. No. | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-UP |
| 1 LA4 | A853 | \$1.70 | \$0.92 | \$0.85 |
| 1LA6 | A854 | 1.70 | . 0.92 | +0.85 |
| 1LH4 | A855 | 1.70 | . 92 | . 85 |
| 1LN5 | A856 | 1.70 | . 92 | . 85 |
| 7A4 | A838 | 1.25 | . 67 | . 63 |
| 746 | A839 | 1.25 | . 67 | . 63 |
| 7 77 | A840 | 1.25 | . 67 | . 63 |
| 7 AB | A841 | 1.25 | 67 | . 63 |
| 785 | A842 | 1.25 | . 67 | . 63 |
| 786 | A813 | 1.25 | . 67 | . 63 |
| 787 | A844 | 1.25 | . 67 | . 63 |
| 788 | A845 | 1.25 | . 67 | . 63 |
| 7 C 5 | 4846 | 1.25 | . 67 | . 63 |
| 7 CG | A847 | 1.25 | . 67 | . 63 |
| $7 \mathrm{C7}$ | A848 | 1.25 | . 67 | . 63 |
| 7 EG | A849 | 1.25 | . 67 | . 63 |
| 7 Y 4 | A850 | 1.25 | .67 | . 63 |
| 1287 | A857 | 1.25 | . 67 | . 63 |
| $35 A 5$ | A851 | 1.25 | . 67 | . 63 |
| 3523 | A852 | 1.25 | . 67 | . 63 |

## TELEVISION TUBES

RAYTHEON is developing a complete line of television tubes. These tubes will be released cal trial in the firl l. Complete technical detail. and prices will le made available shortly


OCTAL GLASS TYPE TUBES

| Type | Stock No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | Stock No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OA4G | A700 | \$1.70 | \$0.92 | \$0.85 | 6C5G | A746 | \$1.10 | \$0.59 | \$0.55 |
| OZ4G | A701 | 1.25 | . 67 | . 63 | 6C8G | A747 | 1.25 | 67 | 3 |
| 1 A5G | A702 | 1.70 | . 92 | . 85 | 6D8G | A748 | 1.70 | . 92 | 5 |
| 1 ATG | A703 | 1.70 | .92 | 85 | 6F5G | A749 | . 90 | .48 | . 45 |
| 187 G | A704 | 1.70 | . 92 | . 85 | GFGG | A750 | . 75 | . 40 | . 38 |
| 1 CSG | A705 | 1.70 | . 92 | . 85 | 6F8G | A751 | 1.25 | . 67 | . 63 |
| $1 \mathrm{C7G}$ | A706 | 1.70 | . 92 | 85 | 6G6G | A752 | 1.70 | . 92 | . 85 |
| 1D5GP | A707 | 1.70 | . 92 | . 85 | 6H6G | A753 | 1.10 | . 59 | 55 |
| 1 D GT | A708 | 1.70 | . 92 | . 85 | 6J5G | A754 | 1.10 | . 59 | . 55 |
| 107 G | A709 | 1.25 | . 67 | . 63 | 6.J7G | A755 | 1.10 | . 59 | . 55 |
| 1 E G | A710 | 1.25 | . 67 | . 63 | 6.18 C | A756 | 1.70 | . 92 | . 85 |
| 1E5G | A711 | 1.70 | .92 | . 85 | 6K5G | A757 | 1.10 | . 59 | . 55 |
| 1E7G | A712 | 1.70 | .92 | . 85 | 6K6G | A758 | 1.10 | . 59 | . 55 |
| 1F5G | A713 | 1.70 | . 92 | . 85 | 6K7G | A759 | . 75 | . 40 | . 38 |
| 1F7G | A714 | 1.70 | . 92 | . 85 | 6K8G | A760 | 1.25 | . 67 | . 63 |
| $1 \mathrm{G4G}$ | A715 | 1.25 | . 67 | . 63 | 6L5G | A761 | 1.70 | . 92 | . 85 |
| 1 GSG | A716 | 1.25 | . 67 | . 63 | 6L6G | A762 | 1.70 | . 92 | . 85 |
| 1 G6G | A717 | 1.25 | . 67 | . 63 | 6L7G | A763 | 1.25 | . 67 | . 63 |
| 1 H 4 G | A718 | . 90 | . 48 | . 45 | 6N6G | A764 | 1.70 | . 92 | . 85 |
| 1H5G | A719 | 1.70 | . 92 | . 85 | 6N6MG | A765 | 1.70 | . 92 | . 85 |
| 1H6G | A720 | 1.25 | . 67 | . 63 | 6N7G | A766 | 1.25 | . 67 | . 63 |
| 1 J G | A721 | 1.70 | .92 | . 85 | 6P5G | A767 | 1.10 | 59 | . 55 |
| 1J6G | A722 | 1.25 | . 67 | . 63 | 6P7G | A768 | 1.70 | . 92 | . 85 |
| 1 N5G | A723 | 1.70 | .92 | . 85 | 6Q6G | A769 | 1.70 | . 92 | . 85 |
| 1 NGG | A724 | 1.70 | .92 | . 85 | 6Q7G | A770 | 1.10 | . 59 | . 55 |
| 1 P 5 G | A725 | 1.70 | .92 | . 85 | 6R7G | A771 | 1.10 | . 59 | . 55 |
| 105G | A726 | 1.70 | . 92 | . 85 | 6S7G | A772 | 1.70 | . 92 | . 85 |
| 2A4G | A727 | 1.70 | . 92 | . 85 | 6T7G | A769 | 1.70 | . 92 | . 85 |
| 4A6G | A728 | 1.70 | . 92 | . 85 | 6U7G | A774 | 1.10 | . 59 | . 55 |
| 5U4G | A729 | 1.10 | . 59 | . 55 | 6V6G | A775 | 1.25 | . 67 | . 63 |
| 5V4G | A730 | 1.70 | . 92 | . 85 | 6V7G | A776 | 1.25 | . 67 | . 63 |
| 5W4G | A731 | . 90 | . 48 | . 45 | 6W5G | A777 | 1.25 | . 67 | . 63 |
| $5 \times 46$ | A732 | 1.25 | . 67 | . 63 | 6W7G | A778 | 1.70 | . 92 | . 85 |
| 5Y3G | A733 | . 60 | . 32 | . 30 | 6X5G | A779 | 1.25 | . 67 | . 63 |
| 5Y4G | A734 | . 90 | . 48 | . 45 | 6YGG | A780 | 1.70 | . 92 | . 85 |
| 524MG | A735 | 1.70 | . 92 | . 85 | 6Y7G | A781 | 1.25 | . 67 | . 63 |
| 6A5G | A736 | 1.70 | . 92 | . 85 | GZY5G | A782 | 1.10 | . 59 | . 55 |
| 6A8G | A737 | . 90 | . 48 | . 45 | 627 G | A783 | 1.70 | . 92 | . 85 |
| 6AC5G | A738 | 1.10 | . 59 | . 55 | 25A6G | A784 | 1.10 | . 59 | . 55 |
| 6ADGG | A739 | 1.25 | . 67 | . 63 | $25 A 7 \mathrm{G}$ | A785 | 1.70 | . 92 | . 85 |
| 6AE5G | A740 | 1.10 | . 59 | . 55 | 25AC5G | A786 | 1.25 | 67 | . 83 |
| 6AE6G | A741 | 1.10 | . 59 | . 55 | 25B6G | A788 | 1.70 | . 92 | . 85 |
| 6AF6G | A742 | 1.25 | . 67 | . 63 | 25 CGG | A787 | 1.25 | . 67 | . 63 |
| 6B4G | A743 | 1.70 | .92 | . 85 | $2516 G$ | A789 | 1.25 | . 67 | . 63 |
| 6B6G | A744 | 1.70 | .92 .92 | .85 | 2576G | A790 A791 | 1.10 1.70 | .59 .92 | . 85 |


| MAJESTIC | SHIELDED TUBES |  |  | RAYTHEON PANEL BULBS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type | No. | List | NET |  |  |  |  |  |  |
| 24.5 | A864 | \$1.25 | \$0.67 | are famou | for the | ir long | life | - |  |
| 275 | A865 | 1.10 | . 59 | clency and | at our l | ow pric | es are | cheaper |  |
| 355 | A866 | 1.25 | . 67 | in the lon | bs. Buy | in lots | erior | oreign- |  |
| $\begin{aligned} & 555 \\ & 56 A S \end{aligned}$ | A867 | 1.70 | .92 | are Automotive Types.) |  |  |  |  |  |
|  | $\begin{array}{r} \text { A868 } \\ \text { A869 } \end{array}$ | 1.25 | . 67 |  |  |  |  |  |  |
| $\begin{aligned} & 565 \\ & 575 \end{aligned}$ |  | 1.25 |  | REGULAR PAN |  |  |  |  | ER10 |
|  | A870 | 1.70 | . 92 | No. | Type | Volts | Amps | EACH |  |
| 57 AS | A871 | 1.70 | . 92 | A2267 | R40 | 6-8 | 15 | 9 c | \$0.53 |
| 585 | A872 | 1.70 | . 92 | A2268 | R40A* | 6-8 | . 15 | 12 c | . 71 |
| 58 AS | A873 | 1.70 | . 92 | A2269 | R41 | 2.5 | . 50 | 19 c 12 c |  |
| 755 | A874 | 1.70 | . 92 | A22 271 | R43* | 3. 2 | . 50 | 12 c | . 59 |
| 85AS | A875 | 1.70 | . 92 |  |  | 6-8 | 25 | 9 c | 53 |
| 2A7S | A876 | 2.20 | 1.19 |  | R45* | 6.8 3.2 | 50 | 12 c | , 5 |
| 2875 | A877 | 2.20 | 1.19 | A22 274 | R46 | 6.8 | 25 | 9 9 |  |
| 6 A75 | A878 | 2.20 | 1.19 | A2275 | R 48 | 2.0 | 06 | 20 c | . 18 |
| 6875 | A879 | 2.20 | 1.19 | A2276 | R49** | 2.0 | . 06 | 22 c | 1.29 |
| $6{ }_{67}$ | A880 | 1.70 | . 92 | A2277 | R49A** | 2. 6 | . 12 | 22 c | 1.29 |
| 6D7 | A881 | 1.70 | . 92 | A2278 | R50才 | 6.8 2.9 | . 17 | $10 c$ $10 c$ | -59 |
| 6E7 | A882 | 1.70 | . 92 | A2280 | R292A* | 2.9 | . 17 | 14 c | 82 |
| 6 6 75 | A883 | 1.70 | . 92 |  | AUTO | мот | VETY | YPES |  |
| 6Y5 | A884 | 1.70 | 1.92 |  |  |  |  | $7 c$ |  |
| 25-45 | A885 | 2.65 | 1.43 | $A 228$ | R5S | $\begin{array}{r} 0-8 \\ 6-8 \\ \hline \end{array}$ | $.40$ | $7 \mathrm{c}$ | . 41 |
| $\frac{272}{675} / G 84$ | A886 | 1.70 1.70 | . 92 | *Minia | re ba | onet b. | ase; | oth | screw |

NEW BANTAM TUBES
Exceptionally efficient new midget-size tubes

| Type | No. | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 1A5GT | A 901 | \$1.70 | \$0.92 | \$0.85 |
| 1A7GT | A 793 | 1.70 | .92 | 85 |
| 1 C 5 GT | A794 | 1.70 | .92 | 85 |
| 1 H5GT | A 795 | 1.70 | 92 | 85 |
| 1 N5GT | A796 | 1.70 | 92 | . 85 |
| 1Q5GT | A902 | 1.70 | .92 | .85 |
| $1 \mathrm{~T}^{\text {SGT }}$ | A903 | 1.70 | .92 | 85 |
| 3Q5GT | A904 | 1.70 | .92 | . 85 |
| 6A8GT | A797 | 1.10 | . 59 | 55 |
| 6F5GT | A798 | 1.10 | . 59 | . 55 |
| $6 H 4 \mathrm{GT}$ | A799 | 1.25 | . 67 | . 63 |
| GHGGT | A 800 | 1.10 | .59 | . 55 |
| 6J5GT | A801 | 1.10 | . 59 | .55 |
| 6J7GT | A802 | 1.10 | . 59 | 55 |
| 6 K 5 GT | A803 | 1.10 | . 59 | .55 |
| 6K6GT | A804 | 1.10 | . 59 | . 55 |
| 6K7GT | A805 | 1.10 | . 59 | .55 |
| 6 KBGT | A806 | 1.25 | . 67 | . 63 |
| 6P5GT | A807 | 1.10 | . 59 | . 55 |
| 6Q7GT | A808 | 1.10 | . 59 | . 55 |
| GSA7GT | A809 | 1.10 | . 59 | -55 |
| 6SF5GT | A810 | 1.10 | . 59 | . 55 |
| 6SJ7GT | A811 | 1.10 | .59 | . 55 |
| GSKTGT | A812 | 1.10 | . 59 | . 55 |
| 6SQ7GT | A813 | 1.10 | . 59 | . 5 |
| 6VGGT | A814 | 1.25 | . 67 | . 63 |
| 6X5GT | A815 | 1.25 | . 67 | . 63 |
| 12 ABGT | A816 | 1.10 | .59 | 55 |
| 12 BaGT | A817 | 1.70 | .92 | . 85 |
| 12 F5GT | A818 | 1.10 | . 59 | . 55 |
| 1215 GT | A819 | 1.25 | .67 | . 63 |
| $12 J 7 \mathrm{GT}$ | A820 | 1.25 | . 67 | 63 |
| 12 KTGT | A821 | 1.10 | . 59 | . 55 |
| 12 Q 7 GT | A822 | 1.10 | . 59 | . 55 |
| 12 SA7GT | A823 | 1.25 | . 67 | . 63 |
| 12 SF5GT | A824 | 1.10 | -59 | . 55 |
| $12 \mathrm{Sl7GT}$ | A825 | 1.10 | . 59 | . 55 |
| $12 \mathrm{SK7GT}$ | A826 | 1.10 | . 59 | ,55 |
| 12 SQ 7 GT | A827 | 1.10 | . 59 | . 55 |
| $25 A 6 G T$ | A905 | 1.10 | . 59 | . 55 |
| $25 A 7 G T$ | A828 | 1.70 | .92 | .85 |
| 25 BEGT | A906 | 1.70 | .92 | . 85 |
| 25L6GT | A829 | 1.25 | . 67 | .63 |
| 2526 GT | A830 | 1.10 | .59 | . 55 |
| 32 L 7GT | A831 | 1.70 | .92 | . 85 |
| 35L6GT | A832 | 1.25 | . 67 | . 63 |
| 3524 GT | A833 | 1.10 | . 59 | . 55 |
| 3525 GT | A834 | 1.10 | . 59 | . 55 |
| 4525GT | A835 | 1.10 | . 59 | . 85 |
| 50L6GT | A836 | 1.70 | . 92 | . 85 |
| 70 Cl GT | A907 | 1.70 | .92 | . 85 |
| 11726 GT | A908 | 1.70 | . 92 | 85 |

## RAYTHEON RESISTANCE TUBES

Type No. Type No. Type No.

 \begin{tabular}{l|l|l|l|l|l}
1B1 \& A2816* \& 165R8 \& A2824 \& NB3 \& A2830 <br>
60R30G \& A2817 \& 185R \& A2825 \& NB4 \& A2831

 

$140 R$ \& A2818 \& $185 R 4$ \& A2826 \& NB5 <br>
A 2832 <br>
A

 

$140 R 4$ \& A2819 \& $185 R 8$ \& A2827 \& NB6 \& A2833 <br>
\hline $140 R 8$ \& A 2820 \& $878 R 48$ \& A 2868 \& NB7 \& A2834

 

$140 R 8$ \& A2820 \& 878R48 A2868 \& NB7 \& A2834 <br>
1651.4 \& A2821 \& NB1 \& A2828 \& NB8 \& A2835

 

1651.4 \& A2821 \& NB1 \& A2828 \& NB8
\end{tabular}

List Price, $\$ 0.80$. NET EACH.
43
+These two types list at $\$ 1.25$. NETEACH 67 C

| Type | No. | Type | No. | Type | No. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| L36B | A2836 | L42D | A2844 | L491 | A 2852 |
| 42 A | A2837 | 49A | A 2845 | K55B | A2853 |
| K42B | A2838 | K49B | A2846 | K55C | A2854 |
| K42C | A2839 | K49C | A2847 | K55D | A2855 |
| K42D | A2840 | K49CB | A2848 | L.55B | A 2856 |
| K42E | A2841 | K49D | A2849 | L.55C | A 2857 |
| L42B | A 2842 | L49B | A 2850 | L.55D | A2858 |
| L42C | A 2843 | L49C | A 2851 | M73B | A2369 |

LARGE PERFORATED METAL

| 42 A 1 | A2859 | 49 Al | A2862 | 55 A 1 | A2865 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 42 A 2 | A 2860 | 49 A 2 | A2863 | 55 A 2 | A2366 | | $42 A 2$ | A2860 | $49 A 2$ | A2863 | 55 A 2 | A2 266 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $42 \mathrm{B2}$ | A2861 | 49 B 2 | A2864 | 55 B 2 | A2867 |

List Price, $\$ 0.80$.
YOUR PRICE EACH.
43.

# KnIGHT 

DEPENDABLE VALUE LEADERS
The popular Knight line of radio tubes offers sa complete selection of standard glass, octal-glass and metal types. You can undersell all competition with this line of superior quality tubes. Features quality and attractive factory-sealed packaging.

EXTRA QUANTITY DI5COUNT
In lots of 25 or more, we offer Knight tubes at special ow prices. Buy in quantities for extra savings and profits. Put in a stock of fast moving types for quick, asy sales. Offer Knight tubes as special-value leader

STANDARD GLASS TYPE TUBES

| Type | List | $\begin{gathered} \text { NET } \\ \mathbf{1 - 2 4} \\ \hline \end{gathered}$ | EACH | Type | List | $\begin{aligned} & \text { NET } \\ & 1-24 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | List | $\begin{gathered} \text { NET } \\ 1-24 \end{gathered}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| O1A | \$1.00 | \$0.29 | \$0.27 | 687 | \$1.50 | \$0.56 | \$0.53 | 31 | \$1.25 | \$0.38 | \$0.35 | 56 | \$1.00 | \$0.26 | \$0.24 |
| 1 A4 | 1.50 | . 61 | . 58 | $6 C 6$ | 1.00 | . 34 | . 31 | 32 | 2.00 | . 68 | . 6.35 | 57 | 1.00 | . 33 | +31 |
| 1 A6 | 1.50 | . 61 | . 58 | 6 6 6 | 1.00 | . 34 | . 31 | 33 | 1.50 | . 54 | . 51 | 58 | 1.00 | . 33 | . 31 |
| 184 | 2.00 | . 65 | . 61 | 6E5 | 1.50 | . 54 | . 51 | 34 | 1.50 | . 61 | . 58 | 59 | 2.00 | . 72 | . 68 |
| 185 | 1.25 | . 54 | . 51 | $6 F 7$ | 2.00 | . 77 | . 73 | 35/51 | 1.25 | . 38 | . 35 | 71A | 1.25 | . 33 | . 31 |
| $1 \mathrm{C6}$ | 1.50 | . 61 | . 58 | 6G5 | 1.25 | . 52 | . 49 | 36 | 1.50 | . 50 | . 47 | $75^{\text {a }}$ | 1.00 | . 34 | . 31 |
| 1F4 | 1.50 2.00 | . 61 | . 58 | $6 T 5$ 605 | 1.50 1.25 | . 54 | . 51 | 37 38 | 1.00 1.25 | . 38 | . 35 | 76 | 1.00 | . 26 | . 24 |
| 1 V | 1.25 | .42 | . 39 | 10 | 3.00 | . 85 | . 81 | $38 / 44$ | 1.25 1.25 | . 46 | . 413 | 77 | 1.25 | . 38 | . 35 |
| $2 A 3$ | 2.50 | . 69 | . 64 | 12 A | 1.25 | . 43 | . 40 | 41 | 1.00 | . 34 | . 31 | 78 | 1.25 1.50 | . 36 | . 338 |
| $2 A 5$ | 1.25 | . 54 | . 51 | 12 AT | 2.00 | . 597 | . 56 | 42 | 1.00 | . 35 | . 32 | 80 | 1.80 | . 23 | . 28 |
| 246 | 1.25 | . 54 | . 51 | 1223 | 1.25 | . 53 | . 50 | 43 | 1.25 | . 41 | . 39 | 81 | 2.50 | . 85 | . 81 |
| $2 A 7$ | 1.50 | . 63 | . 59 | 19 | 1.50 | . 47 | . 44 | 45 | 1.00 | . 31 | . 29 |  |  |  |  |
| $2 \mathrm{B6}$ | 3.00 | 1.06 | 1.00 | 22 | 2.50 | . 88 | . 83 | 46 | 1.50 | . 63 | . 59 | 82 | 1.50 1.50 | . 54 | . 41 |
| 287 | 1.50 | . 61 | . 58 | 24 A | 1.25 | . 37 | . 35 | 47 | 1.25 | . 47 | . 45 | 83 $83 V$ | 1.50 2.50 | . 81 | . 47 |
| 523 | 1.25 | . 37 | . 35 | $25 B 5$ | 1.25 | . 60 | . 57 | 48 | 4.00 | . 85 | . 81 | $84 / 624$ | 2.50 1.50 | . 817 | . 77 |
| 6 64 | 1.50 | . 63 | . 59 | 2525 | 1.25 | .39 | .37 | 49 | 1.25 | . 46 | .43 | 85 | 1.25 | .46 | . 44 |
| 646 | 1.50 | . 58 | . 55 | 26 | 1.00 | . 26 | . 24 | 50 | 3.00 | . 85 | . 81 | 89 | 1.25 | . 50 | . 47 |
| 647 | 1.25 | . 43 | . 40 | 27 | 1.00 | .26 | . 24 | 53 | 2.00 | . 75 | .71 | V99 | 3.00 | .61 | . 59 |
| 685 | 2.50 | .65 | . 61 | 30 | 1.25 | .32 | . 30 | 55 | 1.50 | . 63 | . 60 | $\times 99$ | 2.50 | . 61 | . 59 |

ALL-METAL TYPE TUBES

| Type | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 25-U P \end{aligned}$ | Type | List | $\begin{aligned} & \text { NET } \\ & 1-24 \end{aligned}$ | $\begin{aligned} & \text { FACH } \\ & 25-U P \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 024 | \$1.50 | \$0.59 | \$0.56 | 6N7 | \$2.00 | \$0.78 | \$0.74 |
| 5 T 4 | 2.00 | . 82 | . 78 | 697 | 1.25 | . 52 | . 49 |
| 5w4 | 1.25 | . 45 | . 42 | GR7 | 1.50 | .61 | . 57 |
| 524 | 2.00 | . 82 | . 78 | 657 | 2.00 | 82 | . 78 |
| 648 | 1.50 | . 68 | . 64 | 6SA7 | 1.25 |  |  |
| 688 | 2.00 | . 78 | . 74 | $6 S C 7$ | 1.25 | . 52 | . 49 |
| $6 \mathrm{6F5}$ | 1.25 | . 52 | . 49 | 6SF5 | 1.25 | . 52 | . 49 |
| $6 F 5$ | 1.25 | . 52 | . 49 | 65.77 | 1.25 | . 52 | . 49 |
| 6FG | 1.25 | . 52 | . 49 | GSK7 | 1.25 | . 52 | . 49 |
| 646 615 | 1.25 1.25 | . 52 | . 49 | 6SQ7 | 1.25 | . 52 | .49 |
| 6.17 | 1.25 | . 52 | . 49 | 6V6 | 2.00 | . 78 | . 74 |
| $6 K 7$ | 1.25 | . 52 | . 49 | $6 \times 5$ | 1.50 | . 63 | . 59 |
| 6K8 | 1.50 | . 63 | . 59 | 2546 | 2.00 | . 68 | . 64 |
| 6L6 | 2.50 | . 85 | . 81 | 2546 | 1.50 | . 61 | . 57 |
| $6 L 7$ | 1.50 | . 63 | . 59 | 2526 | 1.25 | . 51 | . 49 |

## HYTRON BANTAM TUBES

 Put in a supply to take carc of replacement needs. For your
these tubes are packed in individual factory-scaled cartons.

| Type | No. | List | NET | Type | No. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1A5GT | A925 | \$2.00 | \$0.91 | 6WGGT | 4952 | \$1.50 | \$0.69 |
| 1A7GT | A926 | 2.00 | . 91 | 6×5GT | A953 | 1.50 | . 69 |
| 1C5GT | A927 | 2.00 | . 91 | 12A8GT | A954 | 1.25 | 44 |
| 1H5GT | A928 | 2.00 | . 91 | 12B8GT | A955 | 2.00 | . 91 |
| 1N5GT | A929 | 2.00 | . 91 | 12F5GT | A956 | 1.25 | 41 |
| 1Q5GT | A930 | 2.00 | . 91 | 12 J GT | 4957 | 1.50 | 5 |
| 1T5GT | A931 | 2.00 | . 91 | 12K7GT | A958 | 1.25 | . 37 |
| 2W3GT | A932 | 1.25 | . 36 | 12Q7GT | A959 | 1.25 | 55 |
| 6AC5GT | A933 | 1.25 | . 55 | 12SA7GT | A960 | 1.50 | . 57 |
| 6A8GT | A934 | 1.25 | . 44 | 12SF5GT | A961 | 1.25 | . 43 |
| 6C5GT | A935 | 1.25 | . 55 | 12SJ7GT | A962 | 1.25 | . 57 |
| 6F5GT | A936 | 1.25 | . 41 | 12SK7GT | A963 | 1.25 | . 57 |
| 6H6GT | A937 | 1.25 | . 51 | 12SQ7GT | A964 | 1.25 | . 57 |
| 6J5GT | A938 | 1.25 | . 55 | 25A6GT | A965 | 1.25 | . 55 |
| 6.J7GT | A939 | 1.25 | . 55 | 25A7GT | A966 | 2.00 | . 91 |
| 6K5GT | A940 | 1.25 | . 55 | 25B8GT | A967 | 2.00 | 91 |
| 6K6GT | A941 | 1.25 | . 55 | 25L6GT | A968 | 1.50 | . 65 |
| 6K7GT | A942 | 1.25 | . 37 | 25X6GT | A969 | 1.25 | . 55 |
| 6K8GT | A943 | 1.50 | . 69 | 2576GT | A970 | 1.25 | . 55 |
| 6P5GT | A944 | 1.25 | . 36 | 35L7GT | A971 | 2.00 | . 91 |
| 6Q7GT | A945 | 1.25 | . 55 | 35L6GT | A972 | 1.50 | . 65 |
| 6R7GT | A946 | 1.25 | . 55 | 3524GT | A973 | 1.25 | . 55 |
| 6SA7GT | A947 | 1.25 | . 57 | 3525GT | A974 | 1.25 | . 55 |
| 6SF5GT | A948 | 1.25 | . 43 | 4525GT | A975 | 1.25 | . 55 |
| 6SJ7GT | A949 | 1.25 | . 57 | 50L6GT | A976 | 2.00 | 65 |
| 6SK7GT | A950 | 1.25 | . 57 | 70L7GT | A977 | 2.00 | 91 |
| 6SQ7GT | A951 | 1.25 | . 57 |  |  |  |  |

## NEW BANTAM JR. TUBES

These are the new "Tiny" tubes which measure only $23 / 16^{\prime \prime}$ in height overall. Bantam Jr. tubes by Hytron are mechanically and electrically designed to reader unusually efficlent service despite their small such as in hearing-aid units. Require 1.4 volts for filament. See page 59 for adapters to fit. Complete technical data is available on request.
$\begin{array}{llll}\text { Type } & \text { No. } & \text { Class } & \text { Application } \\ \text { HY1 } 13 & \text { A978 } & \text { TRIODE } & \text { Cencral Purpose..... } \$ 1.71 \\ H Y 115 & \text { A979 } & \text { PENTODE } & \text { A, F, Interstage...... } 2.45 \\ H Y 125 & \text { A980 } & \text { PENTODE } & \text { A.F. Pwr. Output Amp. } 2.45\end{array}$
A4569. BANTAM JR. SOCKET. NET

# BALLAST TUBES•BULBS•NEON LAMPS 

!BALLAST RESISTORS
New metal-shell ballast tubes for replacement in A.C.-D.C. sets. Identical to originals in electrical char-
acteristics and base connections. Reacteristics and base connections. Re-
quire no rewiring; simply remove quire no rewiring; simply remove place with the proper Knight Ballast tube. Sturdily built for long

| No. | Type | Replaces |
| :---: | :---: | :---: |
| $\overline{\text { A } 1018}$ | K23B | BK23B |
| A1019 | K 36 B | BK368 |
| A1000 | K42B | BK 42B, K 42 BG |
| A1020 | K42C | BK42C, 95 K 2 |
| A1021 | K 42 D | BK42D |
| A1001 | L42B | L42B, BL $42 \mathrm{~B}, \mathrm{~L} 42 \mathrm{BG}$ |
| A1041 | L42C | L40C, 69-2037. BL42C |
| A1002 | L42CJ | 100-38 (Glass or metal) |
| A1023 | M 42 B | BM42B, M 42 BG |
| A1024 | KZ49B | 50B2, 50 B 2 MG |
| A1025 | K49B | BK $49 \mathrm{~B}, \mathrm{~W}-43357,135 \mathrm{~K} 1$ |
| A102 | KZ49C | 50 A 2 MG |
| A103 | K49D | BK49D 334A |
| A104 | L49B | 2UR 224, 69, 2033, L49BG |
| A104 | L49C | L49-5.5C |
| A 100 | L49CJ | 100-37 (Glass or metal) |
| A 102 | L49D | 3 CR 24 |
| A1050 | 55A | K55A |
| A105 | K55B | BK55B, 3613, 55 KKB |
| A 1034 A 1052 | ${ }_{\text {K55CP }}$ | K55CP, K55CPR |
| A 103 | K70B | K708 |
| A1035 | K55H | K52H, 32, 55H |
| A1043 | L55B | 2VR-215, BL55B, L55BG |
| A1044 | L55C | L55,5.5C |
| A1045 | L55S1 | L55S1 |
| A1054 | ${ }_{2}$ | L55S3 |
| A1055 | M558 | BM55B |
| A1005 | M55C | 8M55C |
| A1006 | K67B | K678 |
| A1036 | K74B | K72B. K73B |
| A1048 | K74C | K74C. K72C, K73C |
| A1037 | K80B | K79B, K78B |
| A1038 | ${ }_{928}^{\text {K87 }}$ | K90B, K K 92 A ( |
| A1006 | K92 B | K90B, K85B |
|  | K92F | K90F |
| Al049 | 105A | K105A |

(1)
1unt

## AC-DC ADJUSTABLE BALLASTS

A solution of the Ballast tube probA em. 3 of these adjustable ballasts will replace any one of $99 \%$ of all ballast tubes. Simple to adjust; no tools or experience, necessary
complete chart which shows ballast to use is included with each ballast. to use is included with each ballast.
A 1058 , Ballast $A$. A1059: Ballast B.

## ADJUSTABLE BALLAST KIT

A handy kit of adjustable ballast resistors. Contains 2 type "A." 2 type "B." and 1 type ballast on hand for any job.
$\$ 2.75$

| AMPERITE |  | BATTERY |  | BALLAS |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FOR | Ambl ite | FOR | Am- perite | FOR | $\begin{aligned} & \text { Am- } \\ & \text { per- } \\ & \text { Ite } \end{aligned}$ |
|  | S |  | 1N1 |  |  |
| 1* | 3H1 | 101 | 1 | $1{ }^{1} 1$ |  |
| 1C1* | 7H1 | 151 | 151 | 1 R 1 | $1 \mathrm{R1}$ |
| 101* | 2H1 | $1{ }^{1} 1$ | ${ }_{5} 1 \mathrm{~T} 1$ | ${ }^{1} \mathrm{U}^{1}$ * | 141 30 |
| 1E1* | 5E1 | $1 \mathrm{~V} 1^{*}{ }^{\text {10 }}$ - | $5 \mathrm{H1}$ | ${ }^{1 / 42 *}$ | 30 |
| 1F1** | 7-1 | 10AB* | ${ }_{1}{ }^{151}$ | ${ }_{1}^{1 \mathrm{~B} 2 *}$ |  |
|  | 6-1 | 6AA* | ${ }_{5}^{5 \mathrm{E} 1}$ | $1{ }^{102}$ | D |
| 1K1* | 5H1 | 5 | SE1 | 1 E 2 |  |
| 1L1* | 1L1 |  |  |  |  |

*Denotes 4 prong base-ot hers octal. 73 .
A 1208 . specify type desired. NET

## KELLOGG TUBES

A1010. Type 401. Original Kellogg detector amplifier type.
A1011. Tyne 403. For use in


## GENUINE G.E.

 NEON GLOW LAMPS

EDISON PASE

| No. | Type | Finish | Watts | EACH |
| :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A6452 }}$ | G10 | Clear | 1/2 | 36 c |
| A6451 | G10 | Clear |  | 36 c |
| A6458 | G10 | Clear | 1 (200-240V.) | 3 cc |
| A6450 | S14 | Clear |  | 45 c |
| A6455 | S14 | Orange |  | 49 c |
| $\begin{aligned} & \text { A6456 } \\ & \text { A6453 } \end{aligned}$ | S14 | $\begin{aligned} & \text { Red } \\ & \text { Clear } \end{aligned}$ | $\stackrel{2}{3}$ | 49 c |
| CANDELABRA BASE |  |  |  |  |
| Ā6454 | T41/2 | Clear | 1/4 | 360 |
| BAYONET BASE |  |  |  |  |
| $\overline{\text { A6457 }}$ | T41/2 | Clear | 1/4 | 36 c |

## PORCELAIN SOCKETS



Designed for neon
lamps. Highest guality porcelain construction. fondy screw termina
A6459. Edison Base. Cleat mount- ©c A6460. Edison Base. Sub-panel mounting. NET.......................... A6461. Candelabra Base. Subpanel mounting. Ne Base. Sub-panel mounting. NET.


See page 175 for panel mounting sockets for candelabra bulbs.


The well-known, highly efficient G.E. Tungar Bulbs. Used in many standard chargers. Will
replace Rectigon bulbs of the same rating.

| No. | G.E. Type | Amps. | Fig. | EACH |
| :---: | :---: | :---: | :---: | :---: |
| A6440 | 277465 | $\frac{2}{2}$ | A | S2.94 |
| A6441 | 195528 | 2 | B | $\mathbf{2} .94$ |
| A6442 | 289881 | 6 | C | 2.94 |
| A6443 | 189048 | 5 | D | 4.41 |
| A6444 | 189049 | 6 | D | 4.41 |
| A6445 | 217283 | 15 | D | 8.82 |

## MALLORY BIAS CELLS

Designed principally to bias first audio amplifier tubes in high gain amplifiers. Eliminates necessity of using high capacity cathode bypass condensers. May also be used
to furnish initial bias for RF, IF to furnish initial bias for RF, IF and AVC circults. Size, only $11 / 3 z^{\prime \prime}$ quenci Provid anreor $11 / 4$ volt $\pm 10 \%$. Cells may be used in series for higher voltages. Eliminates distortion caused by conf 11872 volt A11871. $11 / 4$ Volt Type.
18.

## BIAS CELL HOLDERS

| No. | Type | For | EACH |
| :---: | :---: | :---: | :---: |
| A11970 | GB11A | 1 cell | GC |
| A11971 | GB12 | 1 cell | 12 C |
| A11972 | GB11B | 2 cells | 9 C |
| A11973 | GB13 | 3 cells | 15 C |
| A11974 | GB14 | 4 cells | 21 C |

# Now EIICDIECW: Tat Equipment 



## NEW 503 AND 504 TESTERS

## NEW OBSOLESCENCE-FREE FILAMENT VARIVOLT SELECTOR

Iwo new instruments by Supreme incorporating exclusive engineering and design features that anticipate tube and circuit with full confidence that they cannot become obsolete. Drly Supreme provides the filament Varivolt system; allows the selection of any filament voltage from 1.4 to highest value used. Supreme continues the "double floating" filament return selector circuit allowing the selection of the proper filament return lead. Tube tester in both instruments provides dual sensitivity leakage test of all tubes. For cathode to heater leakage a 200,000 olim sensitivity is provided. at either 200,000 ohms or 2 megohms. Push-button operation assures rapid, accurate testing with a minimum of adjustment. mounted with directional arrows leading to each functional switch. Push-buttons are of the heavy wiping type to minimlze contact resistance and assure accurate trouble-free operation. Pre-aged ceramiciṇsulators are used for accuracy and dependability.

## NEW MODEL 503 TUBE TESTER

This new Supreme Tube Tester provides a complete test of all of the newest as well as all standard type tubes. Tests televiston and loctal tubes including the " 7 " series, new single-ended types, gaseous rectifiers. magic tuning eyes, ballast tubes, and pilot lights, as well as the older Glass tubes. Convenient "Arrow-way" testing system uses arrows leading from tube chart designations to the controls. All tests made with proper applied anode voltage throngh the correct load, assuring an accurate
test. Has twenty-three available filament voltages and positive visual test. Has twenty-three available filament voltages and positive visual
check for open filaments. The 4 "square meter has a "Good-?-Bad" scale. Sturdy oak case with hlnged cover; black panel with alumiaum trim and red and ivory fittings. Tests separately each section of multi-section tubes such as diode-triodes, double diodes, etc. This instrument is the $110-130 \mathrm{~V} .60$ cycles A.C. Wit, 15 lbs .
A10265. NET CASM PRICE
Terms: $\$ 4.95$ down, $\$ 4.95$ monthiy for 9 months.

## NEW MODEL 504 TUBE \& SET TESTER

A compact portable testing laboratory. Combines Model 503 tube tester and resistance. Uses the "Speed-Wiy" push-button testing syse, current, buttons used for tube tester and multimeter measurements. Multimeter circuit has a total of 31 ranges and functions: 0.5 -25-100-250-500-1.000. 2.500 volts D.C. at 1,000 ohms per volt; $0-500$ microamps-2.5-10-50-250 M.A. and $0-1-10$ amperes D.C.; $0-5-10-50-250-1.000$ volts A.C.; $0-5-10$ -$50-250-1,000$ volts $A$.C. for output meter use. Ohmmeter has 5 ranges. 0-200-2,000-20,000 ohms, 0-2-20 megohms energized by self-contained power supply. All ranges except 2.500 volts D.C. and 10 amperes operate from one set of pim jacks. All condensers checked for leakage up to 20 megolims on meter. Electrolytics. including high voltage filter con-

A 10260 . NET CASH PRICE

Terms: $\$ 7.25$ down, $\$ 5.94$ monthily for 11 months.

## NEW MODEL 592-593

 COMBINATION TESTER AND ANALYZERThe 592-593 Tester-Analyzer combines in one compact case the Universal Analyzer Model 593 . Combination is Anal for all tube circuit testing is ideal for all tube circuit testing and anable, a full set of adapters including loctal type and a set of test prods. The solid oake case comes complete with slip-hinged cover. carrylng handle, bronze plated hardware, and rubber feet. Regardless of the method of amalysis used, this comblnation instrument will be found to be indispensable. Complete specifications for each individual unit are fully described on this page. Size, $91 /{ }^{1 / 2} \times 67 /{ }^{\circ} \times 13$ Shpg. wt. 15 lbs.
A 10259 . NET
$56^{20}$


Terms: 56.30 down, $\$ 5.16$ monthly for 11 months.

## FAMOUS MODEL 542 POCKET LABORATORY

 Here is an extremely compact. purtable pocket laboratory at aremarkably low price. The full-size $3^{\circ}$ square meter has an accurate 200 microampere movement with a sensitivity of 5,000 ohms per volt. A knife-edged pointer reduces parallax to a minimum, thus permitting easy readings. The 24 ranges of the instrument are as follows: 0-3-6-30-150 M.A. D.C. $0-6-150-300-1,500$ volts D.C.;
$2.000-20.000-200.000$ ohtins and $0-2$ megohms; 0-6-30-150-600 volts A.C.; 4 decibel ranges from - 6 to
 are the same as the A.C. volt scales. All of the ohmmeter ranges, including the $0-2$ megohm range, are operated by self-contained batterD.B. ranges in addition to the zero obms ad all voltage, current and black molded bakelite case has zero ohms adjustments. The durable black molded bakelite case has attractive inetal panel. Compact size self-contained batteries. An indispensable instrumpent to take with wou on those outside service calls. Equally useful in the shop. Shpg. wt. 21 bs.
A10228. NET CASHPRICE
Terms: $\$ 4.73$ down, $\$ 4.73$ monthly for 3 months.

[^1]
# Now EOTFCTCW: 7at Equinment 

## 561 COMBINATION TYPE SIGNAL GENERATOR



The Model 561 includes (1) an A.F. oscillato continuously rariable from 15 to 15,000 cycles, (2) an unmodulated R.F. oscillator from 65 kilocycles to 60 megacycles, (3) a variable audio modulated R.F. signal using the internal audio oscillator, (4) a metered variable modulation percentage control from 0 to $75 \%$. (5) a frequency modulated oscillator having a 30 kilocycle band width. External modulator may air-trimmer condensers for permanent calibra tion, Large 6 inch 11 uminated dials. 5 bands cover 65 kilocycles to 20.5 megacycles on fundamentals and to 60 megacycles on harmonics. A.F. oschitator has output of 150 miliwatts and open circuit voltage of 35 volts $60.600,6000$ and 50,000 ohms. Also includes 60. $600,6.000$ and 50,000 ohms. Also includes attenuation selection; dual ratio knobs; double shielding; built-in V.T. voltmeter, For 15 V V. 60 cycle A.C. Size. $12^{\prime} \times 151 / 2^{*} \times 8^{\prime} / 4^{\prime}$. Shpg. wt., 25 lbs.

## NEW SUPREME MODEL 560 VEDOLYZER

A new technique developed by Supremefor dynamic the type signal at any stage of its journey through any each circuit from This system allows analysis ore made at most sensitive portions of the circult where application of ordinary test equipment would be useless. The Vedolyzer allows distortion to be traced to its source. Herctofore the mode of diagnosing trouble has been to make sure each circuit in the receiver was functioning according to D.C. resist ance and voltage tests. This often led to erroneous conclusions resulting from the peculiar action of
radio frequency energy. A path which may test radio frequency energy. A path which may test "closed" to ordinary test methods is capable of acting just the opposite to R.F. The vedolyze prevents just such mistaken analysis. Lets you see where distortion starts and the effect of corrective ages without disturbing receiver circuits. Easily ages without disturbing receiver circuits. Easily ance, oscillator feed-back and injection voltages R.F, signal and D.C. operating grid voltages
 nverse feed-back, and various other values in cir cuits of any complexity. Location, amount, and frequency of hum, intermittent reception, and other heretofore baffling measurements are easily and quickly made.

## 'SEE THE SIGNAL" TECHNIQUE FOR FAST COMPLETE BROADCAST AND TELEVISION RECEIVER SERVICING

> Specifications. The Vedolyzer contains, (1) a frequency compensated broad-band amplifier with a band width from 20 cycles to 4.5 M.C. which includes A.F., I.F., broadcast, and televislon video frequencies. Amplifier is three stage, high-gain, using new televtsion tubes, Output flat to within 1 D.B. over ranse. Has two separate input jacks for low ( $80 \mathrm{D} . \mathrm{B}$. gain) and high input ( $45 \mathrm{D} . \mathrm{B}$; gain). Works into elther Internal scope or both scope and internal vacuum tube voltmeter. (2) 3 R.F. and A.F. ocilloscope with all circuits and controls necessary to measure modulation factor and distortion and view R.F. and A.F. wave forms. (3) Balanced bridge vacuum tube voltmeter $0.03-.3-3-30$ volts R.F.. 0-1000-10.000-. 1 meg. -1 meg .10 meg .100 meg .1000 meg . Has decimal type easy-reading meter scale. (4) Wave analyzer and frequency meter. (5) Multiple probe input for checking a number of stages simultaneously. Vacuum tube voltmeter requires only one zero A 10219 Supreme Vedolyzer NET CASHPRICE

> Terms: $\$ 13.50$ down, $\$ 10.63$ monthly for 12 months. Send deposit with order. 90


## 571 SIGNAL GENERATOR

The Supreme 571 Signal Generator is an instrument of unquestioned quality and utility. In accuracy and deperdability it challenges the aboratory types of Signal Genemtors costing several times an
much. Advanced circuit design produces an oscillator so free from frequency drift that a $20 \%$ change in line voltage results in an R.F. frequency shift of less than $1 / 100$ of $1 \%$. New circuit uses air dielectric trimmer condensers and 1 m pregnated iron-core inductors assuring permanent calibration. Positive tracking throughout complete tunabie range. Covers all intermediate, broadcast, and high frequencies in 5 bands: A- 65 to
$205 \mathrm{~K} . \mathrm{C} . \mathrm{B}-205$ to $650 \mathrm{~K} . \mathrm{C}$. $\mathrm{C}-650$ to $2050 \mathrm{~K} . \mathrm{C}$. D 2050 to $6500 \mathrm{~K} . \mathrm{C}$. E- 6.5 to 20.5 megacycles. Harmonics of the " $E$ " band are almost unlimited and provide frequencies to 82 megacycles. Standard 400 cycle alignment and a $\mathbf{7 5 \%}$ level to simulate present day high level broadcast alignment and a roo level to simulate present day high level broadcast unmodulatet carrier. The 400 cycle audio note ls com pletely free from frequency change. R.F. output, il volts on all bands, fully controllable
 A10255. NET CASHPRICE.

Termis: $\$ 4.12$ down, $\$ 4.12$ monthly for 9 months.


## 562 AUDOLYZER

The Supreme Audolyzer is the fastest low-priced dynamic test nstrument on the market. This new tester actualy allows you
to hear the signal from a station or test oscillator at consecutlve points as it passes through the receiver. Consists of a high-gain R.F. I.F., and S.W. frequencies R.F.E. I.F.. and S.W. frequencies in 5 continuously varimble
bands. Completewith demolulator, audio system, and speaker Also contains a vacuum tube voltmeter with ranges of $0-1-3-$ D.C., with an input impedance of 15 megohms. Signal is traced through hassis under test means of Audolyzer test probes and heard in the of Audolyzer speaker response. Circuits of Audolyzer may be used eparately with vacuum tube voltmeter for locating intermittents. All D.C. operating potentials, as well as AFC and AVC voltages and D.C. grid voltages can be measured without disturbing operation of receiver under test. Checks location, amount, and frequency of hum. Allows determination of oscillator frequency. May be used with any oacilloscope for seeing distortion. $12^{\circ \times 151 / 2 " x 10^{\prime} . ~ S h p g . ~ w t ., ~} 30 \mathrm{lbs}$.
A 10215 . NET CASH PRICE.......................... 90

215: NET CASH PRICE....ify for 12 months. $\$ 8.50$ down, $\$ 6.49$ monthly

## 546 3" OSCILLOSCOPE

This instrument is a real necessity in tory. The use of a cathude-ray tube having a screen provides a more smaller tube. Intermittent operation of a set, hum, sensitivity, overload, form distortion, etc., are quickly and easily checked. Visual alignment of R.F. and I.F. stages, checking the denodulation characterrstics of second detectors and stage-by-stage gain measurements are but a few of the profitable uses. Cathode-ray oscilloscope testing is a
recognized necessity when checking and recognized necessity when checking and
adjusting modern radio receivers. The oscilloscope can be used as an A.C. D.C., or R.F. voltmeter having char per volt" and input resistance. It has an nertia-less, weightless pointer which cannot be bent or broken and is not subject to injury on overloads. When properly used and its readings interpreted correctly, it represents a powertul tool which enables the development of a rapid, profitable serviclag technique. All controls are on front panel. External synchronization may be used. With instructions For 115 V. 60 cycle. Size, $121 / 2^{\circ} \times 131 / /^{\circ} \times 71 /{ }^{\circ}$
A10258. NET CASH PRICE
erms: $\$ 6.60$ down, $\$ 5.40$ monthiy for il months.

## 582A SIGNAL GENERATOR

The new 582A frequency-modulated Signal Generator is the first on the narket to offer push-button selec ton of 9 popular broadcast and I.F. irequencies ay well as 5 continuous bands from 70 K.C. to $15 \mathrm{M} . \mathrm{C}$. on undamental írequencies. Harmonics rom last band extend to 60 mega cycles. Muminated dial bights only and andirequency being used ermeabiondensers cossure high ". air rimmer condensers assure high ol due to temperature and humidity Has built-in frequency modulator
 Has built-in frequency modulato
 Shpg. wt.. 32 lbs
A10213. NET CASH PRICE
Terms: 57.35 down, $\$ 6.03$ monthly for 11 months.
$65^{\circ 0}$
MODEL 582 SIGNAL GENERATOR. Incorporates all of the features of the Model 582A described above. but does not include the push til fixed broadcast or 115 V. 60 cycles. Shpg. wt., 31 lbs.
A10214, NET CASH PRICE
\$58.75
Terms: $\$ 6.60$ down, $\$ 5.40$ monthly for 11 months.

# Tan 



## 1604 MULTI-PURPOSE SET TESTER

A sensational new Set Tester backed by Triplett's "Red Dot" Lifetime guarantec. Outstanding features are the 12 A.C. and D.C. voltage ranges, direct current ranges; low and direct current ranges; low and
high ohm ranges; complete Free-Point testing; condenser tester; and provisions for D.B. readings. Individual ranges are: readings. Individual ranges are
$0-10-50-250-500-1,000-2.500 \mathrm{~V}$ D.C. at 25,000 olims per volt:
$0-10-50-250-500-1,000-2,500$ V. A.C. at 1,000 ohms per V.; $0-50$ microamperes, $0-1-10-50-250-500$ M.A. mid. capacity range including electrolytic leakage test and provision for -20 to +55 D. B. readings. The Free-Polnt tester makes all series and parallel meter connections through 7 sockets, including Loctal and Bantain Jr. types. Standard R.M.A. markings are employed. An exclusive patented circuit permits but one zero-setting adjustment for all resistance ranges. The plug-in rectifier simplifies replacement in case of accidental damage. Rectifier incorporates a new copper-oxide element which is pre-calibrated to a factory standard. Factory calibration is duplicated when rectifier is plugged into tester. It is unmecessary to return instrument to factory for recalibration. The Model 1604 Is housed $141^{\prime} \times 75 / \times 41 /$ atractive steel case with black suede baked enamel finish. Size, leather strap handle and rubber, etched in red and silver. Case has accessories and instructions. Conuplete with all ac cover has space for cessories. Shpg. wt. 26 lbs. Complete with all ac-
A9958. NET CASH PRICE
$\$ 48^{84}$
TIME PAYMENTS: 54.89 down, 56.05 monthly for 8 months.

## NEW MODEL 1613

## TUBE TESTER

This new Tube Tester with full 6 scale meter, features the Triplett The Dot Lifetime guarantee. The graceful, flowing, streamlined appearance and color contrast greatly enlance its eye-appeal. Full assurance against obsolescence is made possible by a filament transformer variable in
steps from 1 to 110 volts. The Model 1613 has a fully balanced RMA tube testing circuit with leakage test for cathode and heater inter-element or any two elements. Checks for open filaments. Separate testa for multisection tubes and full-wave rec tifiers. It will not pass tubes which will not operate properly in a radio set or an amplifier
Provides for Loctal, "S". Bantam Jr., and Magic-Eye tubes, ballasts gas rectifiers, and pilot lamps, as well as the older types of glass, metal spray-shield, etc. Has a noise test phone jack and a separate line voltage meter. The illuminated roll chart provides maximum speed and simplicity of operation. It is the shortest lengtl chart in use although it contains over 300 tule types. The seamless stcel case is finished in baked suede enamel when trim. Size is $151 / 2^{\circ} \times 11^{\circ} /^{\circ} \times 61 / z^{\prime \prime}$ 49987 . Model 1613. Portable T. 42 los
A9987. Model 1613. Portable Tester. Asillustrated. $\$ \$, 14$
Has detachable cover and carrving handle. NET...........
A9986. Model 1612. Counter Tester. Same as above, but less cover and carrying handle. Size: $151 / 4^{*} \times 115 / s^{\circ} \times 6^{\circ}$
Wt., 38 lbs. NET
s29.24

PUSH-BUTTON TUBE TESTER


## \& V.O.M.

Model 1611. A combination Tube Tester and Volt meter carrying Dot:"Lif Red guarantee. Individual connection of cach tube element to separate termi-
nals insures against naisinsures against obsolescence. Fila-$1-110$ take care of all present and future tubes. An R.M.A.-approved emission type test circuit is employed. Tube testing is speeded up by means of the push-buttons and the new roll chart. The direct-reading illuminated meter for all types of tubes including Loctal, Bantam Jr. gas rectifiers, "S' types, ballasts and high voltage series, including the new $117 \mathrm{~V} G \mathrm{G}$. A Neon bulb positively indicates inter-element leakage. The V.O.M. ranges are: $0-10-50-250$ -$500-1,000 \mathrm{~V}$. D.C. at 1,000 ohms per volt and $\wedge . C$. at 400 ohms per volt; $0-1-10-50-250 \mathrm{M}$.A. D.C.; $0-500-300,000$ ohms; $0-1.5-3$ megohms. Uses a plug-in rectifier. Metal case with re-
muvable cover has black suede finish. Size $151 / 4^{*} \times 115 / 0^{\prime \prime} \times 61 / 2^{\prime}$. For 110.125 V . 60 cycles. Wt. 42 lbs.
A9 969 . NET CASM $\$ 4.85$ down, $\$ 6.01$ monthly for 8 months

A9970. MODEL 1610. Tube Tester only Same as Model 1611 above, but does not in ciude V.O.M. section
\$38.22
$\$ 3.82$ down, $\$ 4.73$ monthly for 8 months.
1691 3-INCH OSCILLOSCOPE


[^2]
## -LOOK

FOR
THE
RED
DOT"
Testers to Triplett is sacrificed to build Testers to the highest standards of perfor

MODEL 1616 TUBE TESTER \& VOLT-OHM-MILLIAMMETER


A dynamic mutual conductance Tube Tester and V.O.M. with Triplett's "Red Dot" Lifetime guarantee. Tests all types of tibbes switches and roll chart simplify testing Fution provision if made for all leakage tests. The Illuminated "Good-Bad" meter scale also reads: 0-10-50-250-500-1.000 V.D.C. at 1.000 ohms per volt and A.C. at 400 ohms per volt: $0-10-50-250 \mathrm{M} . \mathrm{A} . \mathrm{D} . \mathrm{C} . ; 0-500-300.000$ ohms; $0-1.5-3$ megohms and -10 to +42 D.B. The attractive black suede finished metal case is $151 / 4^{\prime \prime} \times 115 / 8^{*} \times 61 / 2$. Removable cover. For operation rom 110 -120V. 60 cycles.
A998. wit. NET CASHPRICE. . . $\$ 7$
$\$ 7.19$ down, $\$ 8.90$ monthly for $B$ months.
A9981. MODEL 1615. Dynamic Mutual Conductance Tube Tester. Same as Model 1616 but less V.O.M. section $\$ 62.07$
NET
56.21 down, 57.68 monthly for 8 months.

## SEND DEPOSIT WITH ORDER <br> FOR EASY TERMS PURCHASE

Please include 3 business references and employment information with order. Time payment forms will be forwarded immediately for your signature. This will speed up handing of your order. Time payment
terms, where available, are glven under terms, where available,
each instrument listing.

1630 SIGNAL GENERATOR


An outstanding, extremely accurate Sipnal Generator. Covers from 100 KC to 30 MC in six ranges. Each coil is individually calibiated The tracked for linearity over its entire range. the unusually large direct-reading dial has a total scale length of $525 / 6^{\circ}$. Zero leakage is attained through triple-shielding. A continuosly variable attenuator controls output from zero to maximum. Rigid construction metal case is finished in black suede enamel Etched panel is frosted silver suede enamel. With removable cover. Complete with trim. instructions and accessories. Size, $141 / 3^{" x 7} /{ }^{\circ}$ : S44 ${ }^{10}$
 $\$ 4.41$ down. $\$ 5.46$ monthly for 8 months. MODEL 1631
Same as Model 1630, but with electronic frequency modulation variable from 5 to 40 A9968. NET CASH PRICE $\$ 3.9 .90$ $\$ 5.39$ down, $\$ 6.67$ monthly for 8 months.

1671 VIBRATOR TESTER


A new vibrator tester for checking all 6 volt type vibrators. Features the "Red Dot" Lifetime guarantee by Triplett. The flexible pushbutton switching and roll chart with 107 key
acttings make tester obsolescence-proof. Uses gettings make tester obsolescence-proof. Uses
seandard 5000 ohm- 8 mfd . test load. The 2 seandard 5000 ohm- 8 mfd , test load. The 2
color meter scale shows vibrator condition as color metes scale shows vibrator condition as loscope and external buffer condenser connections. Tester is fused for protection against shorted vibrators. Case is finished in black etched panel hassilver mark ${ }^{2} \times 41 / 2^{\circ}$. The black ings. Slipg. wt i, 22 lbs .
A9973. ${ }^{\text {NEASM PRICE. }}$
:3909

# FITipt 



## NEW MODEL 1213

## TUBE TESTER

A new Tube Tester by Triplett which carries the "Red Dot" Lifetime guarantee. Circuit used is of the approved RMA type. A unique feature of the 1213 is the hinged card-index tube chart. It permits a rapid and convenient means or locating the various tube types. sections o the chart can be quickly changed when new tubes are added, thus keeping them in their proper order. New tube listings for each section owners. The Model 1213 is one of the most versatile tube testers ever developed.

## MAKES TELEVISION TUBE TESTS

The Model 121,3 tests Loctals, Bantam Jr., high voltage series including the 117V6G, Single End types, Octal and Non-Octal, Magic Eyes Pilot Lamps, Eallasts, Metal, Glass, MG, Gas Rectifiers, Spray Shield tubes, and the rew series of Television tubes. Filament voltages are available from to 110 volts making the instrument obsolescence-proof. It has a fulty balanced circuit with leakage test for cathode-heater and inter-elements (with short test between any two elements), provisions
for checking open filaments, hot leakage check, and separate tests of for checking open filaments, hot leakage check, and separate, tests of separate recter is used for line voltage control. The attractive case of separate meter is used for line voltage control. The attractive case of The etched black panel is trimmed in silver grey and the etched black panel is trimmed in siver gre A9936. NET CASHPRICE
$\$ 256$

## MODEL 1232-A <br> SIGNAL GENERATORS

New improvements in this reasonably priced Signal Generator permit performance approaching that of laboratory precision equipment. 115 kc . to 30.5 MC . Calibrated coils assure accuracy. The bility. Total scale length is over $50^{\circ}$. Triple shielding and line filters minimize leakage. Band-switch and all parts are low capacity. Perfect attenuation. 400 cycle audio nete avallable. The $77 / /^{\prime \prime} \times 61 /{ }^{2} \times 55 /{ }^{\circ}{ }^{\prime}$ metal case is finished in black suede enamel. Panel is sllver and red 60 cycles.
A9

2929

## MODEL 1231-A

Same as the Model 1232A described above but designed for battery operation. Uses 1-221/2 tained anywhere. Size and appearance identical with the Model 1232A. Supplied with a complete set of self-contained batteries and all $151 b s$. A9947. NET
\$26.95


NEW 1280 TESTER FOR 10,000 VOLTS
The Model 1280 is equipped with a "Red Dot" Lifetime kuaran-
teed $4^{\text {a }}$ square instruteed $4^{\circ}$ square instrument which is recessed below the front panel. All metal contacts and parts inside the tester are placed at least
from the sides of the case for safety. The have been subjected to a breakdown test of 25,000 volts Posts are provided on front pane caution against slock at the high voltages encountered in television.

## FOR TELEVISION TESTS

Tests A.C. and D.C. volts in steps of 2,500 and 10,000 vole 1 and D.C. microamperes in steps ohms per volt for D.C and 5,000 ohms for A.C. The zase 1 s enameled in solld red to high voltares Using necessary when thers required for ordinary service work, any of the voltage and current measurements in Television, Receivers can be made. Case size, $71 / 8^{\circ} \times 61 / 2$ $\times 55 / 8^{\circ}$. Accessories include a pair of special high-tension leads with prods on one end and alligator clips on other end Shpg. wt. 12 lb
$\$ 30^{87}$ card. Wt, 101 bs.
A9949. NET
A 1700 . Bantan A9961. A 9962

## NET CASH PRICE.

A9963

## 1200A VOLT-OHM

## MILLIAMMETER

A compact universal A.C.-D.C. Volt-OhmMilliammeter featuriñg a Triplett "Red Dot" Lifetime guaranteed instrument. Twin meters angle case have separate A.C. and D.C. 1000 volts at 2000 ohms per volt: $0-1-10-50-250$ M. A. $0-1500$ ohms 1.5 mes. -3 mes. Has an additional "Backup" low-ohm scale of $0-500$ ohms with 15 ohm center scale reading. A.C. meter reads: 0-10-50-250-500-1000 volts. Volt age scales are direct reading; ohmmeter scales $71 / 6^{\circ} \times 61 / /^{\prime} \times 5 s^{\prime} /^{\prime}$. With leads, prods and batteries. NET
. $23^{35}$


## 1200.C - 5,000 OHMS PER VOLT

Same as Model $1200-\mathrm{A}$, but sensitivity is 5,000 ohms per volt. Has additional 250 microampere and $0-7 / 2$ megohm scales, suitable for and accessories. Shps. wt., 13 lbs. A9943. NET
s26.29

## 1200-E - 25,000 OHMS PER VOLT

Similar in appearance and design to Model 1200A. but the D.C. meter ohms 4 megohme Also has o-10 microampere with all accessories. Shing. we., 13 lbs . $\$ 30.55$

## MODEL 1220-B FREE-POINT

 TESTERDesigned particularly for those who preter the free-poin method of testing and resistance tests between any tube elements or to marked sockets accommodate all tubes including Loctals. Panel has 9 automatic switch-type and 9 single jacks. May be used with any volt-ohm-milliammeter. Complete with plug, room for all accessories Size $77 / 0^{\circ} \times 1^{2} \times 55^{\circ}$ With instructions, guarantee, and registration

88.

## SEND DEPOSIT WITH ORDER

## FOR EASY TERMS PURCHASE

Please include 3 business references and employment information with order. Time payment forms will be forwarded imme diately for your signature. This will speed up handling of your order. Time payment terms, where available, are given under
each instrument listing.

COMBINATION INSTRUMENTS


MODEL 1206. Combines the 1200A V.O.M. 1213 Tube Tester, 1220 B Free-Psint Tester; and 1231 A Signal Generator. Carrying case
$\$ 90.34$
$\$ 9.03$ down $\$ 11.18$ a month for 8 montlis.
MODEL 1207. Combines the 1200A V.O.M., 1213 Tube Tester, 12208 Free-Point Tester, and 1232 -A Signal Generator. Carrylng case is
s92.63
$\$ 9.26$ down, $\$ 11.47$ a month for $\$$ months.
MODEL 1208. Combines the 1200E V.O.M. 1213 Tube Tester, 1220 B Free Point Tester, . $51 /{ }^{\circ}$ Shpg wht 45 lbs
$\$ 99.81$

## MODEL 1252 VACUUM TUBE VOLTMETERS

## Incorporates a Red

 Dot Litetime guaranof the tilting type with separate D.C. movements. The galvanometer indicates bridge balance while the other is a 4 range voltmeter reading peak A, Instrument is calibrating-an exclusive Triplett development. The tube on end of cable reduces input capacthe tube on 6 mmfd Input registance, 10 megohms on A.C. Ranges are 0-3-15-75-300 volts. Any A.C. or D.C. voltage of low magnitude can be easily and quickly checked with out current draln or disturbing the circuit. urements. Metal case finished in black suede enamel; $77 / 8^{\circ} \times 6^{1 / 2} 2^{\circ} \times 55 / s^{7}$. Panel is silver and red on black. Wt., 20 lbs.
A9922
(ASH PRICE
$547^{36}$
$\$ 4.74$ down, $\$ 5.86$ a month for 8 months. Send deposit with order for quick service.

## MODEL 1251

Model 1251 self-calibrating Vacuuin Tube Voltmeter is the same as the Model 1252 , but has tube mounted inside the case rather than on the cable.
A9925. NET CASH PRICE $\$ 4.72$

## PORTABLE APPLIANCE TESTER <br> The Model 2000 Portable Appliance quick and accurate <br> 

 means of testingpower consumption of radios, refrigerators houseliold appliances, and motors under actual operating conditions. The tester containg wattmeter and a voltmeter of the twin instru ment type. Line voltage and wattage may be read gimultaneously. Wattmeter ranges are 1500 watts at 220 volts and 750 watts at 110 volts. Current rating of the Model 2000 is 7.5 amperes. The dual voltmeter scale provides readings of $0-130$ and $0-260$ volts A.C. Tester has two toggle switches, one to control the two voltmeter scale readings, and the other to pro of the motor load. The heavy leather carrying case with handle measures $31 / 16^{\circ} \times 57 / 8^{\circ} \times 21 / 8^{\circ}$ it is equipped with a leather flap which folds over the twin instrument to protect the face and snaps in place when tester is not in use Ample space inside case for cords and plugs which are included with accessories.
Shpg. wt., 6 lbs.
A9950.
s18

#  

## TRIPLETT POCKET

 VOLT-OHM-MILLIAMMETER

## MODEL 666 H

A new and improved instrument built around a sensitive. ac-
curate
"Red Dot
Rife time guarantecd met er. Provides the following scales: $0-10-50-$
$250-1,000-5.000 \mathrm{~V} . \mathrm{AC}-$ DC at 1,000 ohms per volt; $0-10-100-500 \mathrm{MA}$ D.C.; 0 0.300-250,000 ohms. Higher resistance readings may be obtained with external
battery. A compenbattery. A compenrectifier assures accurate A.C. voltage readings Complete with battery and specially insulated Black leads with clips, tested at $11,000^{*}$ volts. Shpg. wt., 6 lbs.
A9926.
s1420
A9928. Model 666. Same as 666 H but less $0-5,000 \mathrm{~V}$. scale. Has additional 1 M.A. D.C. and 0.500 V . ranges.
13.72

A9929. Attractive leather carrylng case with handle for the above iastruments. 0-25 AMP. SHUNTS
A9933. For Model 666H A9934. For Model 666.
${ }^{\mathrm{s}} 1.96$
TRIPLETT MODEL 1181.B PORTABLE LABORATORY


Combines three instruments in one case for complete circuit analysis. Includes (1) the aligning and balancing all radio sets; (2) the Model 1125 -A Universal Volt-Ohm-Milliammeter for point-to-point analysis and as output meter; (3) the Model 1166-B Free-Point Auxiliary Set Tester ior free-point and standard analysis tests. The 1181-B Tester is ultramodern; it will handle all metal tube as well as glass tube circuits. Triplett "Red Dot" meter
reads: $0-15-75-150-750$ Volts A.C. or D.C. at reads: $0-15-75-150-750$ Volts A.C. or D.C. at
1,000 ohms per volt; $0-1.5-15-150$ M.A., D.C. 1,000 ohms per volt; $0-1.5-15-150$ M.A.. D.C.
$0-15-150$ M.A. A.C.; $0-1500$ ohms. $1.5-3$ megohms. Osclllator has four ranges from 110 sockets with jacks for all analyses. Quartered oak case with removable cover; size: $161 / 2^{\prime \prime}$ accessories, and instructions.
Shpg. wt., 17 lbs . A9932. NET.
${ }^{3} 40^{\circ}$
A9932. NET. $\$ 5.10$ down, $\$ 5 \mathrm{mo}$. for 8 mos .
FREE.POINT SET TESTER
1166 B


11668
on fack of Complete with adapters, including loctal, and nstructions. Less case. Etched metal panel. Shpg. wt, 8 lbs. A9940. NET..

## 432-A DIRECT-READING TUBE TESTER

The Readrite Model 432-A is a brand new quality tube tester. It
uses a square $3^{\prime}$ precision " Red Dot" uses a square ${ }^{\text {a }}$ precision Red Dot with a 3 -color Good-Bad directreading scale. Meter has 2 highquality sapphire jewel bearings. A separate shadow-type A.C. meter permits accurate line voltage adjustments. An emission type circuit is used for its reliability and ease of load values, as specified by the R.M.A. and the tube manufacturers, are applied to the tube under test. The final reading will show definitely the true condition of the tube. Unsatisfactory tubes are easily detected. The Model 432-A quickly and accurately checks metal, slass. sprayshield, metal-glass, gas rectifier. Loctal, Bantam Jr. highvoltage series like the 117 zio, and ballast tubes. Separate plate tests can be made on liodes and rectifiers. A sensitive neon bulb determines the slightest inter-clement leakages and shorts. Revised tube charts are furnished ree tos all registered owners. Attractive black icatheretye case
 A9 907. List, $\$ 29.75$. NET. A9908. Model 432-A Direct-Reading Tube Tester. Supplled in handsome case of quarter-sawed golden oak, instead of leatherette
finish. $\$ 36.00$. NET ...................................


An outstanding quality test instru-
ment at a price within the reach of ment at a price within the reach of everyone. It combines the Model
$432-A$ direct reading Tube Tester 432-A direct reading Tube ccurate. high grade Volt-Ohm-Mllliammeter. high grade Volt-Oim-Miliammeter. panel which contains the range panel which contains the range
selector switch, the ohmmeter zero adjuster . and the, jacky. Uses a Triplett "Red Dot" meter with lifetime guarantee. Ranges of the Volt-Ohm-Milliammeter section are: $0-$ 10-50-250-500-2,500 V. D.C. at 1.000 ohms per volt; 0-1-10-100 M.A. D.C.: $0-500$ (with 25 ohms at center scale) 100,000 ohms; $0-1.5$ megohms and 0-10-50-250-500-2,500 V. A.C. The ohmmeter circuit is battery-operated and provides
highly accurate resistance measurehighly accurate resistance measurement scales. pearing black leatherette case
measures $121 / 2^{\prime} x 8^{\prime} 1 / 2^{\prime} \times 7^{\prime}$. Cover is removable. Has strong leather strap for carrying. Panels are silver and black. For $110-125 \mathrm{~V}$ 60 cycle A.C. operation. Shpg. wt., 201 bs . A9906. NET.


## 6 VOLT SUPPLY FOR TESTERS

A specially designed unit for operating tube testers, small electrical appliances, etc. from a 6 volt storage battery. Delivers 110 volts 60 cycle A.C. Output conservatively rated at
$41 / 8^{*} \times 61 / 4^{\circ} \times 8^{\circ}$. Shpg. wt., 23 lbs . A9923. NET

## POCKET



Shpg. wt., $5^{1 \mathrm{lss}}$

## VOLT.OHM

 MILLIAMMETERS
## MODEL 739

Uses a Triplett "Red Dot" 3" meter with sapphire bear-
ings. Ranges are: $0-15-150-$ $750-1,500$ V. A.C. and D.C. at 1,000 ohms per volt;
$0-1.5-15-150 \mathrm{M} . \mathrm{A} . \mathrm{D} . \mathrm{C} . ;$ and 0-500-500,000 ohms with internal battery supplied.
Sturdy molded case has Sturdy molded case has
rounded corners. Size, $31 / 16^{\prime \prime}$ rounded corners. $\times 57 /{ }^{\prime} \times 21 / 1^{\prime}$. With battery, test leads, and alligatorclips. The "Red Dot" 3" Triplett meter has genuine sapphire bearings. Ranges are. 1.500 V volt; $0-1.5$ 1500 V.C. at C. $0.500-500,000$ ohms with internal battery supplied. Molded case,



## 612 UNIVERSAL

The 612 uses a $3^{\text {". }}$ Red Dot type Triplett precision meter with sapphire bear-
ings. Rankes are: $0.15-150-$ ings. Ranges are: $0.15-150-$
450 V. A.C. and D. C. $0-15$ M.A.d.A.C. and D.C.
$0-20,000-100,000$ ohms and $0-20.000-100 \mathrm{mf}$. Selector switeh for all ranges. Curswitch for all ranges. Cur-
rent supply for ohmmeter rent supply for on en or D.C. source by means of cord
and plug. Black molded and plug. Black moded sllver and black panel. No
With test leads. Wt., 5 lbs.
NiET. With test leads, $\qquad$ $\$ 7.79$ A9915. Carrying Case. Leather case with
handle for Models 612.738 or $739 . \$ 3.53$
NET.

## D.C. VOLT-OHMMETERS

A9919. Model 511. A handy pocket-size instrunent for D.C. voltage and resistance testing.
Uses a square Readrite meter with full open dial. Reads $0-3-30-300 \mathrm{~V}$.
$\mathrm{D} . \mathrm{C}$, and 0.10 .000 ohms. D.C. and $0-10.000$ ohms.
Wood case. $25 / 3^{\circ} \times 21 / 4^{\prime \prime} \times 2^{\prime \prime}$. Wood case. $25 / /^{\circ} \times 21 / 1^{\prime \prime} \times 2^{\prime \prime}$.
Furnished with self-conFurnished with self-con-
tained 3 volt battery and leads. Shpg-wt., 4 lbs. $\$ 2.79$
A9920. Model 510. Similar to Model 511 above but reads 0.300 V . D.C., and $0-10,000$ ohms. Wit' leads and battery. $\$ 2.20$
Wt., 4 bs . NET.............. 20

## MODEL 710A SET TESTER



This Readrite Standard Analyzer completely and accurately tests all parts of any recelver circuit. The meters may be connected lato the various circuits for measuring voltages and
currents. This is done by means of the analyzer currents. This is done by means of the analyzer cable plug and adapters. The 3 meter ranges D.C.; and 0-10-140-700 V. A.C. External jacks D.C.i and 0-10-140-700 V. A.C. External jacks
permit using these 9 scales separately. A 12 permit using these
position selector switch connects the meters into various parts of the circuit under lesis-
Provision has been made for measuring resistance up to 100.000 ohms and for testing condensers. Leatherette covered case measures $11^{\circ} \times 81 /^{\circ} \times 4 \%$ Complete with plug. cable.

${ }^{51} 6^{17}$
A9903. Model 712A. Same as the Model "Red Dot" 2 " D.C. Voltmeter having a resistance of 1,000 ohms per volt. Scales sarme as the Model 710 A . In leatherette case. With aNET......................... $\$ 21.76$

## LOCTAL FREE-POINT

$710 A$ ADAPIERS FOR ABOVE
A99 16 Loctal socke
$712 \mathrm{~A}, 72 \mathrm{~A}$ and 730 A .

$73 \mathrm{c} |$| A9 |
| :---: | :---: |
| 712 A, |
| NET |

ocket adapter for the 710A 9921 Loctal plug adapter NET

POINT-TO-POINT ANALYZER


Model 720A. Measures resistance, capacity. current, and voltage of any circuit. Tests made by plugging into receiving set sockets. The tester"s socket terminals are arranged according D.C. meters which provide following ranges: D.C. meters which provide forlowing anges $0-10-25-150-750 \mathrm{~V}$. A.C. Selector switch provides a convenient means for obtalning these randes. Meters are accurate and exceptionally well-bulit to give long, dependable service. Teater has compartment for holding analyzer cable, plug. and adapters. The durable, leatherette-covered case measures $11^{1} x 8^{\prime \prime} \times 43 / 4$ when closed. Supplied complete with analyzer
cable, plug, adapters, and full cable, plug, adapters. and 1 hul A9900. NET
$\$ 1470$ A9901. Model 730A. Same as the Model 720 A described above, but with a Triplett "Red Dot" 2" D.C. Voltmeter having a resistance of 1,000 ohms per volt. Scales same as the Model 720 A in ln leatherette case. With
accessories. Wt., 11 jbs . $\$ 18.23$ accessories. Wt., 11 lbs.
NET

## MODEL 557 SIGNAL GENERATOR

 The Model 557 is a direct-reading all-wave Signal Generator covering from 110 KC to $2,00 \mathrm{KC}$ in S bands. Individually calibrated plug-in type coils set a new standard for obtaining laboratory accuracy at staw cost Instrument is completely shielded ag modulated and unmodulated are avallable. Perfect attenuation and stability modulated, are extremely accurre measures $12^{*} \times 61 / 2^{*} \times 53 / 4^{*}$ when closed. Panel is silver and black. Supplied complete with coils. tubes, batteries and instructions. Shpg, we., 12 lbs.
A9905. NET.


A9904. Model 554A, Similar to the Model 557解 which provide an accuracy
as aloove. Shug, wt. 12 1bs as alr

# (ac) R.C.A. TEST EQUIPMENT 

## NEW RCA-RIDER "VOLTOHMYST"



Rapid obsolescence of test equipment Many annoying and costly problem. Many servicemen have purchased a that in a short time it has become obsolete because of a new development in circuit design. The RCA-Rider Voltohmyst with its 10 billion to resistance ratio is an excellent example obsolescence-minimized equipment The range is ample for present and future tests on Television and radio receivers, transmitters, aircraft radio, power sound, and facsimile. For the arst time, the VoltOhmyst makes it possible to measure rapidly and ac5000 volts without loading the circuit under test. 16 megohm input on ranges under test. 16 megohm input on ranges from 500 to 5000 voltegothm input from 500 to 5000 volte. Tests bia cuits, photocell circuits, television cirvoltages across tuned circuits with the signal present can be measured with speed and accuracy.

PUSH-PULL ELECTRONIC VOLTMETER-OHMMETÉR
A push-pull vacuum tube voltmeter of new design is used. Controlled inverse
Nine ovback compensates for differences in tube characteristics.
overlaping ranges, $0-5-10-25-100-250-500-1000-2500-5000 \mathrm{~V}$. D . Balanced circuit eliminates zero drift. Meter protected against overload. phen present alr resior in test probe allows D.C. tests while A.F. or R.F. are from 0 ohm to 1000 merohm . $1 / 2^{\prime \prime}$ wide, $81^{\circ}$ deep $11^{\prime}$ high Shpe wese chassis measures With tubes. For $25-60$ cycle, $105-130$ volt A. 15 lbs . A12400. NET CASH PRICE TIME PAYMENTS: $\$ 5.75$ down, $\$ 7.12$ montily for 8 months.

FAMOUS RCA-RIDER "CHANALYST"
Due to the fundamental design of this instrument, it is now
possible for the first possible for the first
time to test recelvers under theoretically ideal conditions You can localize troubles in a particular stage in a particular stage
or part of a receiver or part of a receiver
or amplifier with greater speed and more efficiency than ever before. This is true no matter how complicated the circuit may be and regardless of the number or types of
 lefects in Locatirg much more difficult and time-consuming than repairing them By actual tests, the Chanalyst cuts down the time necessary to analyze radio crouble to an unbelievably low minimum. You can check the signal at any point in the circuit without disturbing operation of set. All testing is done without the use of any plugs or adapters. Traces signal through entire set; checks control voltages without interfering with set's operaetc. The beautifully finished

for 8 months.
A12402. WITH RACK MOUNTING PANEL. For adapting the brought to front of black ripple finish panel to install. Jacks at rear are NET CASH PRICE
TIME PAYMENTS:

1940 RCA TUBE TESTER


This new RCA tube tester offers to service engineers and radio dealers a highly efficient unit incorporating the experience of the world's largest radio tube manufacturer, Ruggedly push-buttons prevent incorvect Interlocklng Tests every standard type of receiving tube including ballast tubes. Provision for new bat tery tubes. Equipped to test tubes with heater up to 120 volts. Has two spare sockets and additional space for 100 new tube types convenient roll chart. Has socket for testing minlature lamps. Includes built-in socket for testing Loktal and new bantam tubes. Tests cathode ray tubes for shorts and emission; also tests ballast tubes for noisy welds and opens Indicates yoltage drop on all types of gas tubes such as 874, OA4-G. OZ4-G. etc. Metal case finished in gray wrink le lacquer with light metal special handle. Size, $131 / 2^{\circ}$ long. $53 / 4^{\circ}$ deep. $8^{\circ}$ special handle. Size, $131 / 2^{\circ}$ long, $53 / 4^{\circ}$ deep, $8^{\circ}$
high. Shpg. wt., 161 bs. A 12403 . Model 156C. CounterType. CASH PRICE $\$ 3.80$ down, $\$ 4.70$ monthly for 8 months A12404. Model 156B. Portable model CASH PRICE $\$ 4.00$ down. $\$ 4.95$ monthly for 89.95

## RCA OSCILLOGRAPHS

## 3'' MODEL 155

RCA's finest general purpose 3 -inch oscillograph at a new low price. Uses improved high-sensitivity Cathode Ray tube. All controls mounted on front
panel for greater ease of panel for greater ease of
operation. Ideal for alignment, hum, distortion, and wave-form measurements. sensitive amplifier. flat
from 20 to 90.000 cycles
 from 20 to 90.000 cycles axis, $15-22.000$ gain. Res Blue gray baked finish. Size: $15^{\prime \prime} \times 8^{\circ} \times 14^{\circ}$. For 110 volts, $50-60$ cycles. Shpg. wt. 23 lbs . Cl . $\$ 63.95$ $\$ 6.40$ down, $\$ 7.92$ monthiy ior 8 months. 2-INCH MODEL 151-2
Tilt-mounted screen. All controls on front panel. Size: $131 / 4^{\prime \prime} \times 91 / 4^{"} \times 73 / 4^{\prime \prime}$. Wt., $161 / 2 \mathrm{lbs}$. A12407
$\$ 49.95$
$\$ 5.00$ down, $\$ 6.19$ montiliy ${ }^{2} 8$ months.

## I-INCH MODEL 151

A serviceable instrument of high quality. Same size and weight as 2 -inch model above. A12408.
$\$ 39.95$

## 5-INCH MODEL 160

A general-purpose oscillograph for a wide variety of uses. Large screen gives easily read mages. Controls are few and easy to operate Size: $141^{\prime \prime} \times 8^{\prime} \times 191^{\circ}$. Shpg. wt., 32 lbs.
A12409.
$\$ 130.00$
$\$ 13.00$ down, $\$ 16.09$ monthily for 8 months

## OTHER RCA QUALITY TEST INSTRUMENTS

ALLIED offers these additional R.C.A. test instrumentsforseryiceman, experimenter, or ensineer


## FOR TELEVISION

A12416. MODEL 157. Crystal CallbraCASH PRICE............... $\$ 46.50$ $\$ 4.65$ down, $\$ 5.76$ monthly for 8 months.
A12417. MODEL 158. $5^{\circ}$ Oselllograph.

## PRICE

$\$ 14.50$

MODEL 159. Allgnment Oscillator


WRITE FOR COMPLETE descriptive literature covering any RCA test instrument Most units are availabie under ALLIED'S convenient Time Payment plan. Where time payments are listed under the item, send down payment for speedy delivery.

## RCA TEST OSCILLATORS



## MODEL 153

Six bands cover from 100 to $30,000 \mathrm{KC}$ on fundamentals. The large $6^{\prime}$ dial, over $50^{\circ}$ in ength, insures easy reading. $\mathbf{R F}$ output variable from 2 microvolts to 1 volt maximum. 400 cycle 8 volt output is also available. With cycles. Shpg. Wt., $15 \mathrm{lbs}, \quad \$ 29.95$

## 154 BEAT FREQUENCY AUDIO OSCILLATOR

A variable frequency source of alternating current voltage from 30 to 15,000 cycles. Choice output. Size, $91 / 2^{*} \times 131 /{ }^{\circ} \times 61 / 2$. 125 milliwatt ${ }^{17} 12 \mathrm{lbs} 420$, CASH PRICE $\$ 49.95$

## AEROVOX CAPACITY AND RESISTANCE BRIDGE

Here is an instrument
many functions seasures all of the ssential properties of working conditions. Si wankes from 100 MMH to 100 MF are provided The resistance bridge measures values from ero up to 1 megohm Insulation resistance of condensers, wires, etc. cau be measured up to 10.000 megohms on the meter scale. Theinstrumeter scale. The instru-
ment also includes vacuum-tube voltmet vacuum-tube volmeter. Other meter ranges are: volt; $0-6-60$ mils D. C. and $0-60$ millivol a continuously variable power supply from 15 to 000 volts D.C. is available. Dial from 15 callibrations for easy readings. Instrument is housed in a natural finish, red gumwood case with a slip-hinged cover. Size: $103 / 4^{\circ} \times 73 / 4^{\circ} \times 8^{\circ}$
AlOT 173

35.03

## MODEL 801 TUBE \& SET TESTER



A high-grade instrument combining an ultra-modern tube tester and a sonval meter with gapphire fewels has extra-long multiple scales in colors. Tube rester section tests all new and old tubes according to
RMA standards and provides flaRMA standards and provides filament voltages up to full ine voltage;
tests all ballasts; hot inter-element tests all ballasts; hot inter-element
short and leakage tests on each individual element; continuous line voltage regulation from hum test and volts; a noise and hum test and
individual tests of multi-purpose tubes. The VO.M. ranges are: 0.10 -50-500-1,000 0-1-10-100-1,000 M.A., D.C.; 0-10 amps. D.C.; 0-500-5,000 ohms; $0-1-10$ megohms; $0-10-50-$
 115 V .60 cycles. With test leads. Shpg. Wt., 12 tbs . A1OTOTH PRRICE.

## MODEL 801A WITH PLUG-IN SET ANALYZER

 Identical to the Model 801 described above plus an analyzer unit which is bullt into the cover. Permits all measurementato burnished complete with latch-lock adapters, test prods, etc. For 115 V .60 cycles. Shpg. wt A10108, CASH PRICE,$\$ 37.14$
TIME PAYMENTS: $\$ 3.71$ down. $\$ 4.60$ a month for 8 months.

## MODEL 445 AC-DC MULTITESTER

A unique general test instrument of outstanding performance. Uses an ac-
curate $3^{\circ} \mathrm{D}^{\prime}$ Arsonval meter with bakecurate $3^{\circ}$ D Arsonval meter with bake 2,500 V. D.C. at 1,000 ohms per volt; D.C. $0-500-100$ M.A.,D.C.; 0-10amps D.C.; $0.500-100.000$ ohms; 0.1 meg-
ohm: $0-10-100-500-1,000$ Volts A.C. 4 D.B. ranges from -8 to +55 and 4 output ranges same as A.C. volts. The low range ohmmeter is of the low-drain backup type and reads ads 10 ohms. Ideal for measuring voice coils, shorted turns, poon contacts, etc. A selector switch on the attractively-finished front panel provides convenient operation. Size of case is $3^{\circ} \times 81 / 2^{\circ} \times 5^{\circ}$. Supplied complete with ba

## 432 TROUBLE SHOOTER

Here is an instrument that is priced volt-ohm-milliammeter. The 432 has the following ranges: $0-5-50-500-1,000$ volts D.C. at 1.000 ohms per volt; $0-500-$
$50,000-500,00 \mathrm{C}$ ohms with self-contained batterles; and $0-1-10 \mathrm{M}$.A., D.C. Center scale reading of low-range ohmmeter cir-
cuit is 10 ohms. Not necessary to use test.
 cult is 10 ohms. Not necessary to use test prods for zero-adjusting the 3 olimmeter ranges. Has an attractive etched panel and a welded steel case with morocco fivish.
Size: $5^{7 / 8^{\circ} \times 3^{\prime \prime} \times 2^{*} \text {. Shpg. wt. } 3 \text { lbs. }}$



MODEL 411 SUPERTESTER
$\$ 17.39$
$\$ 17.39$


The Dependable Model 411 is one of the most versatile instruments ever produced, It is ideal for television and radio servicing, ham work and general industrias use. tures are: bakelite jacks providing a arge saltagh markin when measuring high voltages; hog work: low ohmmeter range for yoice coils, high resistance contacts. etc., and high ohmmeter ranges for checking leaky condensers. Uses a $3^{\circ}$ square meter with a sensitivity of 5,000 ohms per voit. Ranges are: $0-10-50-250-1,000-5,000$ volts A.C. and D.C.; $0-200$ microarnps D.C. $0-10-100$ M.A., D.C.: $0-400-40,000-4,000,000$ ohms; -10 to +69 D.B. in 5 steps; 0 1-10-25 amps. D.C. Outcut maeter ranges same as A C amps. A.C. Output pieter ranges same as
volts. Center scale reading on low ohmmeter range is only 5 ohms with each of the first 10 divisions measuring 1 ohm. In natural wood case $77 /$ " $^{4} \times 51 /{ }^{\text {c }} \times 31 / 2^{"}$. A10168. MODEL 411. NET. A10169. MODEL A11P. Same as Model 411 butin a porta
cover case. NET.
A 10121 . Same as the Model 411 but has additional provision for testing ballast tubes With octal bases.

660 ELECTRONIC MULTITESTER

702 SIGNAL GENERATOR
Continuously variable from $95 \mathrm{~K} . \mathrm{C}_{5}$
to $23 \mathrm{M} . \mathrm{C}$ in 5 bands on fundaM. C on harmonics. Callibrations are
etched directly on etched directly on
the panel. Output unmodulated or
modulated $30 \%$ at 400 cycles. Automatic shorting of coils not in use prevents dead

buttons can be pushed at the same time with out danger of shorting; any button can be left locked in depressed position (eliminates release button); current and vorcult made at the ments in the same circuit can be mable including spare lead for future requirements. Panel is ing spare lead for suture requirementsoctal. For use with any volt-ohm-milliammeter. Complete with latest type toggle latcl plug and adapters. Wt., 3 lbs.
A 10116 . Less Case.
AET.
$\$ 347$ A 10117 Model 504 C . Same as 504 above
but in a $3^{\circ}$ deep case.
NET
A new Dynoptimum Tube Checker providing reliable performance at low cost. The accurate $3^{\prime \prime}$ square D'Arsonval meter is direct-reading. loctal, and single end type tubes, and provides filament voltages up to full ine voltage. Tests are made under RMA specified plate voltages and loads; considered the finest co-relative test. A feature of the Model 308 is the provision for audibly checking noisy tubes. The instrulment individually tests each section of
wave rectifiers, duo-diodes and all multi-purpose tubes with new base arrangements. A Neon indicator is used for hot inter-clement shorts and leakages. Line voltage is adjustable from 105 to 135 volts and is indicated 60 cycles. on meter. Size 10 .
A10114. Model 308C
$16^{61}$
A 10115 . Model 308p. Portable and Counter Model. Size, $111^{\prime} \times 12^{\prime} \times 7^{\circ}$. For 115 V. 60 cycles. Shpg. wt., 12 lbs . $\$ 18.57$ For 220 voit $50-60$ cycle models add $\$ 1.00$.


The Analyst is an Improved push selector which permits the greatest possible speed,
safety, and flexibility for analyzing symptoms in radio sets and P.A. installations. Some of the exclusive fea-
MODEL 308 TUBE TESTER
\$14.65

upsetting circuit $\quad$-6-30-150 600-3,000-6.000 V. D.C. 0-1,000-10,000100,000 ohms and $0-1-100-1,000$ megolims. Direct-reading scales over $71 / 2^{\prime \prime}$ long, Adequate protection has been made against high voltage leakage. Foolproof and simple to operate. Has handsome sloping front panel and solid walnut tube and batteries. For 115 V.
60 cycles. Shpg. wt., 7 lbs. 60 cycles. Shpg. wt.
A 10122 . NET..

## (9) PRECISION TEST EQUIPMENT

844 VOLT-OHM-DECIBEL-MILLIAMMETER

facilitinstrument provldes complete ment requirements for service, amateur, television, laboratory, and industrial use. The master rotary switch pernits speedy selection of all ranges. A Precision $45 / 8^{*}$ square meter is used, having a sensitivity of 400 microamperes. The extra-long scales and large numerals assure easy reading. All shunts are wire-
wound on impresnated, moisture wound on impregnated, moistureproof bobbins. Multipliers are of the molded. metallized type and are held to very elose tolerances. The against breakdown through use of heavy-duty pin-jacks ceramic suited construction, and higla grade insulated wire. Selector switch has lowresistance, double-wiping, silver-plated contactector switch has lowaction. Each instrument is individually calibrated and sealed to laboratory standards. Each will give consistently dependable service.

## 34 RANGES - 6000 VOLTS AC AND DC

The Model 844 provides the following ranges: $0-12-60-300-600-1.200-$ $0-12 \mathrm{amps}$ D.C.; $0-400-100,000$ ohms $0-1-10$ megs. 0 - $12-60$. $1,200-6,000$ V. A.C.; -12 to +70 D.B. in 6 steps and 6 output same as A.C. volts. Provisions have been made for mounting the ohmmeter batteries ( $41 / 2$ and 45 volts) on inside of instrument. The 844 is supplied in an attractive walnut-finished hardwood case with removable cover and carrying handle. Has conventent compartment for housing eors. etc. Overall size. $910^{\circ} \times 6^{\circ}$. Less batteries and test eads. Shpe.
Al 2038. MODEL 844P، Portable Type. NET.
$524^{45}$ A 2039 MODEL 844L. Housed in a walnut-finished hardwood case $7^{\prime \prime} \times 8^{\prime} \times 4^{\prime}$. Less batterics and test leads. NET
\$22.49

SERIES 920 DYNAMIC ELECTRONOMETER
A combination Dynamic Mutual Conductance Tube Tester and 33 range Set Tester. Uses a large
$459^{\circ}$ square type Precision meter 43/8 square type Precision meter merals. Tests Loctals, Bantam Jr. "nerals, Yests Loctals, Bantam Jr., octais (MG. G. and Metals) Glass, and Ballast tubes. Accommodates all filament vol tages from 1.4 to 120 volts. The automatic push-button system is assurance against obsolescence and of ability co take care of future tube releases. Meter instantly indicates any tube having an open element Checks each section of multi section tubes. Sensitive Neon in dicator will detect shorts and eakages. Noise test pin-jacks ar
 incorporated for earphone usc. The built-in roller type tube chart per

## DYNAMIC TUSE TESTER \& MULTI-RANGE SET TESTER

 The 920 provides the following ranges: 0-12-60-300-600-1,200-3,000 0-12 amps. D.C. at $0-400-100$ ohms per volt, $0-1.2-12-120-600 \mathrm{M} . \mathrm{A} .$, D.C. -12 amps. D.C. $0-400-100,000$ ohms; $0-1-10$ megohms; 6 D.B., ranges range-selector switch permits ranges same as A.C. volts. The master of electrolytic and permits simplitied, speedy measurements. Leakage housed in a hardwood portable type carrying ermined. Instrument is cover and tool compartment. Walnut fanish battery and test leads. For 110 V . 60 cycles. Shps wt 20 x 13 . With A1 2040. MODEL 920P. Portable Type,

SERIES 830 DC VOLT-OHMMILLIAMMETER


Although small in size, the 830 incorporates 11 adequate ranges for measuring volts, ohms, and current. These ranges are selected by a master rotary switch located on front panel. A large Precision $3^{\circ}$ square D'Arsonval meter is
used. Wire-wound shunts and used. Wire-wound shunts and metallized matched multipliers provide a high degree of
accuracy. Ranges are: $0-10-100-250-500-1.000$ accuracy. Ranges are: $0-10-100-250-500-1.000$
V. D.C. at 1,000 ohms per volt; $0-1-10-100-250$ M.A. D.C., and 0-500-300.000 ohms. Ohmmeter ranges are powered by a self-contained batcarrying strap measures attractive etched metal panel. Supplied with 3 volt battery but less test leads. Shpg. wt., 3 lbs.
$\$ 0^{73}$

## SERIES 870 AC-DC MULTIRANGE TESTER



An outstanding Multitester providing 29
ranges. A simplified method of complete pushbutton circuit and range button circuit and range
selection allows all $\mathrm{A} . \mathrm{C}$ and D.C. measurements (except the 3.000 volt range) to be made from only 2 polarized tip jacks. Readings are on a Precision $3^{\prime \prime}$ D'A $^{\prime}$ rronval meter.
Following ranges are available : $0-6-30-300-600-$ $1.200-3,000$ V. D.C. at 1.000 ohms per volt:
$0-12-60-600-1,200-3.000$ O-12-60-600-1.200-3.000
V. A.C. at 500 ohms per
 5,000-500.000 ohms, $0-5$ megohms (using ex-
ternal battery); 5 D. 5 . ranges -10 to +64 . and 5 output ranges same as A.C. volts. Low Leakage of paper and electrolytic conter scale. easily checked. Wire-wound shunts and matched metallized inultipliers are used for high accuracy. Instrument is housed in a walnut-finished hardwood case with carrying handle. Size, $x 41 / 2 \times 3$. Shpp. wt. $31 / 2 \mathrm{lbs}$.
s17 ${ }^{59}$

910 DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER


The 910 employs an exclusive circuit which effectively tests all receiving tubes for both mutual conductance and cathode structure. Both of these tests are necessary in order to The automatic push-button merit of a tube extreme flexibility for non system affords analysis and ability to accommolescent tube analysis and abinty to accommodate future terminals of all filaments regardless of their pin positions. Indlvidual loads and voltages as specified by the tube manufacturers are applied to each tube element.

## TESTS ALL TUBE TYPES

Accommodates all filament voltages from 1.4 to 120 voits. Accurately tests Loctal, Bantam G and M ). Sprayshield. and Glass types. Diodes, rectifiers, and multi-purpose tubes are tested separately from same sucket. All ballast tubes can be checked for opens, loose elements, and leakage. A Neon indicator is used for clecking hot cathode leakage and hot interelement shorts and leakages. Pin-jacks permit testing tubes for noise by means of earphones. The meter instantly indicates any tube having an open element. Roll type tube chart permits quick readings. Hardwood portable carrying case with removable cover and tool compart-
ment. Walnut finish. Size, $12^{\circ} \times 13^{\circ} \times 6^{\circ}$. For ment. Walnut finish. Size, $12^{\circ} \times 13^{\circ} \times 6^{\circ}$. For A 12044 cles. shpg. wl., is ibs. A12044. MODEL 910P. Portable Type Same ${ }^{\circ}$. MODEL 910C. Counter Type heavy metal case $16^{\circ} \times 12^{\circ} \times 8^{\circ}$ ripple-finished front. Shpg. wt., 19 lbs YOUR PRICE EITHER MODEL
$33^{37}$ A12046. MODEL 910MCP. Sante as 910P but in open black metal case. With

SERIES E300 AUTOMATIC SIGNAL STANDARD


Instantly permits the selection of any 10 Broadcast frequencies from 550 to $1.600 \mathrm{~K} . \mathrm{C}$. by means of pusli-buttons. Each button has its own "Trimaire" variable condenser, adjustable from the front panel. The E 300 provides a
rapid and accurate means of setting up pushrapid and accurate means of setting up pushcar radios. High accuracy and zero drift is attained through stable, air-tuned circuits. Uses I-1N5 and 1-1E4. Output is unmodulated or modulated 400 cycles at $50 \%$. Attenuator does not affect oscillator frequency. Housed in black ripple, metal case with cartying handle. Size. $12^{\circ} \times 6^{\circ} \times 6^{\circ}$. With tubes and cable but less batteries ( $1-11 / 2$ and $2-45 \mathrm{~V}$.).
A12047. NET
$\$ 2445$

## SERIES E200 SIGNAL GENERATOR

A Precision Signal Gromerator covering MC. in 6 bands. The direct-reading,
full-vision dial has deeply etched scales and numerals. A vernier segment permits read
ing to 1 part in supplies A.V.C voltage which is
adjusted tocoincide with the actual developed by the
receiver under normal conditions. A switch
provides 4 outpurs provides 4 outputs, uminodulated R.F., 400 ulated R.F., and 400 cycle., external modvariable from 0 to 60 eyle Perfo. Latter is eliminates leakage. Has calibrated R.F. . . uator. Housed in black ripple stecl case with handle. Size. $12^{\circ} \times 10^{1 / 2} \times 6^{\circ}$. With tubes and Coaxial output cable. 115 V . 60 cycles. Shpg, wt., 19 lbs. A1 2048. NET.


TIME PAYMENTS monthly for 8 months

# Madsm TEST EQUIPMENT 

## NEW MILLION TEST EQUIPMENT



## NEW MODEL SY

 "SIGNALYZER"This instrument enables you quickly to race the signal in any receiver from antenna to voice coil. Absence of the signal is immediately detected by the elecmonic eyes. A coaxial cable probe per disturbing circuit under test. The Signalyzer is particularly useful in tocating trouble in intermittent or "dead" re to the signal to detect hum or distortion. Oscillator performance is read ily determined. Input impedance of the instrument is 6 megohms.

## CHECKS RF-IF-AF-DC VOLTAGES

There are 4 channels available for simultaneous monitoring of the RF, IF, AF, and DC power supply circuits. Each channel has an amplifice stage for adequate sensitivity. Deflection of the 'eyes' can be controlled. Three of the channels are for AC input while the ourth is for AC or DC Cables are $30^{\prime \prime}$ long and have alligator clips. The beautifully finished measures $7^{*} \times 10^{\mp} \times 6^{\prime \prime}$. With 11 tubes, cables and full instruc- 50 measures $7^{\prime \prime} \times 10^{\circ} \times 6^{\prime \prime}$. With 11 tubes, cables and full instruc- $\$ 3750$
tions. For $115 \mathrm{~S}^{2} 60$ cycles. Shpg. wt., 12 lbs. TIME PAYMENTS: $\$ 3.75$ down. $\$ 4.64$ monthly for 8 months.

## MODEL DF TUBE AND CONDENSER TESTER

The Model DF tests all tubes including the latest Loctal, S: Bantam Jr.. and "hearing-aid peanut types. The filament switch covers
from 1.4 to 110 volts with spare positions for future tubes. The exact condition of the tube under test is clearly indicated on the English-reading "Good-Bad" scale of the accurate D'Arsonval meter. A neon bulb is
checks shorts and leakages up to 2 megohms. Tests emission and shorts


## CHECKS CONDENSER LEAKAGE

Complete instructions supplied for testing bypass and electrolytic condensers lor shorts and leakage. Also provides for continuity checks. All test circuits are effccively insulated rom the power adjustments. The is fused. $A$ separate swtehis un Mode DF is-built to precision standards and reatures a rugsegness ine design and assembly that insures accuracy under hard usage. The handle and an 8 foot cord and plug. For $105-125 \mathrm{~V} .60$ cycles. $\$ 1.95$ Shpg. wt., 12 lbs.

OD SIGNAL GENERATOR


Covers 100 K.C. to 25 M.C. in 6 bands. The direct-reading dial has a scale over $40^{\circ}$ in length. Individually trimmed coils assure ac-
curacy and elininate dead spots. RF output curacy and elininate dead spots. RF output
can be modulated 400 cycles. A separate audio can be modulated 400 cycles. A separate audio output, variable from 0 to 1 volt, is available for checking amplifiers. Dual attenuator for coarse and fine adjustment. Line filters and thorough shielding reduce leakage to a minipanel with ivory knobs, For 110 , $\$ 95$ A10014. NET...

BG DELUXE TUBE TESTER


Designed as a precision instrument of outstanding accuracy for testing all types of receiving tubes. Provides an approved etmssion test with readings on a "Good-Bad" meter scale. A neon lamp shows all shorts and leaks between any efements up to 2 megohms while tube is hot. Every precaution has been taken to protect instrument from obsolescence. sockets for all present tubes. 3 extra sockets are provided for future tube releases. The filament 13 steps with 10 spare positions. An extra space switch is also provided. The attractively finished case has metal feet and a removable cover. Size, $10^{*} \times 12^{1 / 2^{\pi}} \times 5^{\prime \prime}$. Has large, con venient compartment for tools, acce black and white markings. For 96 to 132 V 60 cycles. Shos. wt. 15 lbs. A10016. NET
$24^{95}$
POPULAR LOW-COST POCKET TEST INSTRUMENTS AUTO IGNITION ANALYZER
Hereis an indispensable item for the auto owner, mechanic, or serviceman. It permits scientific, accurate checking a resuitant increase in driving efticiency and reduction in gas consumption. Checks cam angle, batteries, coils, condensers, lamps, etc. A small neon bulb is included for checking leakage in the ignition system of any auto.
Size, $23 / 4^{\prime \prime} \times 3 \frac{3}{4} \times 21 / 2^{n}$. Shpg. wt., Alo. 150 . NET.


## MIDGET PYROMETER

This instrument is especially designed for high temperature measurements. Ranges are 0 -
700 and $0-2,000$ degrees Fahrenheit. A jack and plug arrange inent changes from one range to the other. A high grade millivoltmeter with $2^{\prime \prime}$ scale is used. Accuracy is $2 \%$ of. full scale. Meter has been hand-compensated for room temperature. A welded iron No. 16 B . \& S. gauge thermocouple is employed Instrument is housed in an attractive black instrument is housed in an antractive case and neasures $15 / 8^{\prime \prime} \times 27 / 8^{\prime \prime} \times 3^{7 / 8}{ }^{\circ}$ because of the extremely small size of this Pyrometer, it will find many useful applications around the shop. Shpg. w
A10155. NET.
$s 570$


## 271 SIMPLEX

## VOLT-OHMMETER

An exceptionally compact, pocket-size test unit for shop or portable work. Scale is marked 0-3, 0-30. $0-300$ volts, D.C. and $0-10,000$ ohins, Attractive walnut-finished bakelite case measures $15 /{ }^{2 \prime} x$
$27 / 8{ }^{\prime \prime} \times 3 \%$. Meter is of the magnetic vane type. Has pin jacks for quick selection of desired scale. Sch-contained batteries included. Supplied with 30 inch A10151. YOUR PRICE.

MODEL B381 DELUXE V.O.M.
An accurate tester that wlll An accurate tester that will
provehandy on all scrvice work. prove handy on all service work. dial. Rarges are: 0-1-10-50-100 per volt; $0-1-10-100-1,000$ M.A. D.C.; and per volt; $0-1-10-100-1,000$ M.A. D.C.; and
$0-2,000-50,000-500,000$ ohms. A rotary switch quickly sekets desired range. Has in dependent ohm-meter adjusting rheostats. Solid oak, natural finish case is $43 / 4^{\prime \prime} \times 71 / 4^{\circ} \times 23 / 4^{\prime \prime}$ Beautifuliy etched aluminum panel. All multiplier resistors calibrated to $\pm 1 \%$.
teries, but less test leads. Wr.. 2 \$ 876
lbs. 10153 . NET OHMMETER

A very popular, pocketsized test instrument. Ranges are: $0-300$ V.D.C., and $0-10,000$ ohms. Uses a magnetic vane type meter with $2^{\prime \prime}$ dial. Ranges are selected by means of jacks and a plug. The black hardyood case measures $23 / 4^{n} \times 2^{3 / 4} \times 15 /{ }^{n}$. fits in a pocket. Ohmmeter circuit uses 2 self contained standard dry cells. Supplied complete with $24^{\prime \prime}$ polarized leads, test $\$ \$ 26$ A10152. NET.

## 363 UNIVERSAL AC-DC Y.O.M.

## This instrument may be oper-

 ated on either A.C. or D.C. curent and has a wide range of usevane type meter is used with a $2^{\circ}$ dial. Ranges are: $0-15-150$ 450 V. A.C. or D.C.; 0-15 M.A. A.C. and D.C and $0-20,000-100,000$ Provision has also been made-100,000 ohms. pacity pacity of condensers from 01 to 20 mfd . SepaHas ruilt-in for ohmmeter zero adjustment. Has built-in power supply. No batteries required. Black bakelite ease with removable $30^{\circ}$ test leads and instructions. For $\$ 31$ 115 V. A.C. or D.C. Shpg. wt. 11b. 10154 NET.
# Modern TEST EQUIPMENT 

NEW HICKOK TEST INSTRUMENTS


## MODEL 5IOX DYNAMIC

 TUBE \& SET TESTERA desirable combination of a complete se tester and tube tester. Tube tester circuit is Identical to Model 530 described below. The meter has a scaie length over $41 / 2^{*}$. A patreadings for both A.C. and D.C. Ranges readings for both A.C. and D.C. Ranges: scales ind icate output; $0-20-200$ M.A.; D.C. scales indicate output;
$0-25$ megs. in 3 ranges (no batteries tred) 0.25 megs. in 3 ranges (no batteries treed) densers. Also checks inductance of chokes densers. Also checks inductance of chokes,
Meter measures in D.B. An electronlc rectifier permits permanent callbration. Beautifier permits permanent calibration, Beauti-
fully finished case, $14^{\prime \prime} \times 13^{\prime \prime} /^{\prime \prime} \times 6^{\prime \prime}$, with engraved metal panel, Tube chart inside of cover. $110-125$ V., 60 cycles. Slipg. wt., 25 lbs. A10229. CASH PRICE
$\$ 61^{74}$
Tlme Payments: $\$ 6.17$ down, $\$ 7.65$ monthly for 8 months.

## MODEL 530 DYNAMIC TUBE TESTER

The only dual-reading instrument that indicates Dynamic Mutual Conductance in micromhos plus "Good- - -Bad." Uses 4" square meter With a multi-color illuminated dial. Micromhos in 3 ranges: $0-3,000$ -$6.00-15.000$ Tests all new filament voltage tubes up to 120 volts, as
well as loktal. octal, pilot lamps, ballasts, and magic eyes. Selector well as loktat, octal, pilot lamps, ballasts, and magic eyes. Selector
switches preclude obsolescence. Tests tubes for $R$. F., nolse and gas. Sach element of a tube tested separately. Short tests made liot or cold. Each element on a tube tested separately. Short tests made hot or cold Uses a roll-type chart for quick reference. Oper
60 cycles. Size: $14^{\prime \prime} k 1336^{\circ} \times 6^{\circ}$. Shpg. wt., 22 lbs .
A10230. MODEL 530P. Portable Type.
A10231. MODEL 530C. Counter Type. Same as abov but without carrying case cover.
YOUR PRICE, EITHER MODEL
$\$ 5174$
TIme Pasm monst 5 S.17 down, 5 s.41 monthy tor 8 months.


## MODEL 4922 'JUMBO'

 VOLT-OHM-MILLIAMMETERThe 4922 has a meter $9^{\circ \prime}$ in dianneter with a sensitivity of 28,570 ohms per volt. Scales are over $7^{\prime \prime}$ in length for easy accurate readings. Ranges are:
$0-10-50-250-500-2500$ volts A.C. and D.C. $0-500$ microamperes D.C., 0-5-50-500 M.A., D.C., 0-3010.000 ohms, $0-1-10$ megolms and -10 to -15
D.B. A blocking condenser permits using A.C. D.B. A blocking condenser permits using A.C.
voltage ranges as an output meter. Highy accurate. Size. $13^{* \times 103 / 8} \times 71 / 8^{*}$. Shpg. wt., 15 ibs.

## A10319. CASH PRICE

$\$ 3528$ \$3.53 down, $\$ 4.37$ monthiy for 8 months. A 10315 . Shunt. Increases range $0-5-50$ amps. D.C. NET. . $\$ 4.41$
"JUMBO" RADIO-TELEVISION ZERO CURRENT PANEL TESTER


Made extra-large for super speed. Scale
$83 / 4$ long. Ranges: $0-2.5-25-250-2,500 \mathrm{~V}$. 83/4" long Ranges: $0-2.5-25-250-2,500 \mathrm{~V}$. A.C. and D.C. at 1,000 ohms per volt;
$0-2.5-25-250 \mathrm{~V}$. D.C. at infinite ohms per $0-2.5-2.5-2.50$.
Volt; $0-.5-2.5-25-250$
M.A. A. D.C.;
$0.2 .5-25$
 -10 to +15 D.B. Special jacks provide per volt. $13^{\circ} \times 14^{3 / 4}{ }^{\prime \prime} \times 6^{\prime \prime}$. Supplied in ohms per volt. $13{ }^{\circ} \times 143 /{ }^{\prime \prime} \times 6^{\prime \prime}$. Supplied in attrac-
tive case finished in blue. $\$ 5021$ tive case finished
Shpg. wt., 24 lbs.
$\$ 5921$
Time Payments: $\$ 5.82$ down, $\mathbf{5 7 . 2 1}$ monthly for 8 months.

## OTHER HICKOK INSTRUMENTS

We can supply any Hickok instrument not listed above. When placing your order, please give manufacturer's type or model number. Descriptive literature and time payment blanks on Hickok test equipment will
be inailed promptly upon request. On time payment plan with your order to facilitate prompt shipment. We can supply the following Hickok Test Instruments promptly
A 10323 . Model 17. Signal Generator Without Power Level Meter. A 10322 Model 18. Signal Generator With Power Level Meter.
A10301. Model PSG15. Signal Generatimonthly 8 months. CASH $\$ 73.50$ or $\$ 7.35$ down, $\$ 9.10$ monthly for 8 months. A 10303 . Model RFO4. Oscillograph.
A 1032 . $\$ 92.90$ or $\$ 9.29$ down, $\$ 11.50$ monthly for 8 months. A 10321 Model 4800 S . Set Teater With Multi-Selector. 8 months. A 10304 . Model 4900 S . Set Tester Less Multi-Selector.

CASH $\$ 50.57$ or $\$ 5.06$ down, $\$ 6.26$ monthly for 8 months. AlO225. Model 4955 . Volt-Ohm-Milliammeter
A 10305 , Model 4955 . Volt-Ohm-Milliammeter with Carrying Case (
A 10232 Model 19X. Crystal-Controlled Microvolter.
down, 10.19 monthly for 8 months.
A10233 Model 120. Crystal Multi-Vibrator
A10234. Model 110. AC-DC Vacuum Tube Voitmy for 8 months.
ASH \$52.92 or $\$ 5.29$ down, $\$ 6.55$ monthly for

## SOLAR CAPACITY ANALYZERS

One of the most popular instruments for quickly and accurately determining the capacity of any condenser between as a bridge-balance indicator; capacity of condenser under test is shown directly on accurately calibrated color-coded scale. Also measures power factor, and detects defective condensers. Two large resistance scales give readings up to 2 megohms, for checking insulation re eistance, or for measuring resistors. Checks all types of condensers. No headphones, meters, etc., are required; compactly built in sturdy, attractive cabinet With handle for carrying. Measures $91 / 3 x$
$71 / 8 \times 61 / 4^{\prime \prime}$. Requires 1 - $V$ and 1 - 6 E 5 (not supplied). An efficiently angineered instrument. Shpg: wt., 9 lbs.
A10186. Model CB-1-60. For 110 V .60 cycle. $\$ 1882$
A10187. Model CB-2-U. For $110-220$ V. 25-60 cycle. $\$ 23.52$

## MODEL CC CAPACITY ANALYZER

The Model CC Capacity Analyzer and Bridge is similar to the CB Models described above, but has the advantase of extended capacity and resistance ranges. Measures resistance from zero to $2,000,000$ ohms $50 \%$ caty from .00001 to 800 MFD ; power factor of condensers up to $50 \%$; and insulation resistance to 1,000 megohms. Test voltages are are not supplied. Shpg, wt D.C. Requires $1-80$ and 1-6E5 which A10 183. MODEL CC- -60.110 V .60 cycle.

```
A10184. MODEL CC-2-U. 110-220 V. 25-60 cycle
\(\$ 29.40\)
```


## WESTON TEST INSTRUMENTS

## MODEL 772. TYPE 2

SUPER-SENSITIVE ANALYZER
Has $41 / 2^{\prime \prime}$ multi-scale meter with 100 division scale and knife-edge pointer. Checks all types of radio sets and transmitters; has high sensi-$0-2.5-10-50-250-1000$ volts D.C. at 20,000 ong per volt, and A.C. at 1000 ohrss per volt: M.A. 0 -1-10 Amps D.C. $0-3000.30,000$ ahms. 0.3-30 megs. -14 to +54 D B Ohmmeter used for condenser leakage tests. In fabricoid carrying case, $15 \times 5 \times 83^{3 / 4}$. Shpg. wt., 12 lbs.
A10350. CASH PRICE
$\$ 4.95$ down, $\$ 6.13$ monthly for $\mathbf{8}$ months.


## MODEL 773 TUBE CHECKERS

Double-checks doubtrul tubes. Permits a total emission test and R.M.A. load test. Point-to-point electrode check detects defective elements. Continuous line voltage control read on meter. $\$ 45.00$ Time Payments: $\$ 4.50$ down, $\$ 5.57$ montily for 8 months. A10352. MODEL 773-2. Counter Type. CASH..... $\$ 50.63$ Time Payments: $\$ 5.06$ down, $\$ 6.27$ monthly for 8 months.

## MODERNIZE ANY TUBE-CHECKER WITH MODEL 767 FILATROL

Check new high-voltage tubes with your present tube checker. One lead from Filatrol plugs into lead plugs into a 110 V . A.C. outlet. Place the tube to be tested in octal socket. Tubes requiring 35 to 117 volts can be checked in this manner. Complete instructions are supplied A10371'
$\$ 495$


## OTHER WESTON INSTRUMENTS

We can supply all Weston units. Give manufacturer's model and type number for the instrument desired. Descriptive literature will be forwarded promptly upon request. Most Weston units are available on ment details or pend deposit write for application blanks and time payment details or send deposit with order for quick seryice

| $\begin{aligned} & \text { Catalog } \\ & \text { No. } \end{aligned}$ | Model No. | CASHPRICE | TIME PAYMENTS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Down | Monthly | Month |
| A10354 | 771 | \$55.13 | \$5.51 | \$6.83 | 8 |
| A10364 | 775 776 | $93.00$ | 9.30 6.53 | 11.51 | 8 |
| A10361 | 780 | $\begin{aligned} & 65.25 \\ & 24.00 \end{aligned}$ | 6.53 | 8.08 | 8 |
| A10351 | 787 | 93.75 | 9.38 | 11.60 |  |
| A10363 | ${ }_{669}^{666-1 B}$ | 15.83 |  |  |  |
| A10359 | 689-1E | 3.50 |  | 6.13 |  |
| A10356 | ${ }_{695}^{692}$ | 51.56 | 5.16 | 6.38 | 8 |
| A10358 | ${ }_{697} 695$ | 28.50 |  |  |  |
| A10353 | 564 | 28.80 |  |  |  |

## SERVICE Instruments

NEW BERNARD POPULAR-PRICED TEST INSTRUMENTS


## ROTARY AUTOMATIC AC-DC <br> 5000 OHMS PER VOLT V.O.M.

This new instrument is equipped with a single control switch to select 24 ranges. Has automatic ohms and A.C. feature. Uses a precision meter, 3 square, with knife-edge polnter zero adjuster, and colored scales; accuracy. $2 \%$
Ranges: $0-3-10-50-250-500-5,000$ V. D.C. at 5000 ohms per volt; $0-2,000$ ( 15 ohm center) $-20,000-200.000$ ohms, 2 meg. with 3 V . bat tery supplied; 0-200 micro-amps. 0-2-20-200 M.A. $0-10$ A. D.C.: $0-15-150-1.500$ V. A.C. at 1,200 ohms per volt; -10 to $+58 \mathrm{D} . \mathrm{B}$. in 3 ranges; 3 output ranges $0-15-150-1,500 \mathrm{~V}$. Tests condensers for quality. In wood case with test leads. $61 / 4 \times 41 / 2 \times 31 / 4$. Shpg. wt., 3 lbs.
Less test leads.
A1O239. Model 402 s .
NETPRICE A10240. Model 402 J. Same as Model 402S but less
s 11.90

## 19 RANGE POCKETMETER

 2500 V. DC - 1,500 V. ACHas a $3^{\circ}$ square meter with zero adjuster and knife-edge pointer. Features auto matic A.C. switehing. Has only one ohms adjustment for all resistance ranges; all other ranges may be selected with one control. Ranges: 0-1.5-10-50-250-5002,500 V. D.C. at 1,000 ohms per volt 0-1-10-100 M.A., 0-1 amp. D.C.: 0-2.500
( 15 ohm center) $-25,000-250,000$ ohms -1500 V A C. . output Cance with 3 . battery (supplied): $0-15-150-1500$ V. A.C.; outpnt ranges open wood case, $61^{\prime \prime} \times 3^{\circ} 1 / 2^{\prime \prime} \times 3^{\prime}$. Less test leads. Shpg. Al'O245. Model 403. NET.


VOLT-OHM-MILLIAMMETER D.C. POCKET TESTER

## Uses 3' square meter. Has automatic

 ohms circuit. Ranges: $0-1.5-10-50-250$ $500-2,500-5.000$ V. D.C. at 1,000 ohms per volt; $0-1-10-100 \mathrm{M} . \mathrm{A}$. and $0-1$ arnp.D.C.; $0-2,500(15$ ohm center) $-25,000$. 250.000 ohms with 3 V . battery (supplied); $0-2.5$ meg. with external 45 V . supply and $0-25$ mes. with 300
ternal supply. Tests condensers for quality. Size: $61 / 2^{*} \times 31 / 2^{*}$
$\times 3^{\circ}$. Less test leads and external voltage supply. Wt., $3^{\prime 2} 1 \mathrm{bs}$. A1O246. Model 404. NET


A full $45 / \mathbf{a}^{*}$ precision 0-200 micro-ammeter with multi-colored scales. Has automatic ohms and A.C. feature controlled by latch-type safety push-buttons. Ranges are: $0-4.5-10-50$
$250-500-2500-5,000$ V. per volt; 0-15-45-150-750-1,500-3,000 V. A.C. -20 put meter ranges wirh bult-in con to to $+68 \mathrm{D} . \mathrm{B}$. in 6 ranges, $0-200$ D.C and $0.3,000(221 / 2 \mathrm{ohm}$ center) $-30,000-300,000$ ohms-3 meg., with 4.5 V . battery (supplied) 0.30 meg., requires external 45 V . supply and o-300 meg., 450 V. supply. Tests condensers external voltage supplies. Size: $\$ 7.90$ $5^{\prime \prime} \times 7^{\circ} \times 4^{*}$ " Shpg. wt. 6 Ibs.
A1024 Model 401 . NET.
$16^{\circ 0}$

## PORTABLE TUBE TESTER VOLT-OHM-MILLIAMMETER

Features a $3^{\prime \prime}$ square meter marked "NGA neon tube so provided wid cathode leakage. shorts, opens, noise, and gas. Tests new $S$ and Loctal tubes. Spare socket guards against obsolescence. V-O-M operated with slide switches. Automatic ohm and A.C. circuits eliminate AC-DC switching and ohms scale adjustments. Ranges: 0-3-10-50 $250-500-5.000$ V. D.C. at 1,000 ohms per volt: $0-1-10-100 \mathrm{MA}$. and $0-10$ A. onns with 3 V battery (supplied) and ,sing ohns with 3 . battery (supplied). and using decimal-repeating scale without skips, Tests condensers for quality and leakage. Includes test leads. In wood case. Size. $\$ \$ 290$ A 10242 . Miodel $40^{\circ} 5^{60}$. Portable Type. NET
A10243. Model 405C. Counter Type. Same as above \$21. 90 A10244. Madel 405 A . Tube Tester Only. In an open case for store counter, shop, or home bench, without V.O-M. Less $\$ 17.90$
test leads. Shpg. wt., 141 bs . NET. ................... $\mathbf{1 7}$

5000 OHMS PER VOLT PORTABLE ANALYZER

Permits capacity and inductance measurements. Incorporates a precision 45/8" square | $0-200$ micro-ammeter; accuracy. |
| :--- |
| $0-2.5-10-50-250-500-2: 500 ~ V . ~ R a n g e s: ~$ | ohms per volt; $0-1-10-100$ M.A., $0-1-10$ A D.C. $0-3,000(221 / 3$ ohm center) $-50,000-$ 45 V . batteries (supplied); $0-300 \mathrm{meg}$. with external 300 . supply; $.0005-.05 \mathrm{mid} . ; 05$ 1500 m A. C . -10 to +58 D. B. in 3 ranges 1.500 V.A.C.; -10 to +58 D.B. in 3 ranges; For $105-130 \mathrm{Y} 60$ cycles. $15^{\circ} \times 9^{\prime \prime} \times 51 /{ }^{\prime \prime}$ With test leads. Wi, 15 ibs.

A 10247 . Model 407 $\$ 90$ AlO2.

## 1000 OHM PER VOLT ANALYZER

A10248. Model 4105 . Similar to 407 but less capacity and in ductance ranges. Ohms $0-2,500-25,000-250.000$ with battery supplied test leads. NET

## 409 SIGNAL GENERATOR

## An all-wave oscillator covering 116.350

 K.C., $350-1,050$ K.C. $1.05-3.7$ M.C., $3.7-12$ M.C.. $10-35$ M.C., $30-75 \mathrm{M.C}$. ( 4 meters), all on fundamentals. Two output impedance levels; $1 \%$ accuracy on 1.F and broadcast, $2 \%$ to 12 M.C. Uses 352 degree dial. dia. Wobbler, and separate audio For 105-130 V. 60 cycles. $\$ 90$ Shpg. wt., ${ }^{16}{ }^{16} 10249$ NETPRICE


## CORNELL-DUBILIER

 CONDENSER ANALYZERThis instrument quickly and accurately measures important characteristics of all types of condensers. Range from 00001 to 240 mid. This analyzer will determine the exact condition of all paper, mica, and electrolytic condensers, including A.C. motor-starting types. It is the only instrument of its type which provides a complete test for all con-
densers. Has amplifier for adequate sensidensers. Has amplifier for adequate senslivity. Has colored, easy-reading, accuratelon witches D.C vitage with push-butual witches, D.C. voltage supply and visual eye leakage ind teator. leads. cycles. In walnut cabin ${ }^{\circ} 1^{\circ} \times 12^{\circ} \times 9^{3} / 4^{\circ}$. Wt 121 bs . A10175. Model BF-50. NET

## CORNELL-DUBILIER ULTRA-COMPACT BRIDGE

An accurately designed bridge that measures all types of condensers between 00001 and 50 mfd. Accuracy independent of line voltage variation. Indicates power factor of electrolytic condensers. Useful as a continuity meter and for locating opens, shorts, high or low capacity, high power directly in microfarads. The most useful instrudirectly in microfarads. The most usefulinstruSupplied with test leads and instructions, less tubes (12A7 and 6AF6G). For $110-1 \geq 0$ V., 60 cycles. Size: $35 / /^{\prime} \times 5^{\prime \prime} \times 3^{\prime \prime}$. Shpg. wt., $\$ 070$ 3 lbs . A quality-built instrument at a low price. A10176. Model BN. NET

TRIUMPH $3^{\prime \prime}$ OSCILLOGRAPH AND WOBBULATOR Aor. The model 830 serves as a and T.V.M. and wave-form analyzer. Essential for flat topping I.F. $s$ and aligning A.F.C. circuits; also pro vides for overall set analysis. Frequency re sponse of both amplifers is 10-100,000 cycles. Thyratron linear timing sweep, 7-30,000 cycles. Absolute locking on all frequencies. The wob automatically synchronized and electronic fre automatically synchronized and electronic fre In black wrinkle-finished case, $10^{\circ} \times 7^{1 / 8^{\circ} \times 14^{\circ}}$ $105-125$ V., 60 cycles. Shpg. wt., 28 lbs. A1O119. Model 830.
${ }^{5} 68^{5 s}$


Time Payments: $\$ 6.86$ down, $\$$

## MODEL 130 VIDEO

 SIGNAL GENERATORA Triumph instrument with a range of 100 K.C. to 96 M.C., in 5 bands, for radio and television frequencies. Accuracy $1 / 2$ of $1 \%$ on casily-read 3 o-degree dial Airect-readins Controlled percentace of modulation calibrated on front panel, $0.75 \%$. Pure 400 cycle audio sine wave, variable $\dot{0}-21 / 2$ volts. In
black wrinkle-finished metal case. Front
 panel is ivory with black embossing. 13 AlOI20. NET

## READRTIE METERS SHUNTS -RECTIFIERS



## MODEL 55 D.C.

The popular and economical Readrite line used extensively in radio and electrical work where an efficient low-priced meter is required. Accuracy assured within $5 \%$. Dype. Require $25 \mathrm{f}^{\prime \prime}$ mounting vane, solenoid type. Require ${ }^{2564}$ mounting hole. Have easy-reading white dial, black lettering and cluded to hold meter tight against pancl Screw connections with binding nuts on rear. $21 / 4^{*}$ diameter. For outside flange mounting use No. 65A Flange ring.

## READRITE PANEL METERS

## MODEL 95

Here is a new addition to the famous line of Readrite meters. Model 95 is modernistic and up-to-date. The beautiful black lacquer-finished square cases measure $2 \% / 16^{\circ} \times 25 / 8^{\prime \prime}$. Wrinkle, nickel. and chrome finishes are also available on special order. Meters require Ideal modern for mounting. with dependable accuracy.


## D.C. MILLIAMMETERS




## RESISTANCE METER

## MODEL 501

DIrlet readins: 0-10,000 obms. $0-41 / 2$ volts. Measures resistance and checks contincircuits. Uses 3 small flashlight

## RESISTORS

No. 503 Resistor. 1150 ohms resistance to inA 7343 . wer used with $221 / 2 \mathrm{~V}$. battery. 59 e
No. 504 Resistor. 2,300 ohms, center-tapped. for use with 45 V . "B" to increase reading of A 7344 . With tip 100,000 ohms ATETM4. With tip jacks.
${ }^{\mathrm{s}} 1.32$

## OUTPUT METER

 MODEL 575Indicates output voltages for correct align-
ment of RF and TF stages. Ranges: 0-5. $0-5$ volts. Has copper-
oxide rectifier. In $41 / 2^{*}$ black metal case. ATET48.
$\$ 4.85$
MODEL 515 OUTPUT METER
Same as Model 575 above but with Trip750 ohms resistance per volt.
$\$ 9.770$

## CONTINENTAL CARBON

 TYPE A PRECISION RESISTORS
## Al ancicom 35M

A new 1-watt type of carbon resistor, im pregnated, and hermetically sealed in glass circuits requiring real stability. $11 / 2^{4} x^{1 / 4}$ dia.

SPECIFY VALUE DESIRED
Ohms $\left|\begin{array}{c|}\text { Volts } \\ \text { at } \\ \text { M }\end{array}\right|$

| Ohms | $\begin{aligned} & \text { at } 1 \\ & \text { M. A. } \end{aligned}$ | Ohmis | $\begin{aligned} & \text { at } 1 \\ & \text { M. A. } \end{aligned}$ | Ohms | $\begin{aligned} & \text { at } 1 \\ & \text { M. A. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 100 | . 1 | 8500 | 8.5 | 100000 | 100 |
| 200 | 2 | * 8950 | 9 | 150000 | 150 |
| 400 | 4 | *9950 | 10 | 200000 | 200 |
| 500 | 5 | 10000 | 10 | 240000 | 240 |
| 1000 |  | 13500 | 13.5 | 250000 | 250 |
| * 1450 | 1.5 | 15000 | 15 | 300000 | 300 |
| 2000 | 2 | 20000 | 20 | 400000 | 400 |
| *2950 | 3 | 25000 | 25 | 450000 | 450 |
| 3500 | 3.5 | 30000 | 30 | 490000 | 490 |
| 4000 | 4 | 40000 | 40 | 500000 | 500 |
| *4450 | 4.5 | 50000 | 50 | 600000 | 600 |
| *4950 | 5 | 60000 | 60 | 750000 | 750 |
| 5000 | 5 | 75000 | 75 | 800000 | 800 |
| 5500 | 5.5 | 85000 | 85 | 900000 | 900 |
| *5950 | 6 | 90000 | 90 | 1000000 | 1000 |
| *7450 | 7.5 |  |  | 10000 |  |

*These units allow for the 50 ohms internal resistance of the milliammeter. EA. 29 c A8198. Accuracy within $5 \%$. EACH. . 18 c

CONANT RECTIFIER
Type "M" full-wave rectifier for converting D.C. meters for
A. C. use. Input 10 volts RMS; A 2503 . NET. 2.06

KNIGHT 50 OHM SHUNTS


Individually calibrated to an accuracy of $\pm 1 / 2$ mil meters. Wire is hard-drawn manganin. For 50 ohm meters.

| No. | M.A. | No. M.A. |
| :---: | :---: | :---: |
| A2369 | 5 | A2373 100 |
| A2370 | 10 | A2374 250 |
| A2371 | 25 | A2375 500 |
| A2372 | 50 | NET EACH. |

KNIGHT COMBINATION SHUNTS


## COPPER-OXIDE RECTIFIERS

## 5 M.A. CAPACITY

 Miniature type. Converts D.C meters drawing less than 5 M .A A2500.\$2.15

## 20 M.A. CAPACITY

## Z/6" round. $3 / 4$ " long. Converts




## 50 M.A. CAPACITY

$3 / 4$ " dia.; $11 /{ }^{\prime}$ " long. Heavy-duty
type for use where current does not exceed $50 \mathrm{M} . \mathrm{A} . \$ 1.75$


## 321-521 <br> 326-726

## TRIPLETT

## FOUNDATION KITS

1000 OHMS PER VOLT
These high-quality, precisionbuilt Triplett meters, with the shunts and multipliers described below, an exdrethely appurate, mul-
build an extren build an extrenely accurate. mul-
ti-scale volt-ohm-milliammeter at ti-scale volt-ohm-milliammeter at
low cost The four meters incorporate a basic 0.1 mil movement rate a basic an internal resistance of 100 With an internal resistance on
ol
a sensitivity of
1.000 ohms per volt. Ranges are as followns: $0-10-50-250-500.1,000$ volts D.C. ${ }^{0}-1-500-100,000$ ohms; and as low as 2 ohms can readily be made. All meters are equipped with zero adjustments and have knife-edge pointers. Each instrument has wiring diagram. MODEL 321
Flange, $31 / 2^{n}$ diameter. fiush mounting. Scale length $23 / 8^{\circ}$ A8946. NET...

## MODEL 326

Flange, $31 /{ }^{\prime \prime}{ }^{\prime 2} 215 / 5$ hr $^{\prime \prime}$. fiush mount ing Sale enengh. ${ }^{\text {base }}$. $\$ 4.90$ A8941. NET... MODEL 521
Flange measures $516^{4}$ diameter. Aush mounting. Scale length diameter. Body is $11 / 2^{\prime \prime}$ deep. Shpg wt. 5 libs. NET..... $\$ 6.86$
A8949: NED MODEL 726
Flange measures $61 / /^{\circ} \times 711^{\prime \prime}$ ifush A9 116 . NET... $\$ 1.43$
RESISTORS \& SHUNTS A8942. Resistors mounted on $0-10-50-250-500-1,000 \mathrm{~s} 7.17$ volts D.C. NET.
A8943. Shunts mounted on bakelite for 0-1-10-50-250 mils D.C., shunt for low ohms, and NET high ohms. \$2.28 AB778. Zero adjuster fot 65 c A8779. Selector switch wit NET.
$\$ 1.33$
A8944. Current limiting resist meter range. NET.

## MALLORY-YAXLEY RESISTANCE KITS

These new kits fill a definite need in the Service, Amateur, and Experimental fields. Each kit contains all necessary materials to construct flexible resistors of a wide range of values. With these kits it is possible to construct the odd-value resistors so often found necessary in building test equipment and in experimental high quality flexible resistors are high quality flexible resistors are yard of spiral-wound resistance wire, 1 yard of insulated braid, and 10 spiral wire leads. Resistance value remains constant
through unlimited life. Correct resistance may be obtained by cutting the spiral resistance wire to measurement. All types listed safely dissipate $1 / 2$ watt per inch. No. Reslstance NET A9235. 1 ohm perin. A 9237.100 ohms per in.
A 9238.500 ohms per in.

## TRIPLETT PRECISION METERS

These accurate, dependable meters are available in a variety of styles, sizes, and ranges. Incorporate a rugged D'Arsonval movement which assures an accuracy within ${ }^{\prime \prime}$. The genuine polished sapphire-jeweled bearings are set in adjustable screws. All instruments have zero adjustments and balanced aluminum nibbed type pointers. Metal diass are beautifuly Cinished in white enambe wron-repulsion type are air-damped and have light moving parts D C meters have well-aged magnets of special construction, assuring accurate readings. Zero adjusting screw is accessible from front of meter. Front lighting and portable frame attachments are available for Models 321 and 331 . See descriptions at rizht. Average shpg. wt., 3 lbs . each.

## METER DIMENSIONS

| Model | Flange | Mig. | Scale | Case |
| :---: | :---: | :---: | :---: | :---: |
| 221 | 25/8" | Flush | $1{ }^{23 / 32^{17}}$ | Bakelite |
| 227 | $23 / 8 \times 23 / 8^{\text {c }}$ | Flush | $1{ }^{23} 33^{\prime \prime}$ | Bakelite |
| 231 |  | Flush | $13564^{\prime \prime}$ | Bakelite |
| 237 | $23 / 8 \times 23 / 8^{*}$ | Flush | $1{ }^{15964}$ | Bakelite |
| 321 | 31/2" | Flush | ${ }^{23} 18^{\prime \prime}$ | Bakelite |
| 327 331 | ${ }^{3 \times 3}{ }^{\prime \prime}$ | Flush | 2\% 29 | Bakeite Bakelite |
| 337 | $3 \times 3$ \% | Flush | 2\% | Bakelite |

## D.C. MILLIAMMETERS

| Miodel |  | NET | Model |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 321 | 327 |  | M.A. | 221 | 227 | NET |
| $\begin{aligned} & \text { A8650 } \\ & \text { A8651 } \end{aligned}$ | A8664 A 8665 ( | \$4.57 | $\begin{aligned} & 0-1 \\ & 0-1.5 \end{aligned}$ | $\begin{array}{\|l\|} \hline A 8736 \\ A 8737 \end{array}$ | $\begin{array}{\|c\|} \hline A 8786 \\ A 8787 \\ \hline \end{array}$ | \$3.75 |
| $\begin{aligned} & \text { A8652 } \\ & \text { A8653 } \end{aligned}$ | $\begin{aligned} & \text { A8666\} } \\ & \text { A8667 } \end{aligned}$ | 3.75 | $\begin{aligned} & \hline 0-5 \\ & 0-10 \end{aligned}$ | $\begin{aligned} & \mathrm{A8738} \\ & \mathrm{~A} 8739 \end{aligned}$ | $\begin{aligned} & A 8788 \\ & A 8789\} \end{aligned}$ | 2.94 |
| $\bar{A} 8654$ A8655 A8656 | A8668 |  | $0-15$ $0-25$ $0-50$ | $\left\|\begin{array}{l} A 8740 \\ A 8741 \\ A 8742 \end{array}\right\|$ | $\begin{aligned} & \hline \begin{array}{l} \text { A8790 } \\ \text { A8891 } \\ \text { A87922 } \end{array} \end{aligned}$ |  |
| A8656 <br> A8657 | A8670 | 3.75 | $0-50$ $0-100$ 0 | A8742 | A8792 <br> A8793 | 2.94 |
| A8661. | A8672 |  | -150 | A8744 | A8794 |  |
| A8658 | A8673 |  | 0-200 | A8745 | A8795] |  |
| A8663 | A8674 | 3.75 | $0-250$ $0-300$ 0 | A8746 ${ }_{\text {A }} \times 8747$ | A8796 ${ }^{\text {A8797 }}$ |  |
| A8660 | A8676 | 3. | 0-500 | A8768 | A8798 |  |
| A8662 | A8677) |  | 0.750 | A8749 | A8799 |  |


| A8662 A8677 |  |  |  |  |  |  | D.C. AMMETERS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D.C. VOLTMETERS <br> ( 125 Ohms Per Volt) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 321 | 327 | NET | Amps. | 221 | 227 | NE |
| 21 | 327 | NET | Volts | 221 | 227 | NE | $2$ | A887 |  | -1 |  |  |  |
| A8761A8691A8692A8693A8694 | A8450 |  |  | A8462 | A8474 |  | A87 | A887 | \$3.75 |  | A888 | A8886 |  |
|  | A8852 | \$3 | 0-15 | A8464 | A8476 | \$2.94 | A8 | A8 |  |  |  |  |  |
|  | A8453 |  |  | A8465 | A8477 |  | $\begin{array}{\|l\|} \hline A 8759 \\ A 8760 \end{array}$ | A8876 | \$3.75 | $20$ | $\begin{aligned} & \text { A8882 } \\ & \text { A8883 } \end{aligned}$ |  | \$2.94 |
|  | A8454 |  | 0-50 | A8466 | A8478 |  |  |  |  |  |  |  |  |
| A8695A8966A8762A8697A8688A8699A8690 | $\begin{array}{\|l\|} \hline A 8455 \\ A 8456 \\ A 847 \\ A 8458 \\ A 859 \\ A 8460 \\ A 8861 \end{array}$ | 3.753.754.596.047.188.33 | $\begin{aligned} & 0-100 \\ & 0-150 \\ & 0-250 \\ & 0-300 \\ & 0-500 \\ & 0-750 \\ & 0-1000 \end{aligned}$ | A8467A8488A8469A8470A8471A8472A8473 | A8479A8880A8481A8883A8484A8485 | $\begin{aligned} & 2.94 \\ & 2.94 \\ & 3.75 \\ & 4.24 \\ & 5.06 \\ & 9.05 \end{aligned}$ | A.C. AMMETERS |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 331 | 337 | NET | Amps. | 231 | 237 |  |
|  |  |  |  |  |  |  | A886 | A8763 |  | 0-1 | A8771 | A8821 |  |
|  |  |  |  |  |  |  | A8867 | A8764 |  |  | A 8772 | A8882 |  |
|  |  |  |  |  |  |  | A8868 | A8765 | \$3.75 | 0 | A8773 | A8823 | 94 |
|  |  |  |  |  |  |  | A8869 | A8766 A8767 |  | $0-5$ $0-10$ | $\begin{array}{\|c\|c\|} \hline A 8774 \\ \text { A8775 } \end{array}$ | $\begin{aligned} & A 8824 \\ & A 8825 \end{aligned}$ |  |
| A.C. VOLTMETERS |  |  |  |  |  |  | $\begin{array}{\|l\|} \hline \text { A8871 } \\ \text { A8895 } \\ \text { A8896 } \end{array}$ | $\begin{array}{\|c\|} \hline A 87688 \\ A 8769 \\ A 8770 \end{array}$ | $\begin{aligned} & 4.55 \\ & 5.88 \\ & 8.16 \end{aligned}$ | 0-25 | A8776 | A8826 |  |
| 331 | 337 | NET | Volts | 231 | 37 | T |  |  |  | -75 | A8777 | 7 |  |
| A8830 | A8700 | \$3.75 | $\begin{aligned} & 0-5 \\ & 0-10 \\ & 0-15 \\ & 0-25 \end{aligned}$ | A8711 <br> A8712 <br> A8713 <br> A8714 | A8486A8487A8488A8489 | \$2.94 |  |  |  |  |  |  |  |
| A8831 | A8701 |  |  |  |  |  | A.C. MILLIAMMETERS |  |  |  |  |  |  |
| $\begin{aligned} & \text { A8832 } \\ & \mathbf{A} 8833 \end{aligned}$ | A87702 |  |  |  |  |  | 331 | 337 | NET | M. A. | 231 | 237 | NET |
| A8834 | A8704 |  | 0-50 | A8715 | A8490 |  | A8805 | A8812 | \$4.41 | 0-10 | A8841 | A9062 | \$3.60 |
| A8835 | A8705 | . 5 | 0-100 | A876 | A8891 |  | A8806 | ${ }_{\text {A8814 }}$ |  | $0-15$ $0-25$ | $\begin{aligned} & A 8842 \\ & A 8843 \\ & A 8 \end{aligned}$ |  |  |
| A8836 | A8706 |  | (150 $\begin{aligned} & -1500 \\ & 0-300\end{aligned}$ | A8717 | $\begin{aligned} & A 8492 \\ & A 8493 \end{aligned}$ |  | $\begin{array}{\|c\|} A 8807 \\ A 8808 \end{array}$ | $\begin{aligned} & \text { A8814 } \\ & \text { A8815 } \end{aligned}$ | \$3.75 | - $0-25$ | $\begin{gathered} A 8843 \\ A 8844 \end{gathered}$ | $\begin{aligned} & \text { A9064 } \\ & \mathbf{A} 9065 \end{aligned}$ |  |
| 837 | A8707 | 5.39 | 0-300 |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { A8838 } \\ & \text { A8839 } \end{aligned}$ | A8708 |  | $\begin{aligned} & 0-500 \\ & 0750 \end{aligned}$ | $\begin{array}{\|l\|} \hline A 8719 \\ A 8720 \\ A 8721 \end{array}$ | A8494 A8495 A8496 |  | $\begin{aligned} & \hline \begin{array}{l} A 8809 \\ A 8810 \end{array} \end{aligned}$ | $\begin{aligned} & \overline{A 8816} \\ & A 8817 \\ & A 8818 \end{aligned}$ | \$3.75 | $\begin{aligned} & 0-100 \\ & 0-250 \\ & 0-500 \end{aligned}$ | $\begin{aligned} & A 8845 \\ & \text { A8846 } \end{aligned}$ A8847 | $\begin{aligned} & A 9066 \\ & \text { A9067 } \\ & \text { A9068 } \end{aligned}$ | \$2.94 |

## D.C. MILLIAMMETERS

 MODEL 701Highly accurate D'Arsonval type meters. Moving coil design. Aciustment, sapphire bearings, aluminum pointers. Flush mounting, $31 / 4^{\prime \prime}$ diameter. in metal case. Highable accuracy.

| No. | M. A. | LIst | NET |
| :---: | :--- | ---: | ---: |
| A2300 | $0-1$ | $\$ 6.00$ | $\$ 3.53$ |
| A2 301 | $0-10$ | 4.75 | $\$ 2.79$ |
| A2 302 | 0.100 | 4.75 | 2.79 |
| A2 303 | $0-200$ | 4.75 | 2.79 |
| A2305 | 0.500 | 4.75 | 2.79 |
| A2304 | $1-0-1$ | 6.00 | 3.53 |

## VOLT.OHM-MILLIAMMETERS

A2315. MODEL 701. Meter only. Reads 0-1 mils D. C. NET
$\$ 3.53$
A2317. MODEL 701. Meter only. Reads 0-1 mils D.C., 0-2.000 ohms, 0-5-250-750 volts \$3.53
We can supply all Beede meters. Write for descriptive
We can supply all Beede meters. Write for descri
literature and prices which will be sent promptly.

${ }_{331-231}^{321}$ A. C.
PORTABLE FRAME
Designed to house Triplett Iodel 321 and 331 meters. Built of black wrinkle-finish metal from frame. A9074. NET.

98 c
DIAL LIGHTING ATTACHMENT For Triplett Models 321 and 331. Easily attached. With 6.3 V. bulb. 98.
D.C. VOLTMETERS
(1000 Ohms Per Volf)

| 321 | 327 | NET | Volts | 221 | 227 | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A8722 | A8678 |  | $0-05$ | A8853 | A9050 |  |
| A8723 | A8679 | \$5.39 | 0-10 | A8854 | A9051 | \$4.24 |
| A8724 | A8680 | +5.39 | 0-25 | A8855 | A 9052 | +4.24 |
| A8725 | A8681 |  | 0-50 | A8856 | $\text { A } 9053$ |  |
| A8726 | A8682 | 5.71 | 0-100 | A8857 | A9054 | 5.07 |
| A8727 | A8683 | 5.71 | 0-150 | A8858 | A9055 |  |
| A8728 | A8684 | 6.53 | O-300 | A8859 | A9056 | 5.71 |
| A8729 | A8685 | 7.18 | $0-500$ | A8860 | A9058 |  |
| A8730 | A8686 | 9.02 | 0-750 | A8861 | A9058 |  |
| A8731 | A8687 | 10.46 | 0-1000 | A8862 | A9059 | 1 |
| A8732 | A8688 | 18 | $0-15$ | A8863 |  | 3 |
| A8733 | A8689 | 10.29 | $\begin{aligned} & 0-15-60- \\ & 300-600 \end{aligned}$ | A8864 | A9061 | 9.14 |

## TRIPLETT 7" ILLUMINATED

## AC-DC FOUNDATION METER KIT

New foundation instruments with 25.000 ohms per volt D.C. sensitivity. Effective scale length. $6^{*}$. Dial cale reads: $0-10-50-250-1000$ volts microamperes; 0-1-10-50-250 mil liamperes; 0 to 500 ohms, backup circuit; 20,000-200,000-2 meg. resistance scale; 0-10-50-250-1000 A.C. volts, at 1000 ohms per volt. Build your test equipment around one of these meters. Illumination feature is supplied in $7^{\prime \prime}$ model only with markings in colo
NET.

## A9111. Model 321. 3* Round. NET....... $\$ 9.80$ A9112. Model 426. "* Square. NET. <br> ESSENTIAL PARTS KITS

A9114. AC-DC Control Box. Assembled. Includes everything necessary to obtain readings above. In A9115. As above, but not assembled. Must be

# Precasion FOUNDATION \& PANEL MEIERS 

## KNIGHT-BEEDE FOUNDATION METERS

## D.C. VOLT-OHM-MILLIAMMETER

These new Beede Foundation Meter Kits are ideal for building an efficient Volt-Ohrm-Milliammeter at an attractively low price. An invaluable instrument. The black bakelite fan-type case is $41 / 2^{*}$ long and $33 / 8^{\circ}$ high and mounts in a the lour $333^{=}$scale hole. The large figures on knife-edge pointer Has D'Arsonval movement

## 1000 OHMS PER VOLT

Uses a sensitive 0-1 MA movement, 50 ohms internal resistance. Scales are: 0-10-25-50-100 $250-500$ volts D.C.; $0-1.000$ ohme- 1 megohm; and $0-10-100$ milliamperes D.C. These scales pro
vide quick and accurate testing. (See multiplier resistor kit and shunt reslstors below.) $\$$. videquick and accurate testing. (See multiplier resistor kit and shunt reslators below.) \$4....................................................................................

## MULTIPLIER RESISTOR KIT

Consists of high quallty semi-precision reslators for use with the above meter to obtain the ohm to within $5 \%$. With diagrain. A2331. NET
. 1.59

## 5000 OHMS PER VOLT

An ideal instrument for use as a voltmeter where a meter sensitivity greater than 1,000 ohms per volt is required. Uses a 200 microampere scales are: 0 internal resistance, 450 D.C $0-1.000-1000000$ ohms. $0-1-2$ mere volts D.C io $10-100$ milliamperes, D.C. Use resistors and shunts below:
$\$ 5.88$
A2320. Multiplier resistor kit for use with 5,000 ohm per volt meter above. Accuracy is 42321 Shunt resistors for obtalning 4.65 A2321. Shunt resistors for obtalning M.A.


## KNIGHT GIANT $9^{\prime \prime}$ AC-DC FOUNDATION METER



The KNIGHT Giant Foundation Meter uses a new principle of "motivation. Has new "Alnico" magnets and zero adjustment. A high-quality lab
instrument in every detail.

## Here 1s a laboratory type instrument ldeally suited for the service-

 man, experimenter or amateur. Uses a large, highly accurate $9^{\circ}$meter with a sensitivity of 2,000 ohms per volt. Clearly marked meter with a sensitivity of 2,000 ohms per volt. Clearly marked scales can be easily read at a distance. Ranges of the instrument are D. follows: 0-10-50-250-500-2.500 volts D.C. $0-5-10-50-500$ M.A. $0-10,000 ; 0-100,000$ ohms: $0-1-10$ mevohing and 5 A.C.; $0-1,000$; $0-10,000 ; 0-100,000$ ohms; $0-1-10$ megohms and 5 output ranges same as A.C. voltage scales. Separate chart permits reading from Kit A 2329 below (includiagram is included with meter. Use Parts make complete Giant Tester to obtain above readings. $\$ 50$ A2318. NET
A2318. NET......................................... $\$ 80$


## ACCESSORIES FOR METER

A2319. External Shunt. Permits increasing range of Giant Meter 0-10 amperes D.C. Indispensable for auto radio servicing. Shunt is wire-wound and held to close tolerance. NET....\$1.75 A2316. Case for Meter. A sturdy, attractively finished inetal
case designed to house the Knight Giant Meter. NET.... $\$ 1.75$

AUDIO BEAT FREQUENCY OSCILLATOR KIT
 This instrument is indispensable for providing
overall
fidelity overall fidelity checks on audio ceivers, determlnation of modulation capabilities, checking for speaker rattle, 20 to $15,000 \mathrm{cy}-$ cles per second. Has sinusoidal wave form with maximum distortion under $2 \%$. Output flat within 1.8 D. B. over entire range. Dial scale is $40^{\circ}$ long and has accurate reset. Thorough shielding and proper placement of parts eliml-
nates spurious beats. Parts are temperature nates spurious beats. Parts are temperature stabilized. Calibration is permanent-no triming multiples of the power line frequency.

ESSENTIAL PARTS KIT
Contains a fixed and a variable frequency oscillator unit, a special filter, geared 385 mmf . variable condenser, a punched and drilled $7^{\prime \prime} \times$ " $\times 2^{\prime \prime}$ chassis base, black crystalline-finished panel and cabinet, hardware, dial parts, mis-
cellaneous assembly parts, et.
A8430. NET................. 88

## MISCELLANEOUS PARTS

A specially selected kit of matched parts consisting of fixed condensers, resistors, power $6 \mathrm{C} 5,1-6 \mathrm{TS}$ and $1-524$ tubes. $\$ 170$

WRITE FOR Descriptive Literature on above unit. Bulletin sent FREE on request.

## METER DIAL SCALES

These scales are used to convert 0-1 M.A. meters into multimeters. They are reproductions of inivldual precision calibrations and are avallals and scales are clearly etched in black on whiteand platinum Bristol board.


## SCALE HIC

Upper scale has standard calibration in ohms for a $41 / 2$ volt battery. Lower scale reads 0-5048435 . For Triplett 32 vols A.C. Or D.C A8436. For Weston 301. EACH A8437: For Jewell 88. 19.

SCALE H2C
Lower scale calibrated $0-50-250-1,000$ volts and M.A.D.C. Upper scale has standard calibration in ohms plus a backup olims scale. A8438. For Triplett 321.
A8439. For Weston 301.
EACH A8439. For Weston 301. A8440. For Jewell 88.
$19 c$

## SCALE H3C

Upper scale has standard calibration in ohms for a $41 / 2$ volt battery. Lower scale reads $0-50$ -$250-1,000 \mathrm{M} . \mathrm{A}$. and volts D.C. A8441. For Triplett 321. EACH A8442. For Weston 301. 19.

## SCALE H4C

Lower scale reads 0-150-300-600 M.A. and volts D.C. Upper scale has standard calibration in ohms or a $41 / 2$ volt battery A8444, For Triplett 321 A8445. For Weston 301

## TUNING METERS



High resistance milliammeters for visual tuning of $A$. $V$. C. sets. Indicate exact tuning resonance. Model 121 is shadow tuning type. Other models use needle as indicator.

| M.A. TM-103 | TM-102 | TM- 108 | TM-121 |
| :--- | :--- | :--- | :--- | :--- | | $0-5$ | $A 7475$ | $A 7480$ | $A 7485$ | $A 7490$ |
| :--- | :--- | :--- | :--- | :--- |
| $0-1$ | $A 7476$ | $A 7481$ | $A 7486$ | $A 7491$ |
| $0-10$ | $A 7477$ | $A 7482$ | $A 7487$ | $A 7492$ |
| $0-15$ | $A 7478$ | $A 7483$ | $A 7488$ | $A 7493$ |

Choice of any type above, less
escutcheon. NET EACH
List, $\$ 1.50$. NET

A7495. For TM-108, 121 S.

## WESTON 301 PANEL METERS

These panel instruments are distinguished for their fine workmanship and dependable performance. They have well-damped D'Arsonval movements with an accuracy within $2 \%$ Contained in $31 / 2^{\prime \prime}$ fushomounting type.

D.C. MILLIAMMETERS

No. $\left|\frac{\text { M. A. }}{\text { A1420 }}\right| \frac{\text { NET }}{57.35}\left|\frac{\text { No. }}{\text { A14. }}\right| \frac{\text { M. A. }}{0.1424}$ NET
$\begin{array}{llllll} & \text { A1421 } & 0-1 & \$ 7.35 & \text { A1424 } & 0-100\end{array}$



## PANEL LIGHT

Excellent for lighting paneltype meters. Requires single $1 / 2^{n}$ mounting hole. Accommodates
miniature base bulb.
 A9133. NET… 29 c

technlciuns and are calibrated against accurate standards. For prices on services not shown, send meter prepaid for inspection.
SERVICE A: For $31 / 2$ meters with burned-out or open armatures. We dismantle the entire replace and sharpen the pivots, and polish the jewels. If the armature has been burnt, new halr-springs are installed. The moving element is then reassembled and balanced, and the meter calibrated at three points. Scratched metal cases are carefully refinished. \$ 3.75
SERVICE B: For slugyish or erratic meters. Same as Service A except that armature and hair-springs are not replaced. ..... \$2.95 SERVICEC: If glass is cracked, scratched or broken, we will replace it for an
additional charge of ..................... 90

## SEND CASH WITH ORDER

Prices above cover only replacement parts specified in each service. Additional parts, such as pointers, springs, zero adjusters, case, etc.,
will be supplied at the lowest possibleprices.

#  

## 

SPEAKER-HEADPHONE MIKE \& PHONO ADAPTERS For speaker and headphone switching. Connects headphones to radio set; built-in switch will not be disturbed. Adapters supplied fit under power tubes. Very easily installed.


FOR MIKE \& PHONO
A5505. 5 Prong. ............] NET EACH
54.

## FOR EARPHONES

Io connect headphones to any set. May also be usen as extra spea
A5294. 5 Prong. A5295. 6 Prong. NET EACM 44c

## UNIVERSAL ADAPTER

 Brings out all tube terminals for disturb wiring.
GRID CAP PHONO ADAPTER
Connects phonograph pickup to grid cap of tuhe. Has 2 contacts into which the phone tip A pickup are connected. For A5547. For Metal Tubes. YOUR PRICE EACH.

RCA PHONO ADAPTER


For connecting record player to any radio set.
Switch changes from radio to phonograph quickly and convenswitch, shiclded cable, terminal board, knob mounting screws, etc
59.

## GRID CAP ADAPTERS

A1672. Double clip for metal and glass tubes. Insulater in moided housing. YOUR PRICE

10 A1673. Plugs into standard grid cap. Other end fits small metal tube cap. A1684. D analyzer plup. Metal and glass. YOUR PRICE.
A1685. Octal screw type, Replaces 1 large studs on plugs having 2.

## UNIVERSAL OUTPUT-METER

E-

年ADAPTER controls, etc for test purposes. Puili out tube, silip adapter over proper
prong. and replace the tube. 50 lead A1678.

## UNIVERSAL ADAPTER KIT



Can be used to make up any adapter required for test $a$ $5,6,7$, and 8 octal prong wafer separators and 12 contacts. In use, the yeparator needed is
selecter selected; then the correct number of contacts are inserted according to element of tube orcircuit under test. Parts
may be used over and over may be used over and over again. Complete in leatherette case. Shpp. wt., 1 lb . A1679. NET.
$.44 c$

BUD ANALYZER PLUG AND ADAPTERS
This molded bakelite analyzer plug with its small-base adapter kit makes it possible for yourer ub-tod your present analyzer up-to-date. Consists and socket 8 wire cable; dual and sock stud and 5 adapters A1 1659.
$\$ 5.40$
A 1650 . Analyzer plux only. Small 8 prong octal base plug which pluss into adaplers. Hasdual grid studs\$1.03
A 1651 . Analyzer plug, as of 9 wire cable attached and an 8 prong panel pla DAPTERS ONIY

|  | ADAPTERS ONLY |  |
| :---: | :---: | :---: |
|  | Prongs |  |
| $\begin{aligned} & 653 \\ & 654 \end{aligned}$ | 8 to 4 | EACH |
| ¢ | 8 to 6 |  |
| 165 | 8 to 7M | 58 |
| A1657 | 8 to 7S |  |
| A1658 | 8 to Loctal. NET |  |
| A1660 | 8 to Bantam Jr. NE |  |

## ALDEN TUBE LEAKAGE AND SHORT TESTER

For 4, 5, 6 and 7 prong tubes. Will indicate any leakage Operates from AC line. Has jacks for using as a continuity tester. With neon lamp. grid lead. cord
and plug. Wt. 2 lbs. A1675
Your YOUR \$2.... 2.06


## UBE TEST

ADAPTER
For use with any tube checker. Plugs into 36 socket. 3 octal sockets on adapter accomp modate all metal tube types. 2 toggle
switches are provided switches are provided for thorough tests
cluding both plates of cluding both plates of
double-plate tubes Wt., 21 bs .
A1674. \$3.82

## HIGH IMPEDANCE PHONO

 PICKUP ADAPTERS

These adapters make it possible
to connect a phono pickup to any set without making circuit changes. Will not disturb opera-
tion of get. Adapters connect tion of get. Adapters connect
into control grid to ground circuit of detector or to first A. F. amplifier. With shielded cable and change-over switch.
A4925. 5 Prong Adapter. For insertion under any 5 prong detector or first audio tube such as 27,5 ,
A4926. Octal Base Adapter. For insertion under any detector or first audio amplifier
tube with octal base such as $6 \mathrm{~B}, 6 \mathrm{C} 5,6 \mathrm{~F} 6$. etc. A4927. Grid Cap Adapter. For use in control circuit of tubes having top cap. NET EACH

95

## WIRED LOCTAL ADAPTER SET



5 adapters are required for testing the new Loctal tubes. This set testing these new type testing these new type
tubes in any type of tubes in any type of custom-built, and emission, or direct-reaning tyves. Socket tops are color-coded black, bluc. green. yellow, and gray for identification purposes. Bottom octal plugs are all black. The set is supplied with complete instructions.
A4617.
2.75

AMPHENOL UNIVERSAL ADAPTER FORMS
A new type of adapter. The top consists of a standard bakclite socket. Any top and any bottom together with Allap adapter shell will make the is brass, finished in black It is $11 /$ long. Both the top socket and bottom plug may be easily snapped into shell adapter after wiring.

SOCKET (Top)

MODERNIZING AND TUBE TESTING ADAPTERS
Cash in on set-modernization. Use these adapters to replace tube types listed below. The new glass and metal tubes now avallable will stability. These adapters may, also stability. These adapters may also be used to modernize old style testpresent tube tester or analyzer need not be disturbed


| No. | Test or Replace | In Socket |
| :---: | :---: | :---: |
| A1728 | 2576 | 2575 |
| A1735 | 6F5 | 75 (Triode) |
| A1727 | 6. 5 | 84. 624 |
| A1730 | 6 J 7 | 77, 6C6 |
|  | 6 K 7 | 78, 6D6 |
|  | 6F6, 6L6 | 41, 42 |
|  | 6 K 6 | 41, 42 |
|  | 25A6 | 43 |
| A1686 | 6F5* | 75, 85 |
| A1687 | 6H6* | 75,85 |
| A1682 | $6 \mathrm{C5}$ - ${ }^{\text {6 }}$ | 37,76 |
| A167\% | 5Z4, $5 \mathrm{~W} 4,5 \mathrm{Y} 3$ | 80 |
| A1680 | 6K7, 6J7, 6F6 | 78, 77. 42 |
|  | 6L6, 607, 6R7 | 42, 75, 85 |
|  | 25A6, 6B5 | 43, 6N6 |
|  | $57,58,77,78$ | 24, 35, 37, 39 |
| A1740 | $47$ | $45$ |
| A1743 | 59 | 45 |
| A1744 | 2A5 | 45 |
| A1745 | 59 | 47 |
| A1746 | 2 A 5 | 47 |
| A1755 | UX201A | UV201A |

*For testing only.
YOUR CHOICE OF ANY OF
38.

AMPHENOL COMPACT

## ADAPTER FORMS

Unwired adapter forms. Smaller than Universal type. Black bottoms have $5 / 3 z^{\prime \prime}$ hole for bringing out leads where needed. Tops available in black, red, green, blue, gray, or yellow. Specify color of tops when ordering these adapter forms.

| Holes or Prongs | Socket Top | BOTTOM PLUG |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Less | Stud | With Stud |
| $\begin{gathered} 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ \text { Loctal } \end{gathered}$ | A 1716 A17 A 178 $A 1719$ A 17721 | $\begin{aligned} & \mathrm{A} 1 \\ & \mathrm{~A} 1 \\ & \mathrm{~A} 1 \\ & \mathrm{~A} 1 \\ & \mathrm{~A} 1 \end{aligned}$ | $\begin{aligned} & 722 \\ & 723 \\ & 724 \\ & 725 \\ & 726 \end{aligned}$ | $\begin{aligned} & \text { A } 1784 \\ & \text { A } 1785 \\ & \text { A } 17867 \\ & \text { A } 1788 \end{aligned}$ |
| $\begin{aligned} & \text { NET } \\ & \text { EACH......... } 2 c \end{aligned}$ |  |  | H | EACH |
|  |  |  |  |  |

Designed for use with analyzers. Adapters are wired straight through, 1 to 1, 2 to E. EACM A1796. 6 to Loctal...................... $\}$ EACM

## COMBINATION SOCKET

 AND BULB TESTERCombination 7 contact socket with a large center contact for testing pilot lights, flashlight A4620. NET
26.

#  

## ALIGNING AND NEUTRALIZING TOOLS


#### Abstract

A5534. Flexlble Shaft Tuning Wand. or checking alignment of radio sets without isturbing adjustment of the trimmers. Sbait is of flexible catgut; brass cylinder at 59e A5573. Solld Shaft Tuning Wand. With olid bakelite shaft. NET


Non-Metallic Adjustable Neufrallzing Tool. Made of Fenoline-no metal parts. Screwdriver at one end and hex socket at other. Fully shock-proof. A5581. Extends 6 to $11^{\circ}$. NET A5581. Extends $10^{\circ}$ to $18^{\circ}$. NET

45584. Narrow Shaft Alignment Tool. Ideal for crowded quarters. Consists of socket wrench and screwdriver on bakelite 28 e

A5483. Non-Metallic Screwdrlver. Made etc. $6^{\circ}$ long. NET..................... 25 c $25 c$
A5484, Double-Edged Screwdriver. Made of durable $1 / 4$ " bakelite rod with blades 21 c
at both ends. 7 long. NET............ 210

## $8 \times 5=0$

A5503. Insulated Screwdriver. Completely Insulated. $51 /{ }^{2}{ }^{2}$ long. Narrow $5 / 16^{\circ}$ dia- 18 c

Set Trimmers for Philco, Zenith, RCA. Designed for allignment of the small-space coil and trimmer assemblies used on new All-Wave ets. Screwdriver has a diameter of $7 / \mathrm{p}^{\prime}$ so that has socket head for $5 / 10^{\circ}$ hex nut. 426 A536. 10" Trimmer. NET $.57 c$


A5502. Alignment Wrench for Philco and RCA. A new aligning tool for neutralizing and adjusting the air trimmers of ail RCA. Fenoline rod, $81 / 2^{2}$ long. Has hollowshaft hexagon wrench at one end, shaped hook 7 3c
at other end. NET.....................

Insulated Hex Wrench. Hex broaching runs entire length of wrench. End may be cut off when worn. Fibre rod. Fits $1 / 4^{\circ}$ nut.

12e| ASAT4.
15.

A5528. Metal Nib Neutralizing Tool. Two valuable tools. One is a $6^{\circ} \times 3 / 8^{*}$ tube, on each end of which are heavy brass nickel-plated socket wrenches for $1 / 6$ and $1 / 4$ hex. nuts. The
other toul fits into the tube tool. Has screwdriver blade at one end; other end is 59 e
of magnetic steel. NET.............

A6657. Push-Button Aligner Tool. Designed for trimming and adjusting all Push Button Tuners. Fenoline ribbed handle with contains a small recessed screwdriver 29

A6658. Low "c" Aligner. Made of unbreakable bone fibre $7 / 2$ a $^{\text {in }}$ in diameter. One end padding condensers; the other end has a recessed screwdriver for adjusting per-29c
meability tuned circuits. NET.........29c

## NEUTRALIZING \& ALIGNING KITS

DE LUXE MODEL
tool for every receiver. 1 parts cover multiple func into each other forming 6 sep rate tools. In a handy leath
 rete case including. screw hard-torreach spots; "masic alignment tool; alligator side wrencli; $6^{*}$ insulated screw river with metal nib; S/is ${ }^{\circ}$ and $1 / 4{ }^{\circ}$ nut wrench; $1 / 4^{\circ}$ insulated quare nut wrench; $1 / 4^{*}$ hex metal side wrench; $21 / 2$ insulated screwdriver with metal nib; $1 / /^{*}$ hex slotted insulated nrench screwdriver, 3/10, hex insulated screw Supplied with leath- $\$ 9 \mathbf{9 4}$
erette case. A5529.


## STANDARD MODEL KIT

Similar to the "De Luxe" set above but less the fiexible screwdsiver and "magic" aligning tool. With hardy
A5532, NET.
$\$ 2.30$

## ALL-PURPOSE TEST KIT

Kit contains one palr of test lads 60 inches long, one red and one black, of kinkless live lated phone tio and the other lated phone tip, and the other end has insulated banana prod plug-on type, making the test plug-on type, making the test
 eads universal in appication. Also included are: 1 pair insulated alligator clips-one red and one back, needle points-one red and one black. With handy carrying case.
$\$ 1.32$
5-1N-1
ALIGNMENT

## TOOL

A handy alignment tool kit that will serve innumerable uses. Consists of $1 / 4^{\prime \prime}$ and $3 / 16^{*}$ nut full-size screwdriver with pocket clips. 5\%c

## 4-IN-1

## ALIGNMENT

 TOOLCombines in one

ountain pen size, tool 4 Serviceman, 53 sities- $1 / 4^{\circ}$ and $5 / 16^{\circ}$ nut wrenches, neutralizing screwdriver and key slot grip. Insulated handle with pocket clip. $6^{\circ}$ long.
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 Protect your instruments withfused test leads. Fuses cost less to replace than meters. Standard fuses can be inserted into the barrel of each prod. Interchange fuses for different meters. Complete with Interchangeable Alligator Clips. Spade Luge. and Phone Tips, all of which fit on to
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27.

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Mandles are $6^{\circ}$ long and $1 / 4$ dia meter. Have 5 foot kink less red and black wires One end equipped with
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A companion book to book above. Contalns and phone designs of process of modulation Dower Xmitter, modulator, antenna.

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Contains 38 log pages, 38 blank pages, " $Q$ gnal hst, measase number sheet, and cross section paper, etc. spiral-bound. . 3 for

## A.R.R.L. RADIO MAP

A $30^{\prime \prime} \mathrm{K} 40^{\prime \prime}$ Rand-McNally 6 color map. Shows Countries, Prefixes, WAC and World Tim A2171. NET.

## LIGHTNING

CALCULATORS
A2180. Type A. Solves problems of frequency, inductance. etc.
42181. Type B. Solves roblems in voltage, current, REsistance, power. \$1.00


A2182. TypeC. Solves all
problems involving wire computations. A2183. Type D. Solves all problems in
A2184. Type E. For problems of parallel
A2 185 . Type F. Works out ohmmeter cal
Culations with a voltmeter.
50.

# BURGES RAOIO <br> BURGESS Battarate KNIGHT 

BURGESS PLUG-IN "B" BATTERIES
The rigid specifications to which thes famous batteries are built make them suit able for all radio and laboratory require ments. They are absolutely moisture- and climate-proof, and incorporate the highest degree of purity, in materials to assure a cast 1000 hours' normal service. No finer batteries are made today to meet every requirement for pure D.C. ALLIED'S stock of Burgess Batteries is always fresh, assuring you of full rated service from each unit. All Burgess batteries isted below as equipped for plug-in connectors can also be supplied with Fahenstock clips at no catalog number when ordering.
 SUPER "'B' BATTERIES

| A8900! | $21308!$ | 45 | 16 | 6 | $\$ 2.85$ | $\$ 2.17$ | $\mid$ |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| A8901 | 22308 | 45 | $101 / 2$ | 6 | 2.15 | 1.61 | 1.46 |

STANDARD "B"' BATTERIES

| A8902-1 | 10308 \| | 45 | 14 | 6 | \$2.35 | $\$ 1.79$ | 51.63 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A8903 | 2308 | 45 | $91 / 2$ | 6 | 1.75 | 1.33 | 1.21 |
| A8904 | *5308 | 45 | 4 | 5 | 1.50 | 1.15 | 1.05 |
| A8928 | *Z30N 1 | 45 | $13 / 4$ | 6 | 1.70 | 1.27 | 1.15 |
| A8929 | X30FL | 45 | $11 / 2$ | 6 | 2.60 | 1.75 | 1.57 |
| A8985 | *W30BPX | 45 | 1 | 6 | 2.55 | 1.87 | 1.70 |
| A8986 ! | *W30BP | 45 | 1 | 6 | 2.45 | 1.83 | 1.66 |
| A8987 | * X 30 BP | 45 | 2 | 6 | 2.55 | 1.87 | 1.70 |
| A8988 | *Z30NX | 45 | 2 | 6 | 2.20 | 1.65 | 1.50 |
| A8978 | *Z30BP | 45 | 2 | 6 | 1.85 | 1.35 | 1.23 |
| A8979 \| | *A30BP | 45 | 3 | 6 | 1.90 | 1.40 | 1.27 |
| A8905 | *2156 | 221/2 | $51 / 2$ | 5 | 1.50 | 1.12 | 1.02 |
| A8906 | *4156 | 221/2 | $11 / 2$ | 4 | . 85 | . 64 | . 58 |

STANDARD " $C$ "' BATTERIES
Standard compact batteries designed primarily for bias application.

| A8907 ${ }^{\text {I }}$ | 5156 | $221 / 2$ | 2 | 4 | \$0.95 | \$0.71 | \$0.65 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A8908 1 | 2370 | $41 / 2$ | $11 / 2$ | 10 | 40 | . 30 | . 27 |
| A8909 1 | *5540 | $71 / 2$ | 1 | 4 | 65 | . 48 | . 44 |
| A8910 | *5360 | $41 / 2$ | 1/2 | 4 | 40 | . 31 | 28 |
| A8917) | B5P | $71 / 2$ | 1 | 4 | . 65 | . 48 | . 44 |
| A8980 1 | *W5 BP | $71 / 2$ | 1 | 6 | . 96 | . 70 | . 64 |

Connectors are not supplied with batteries. See following listing A8930. Connector for all 45 volt batteries, EACH A8931. Connector for $221 / 3$ volt batteries. EACH A 8932 . Connector for $41 / 2$ volt batteries. EACH


TUBULAR FLASHLIGHT UNI-CELLS

A8913. No. $\begin{gathered}\text { volts. Sizes: } 1 / 8 \times 1 \text { in }\end{gathered}$ Baby type.

 A8914. No. 2. $11 / 2$ List. 10c | volts. Size: $23 / 16 \times 1516^{\circ}$. | NET |
| :--- | :--- |
| Standard type. | EACH |

## BURGESS 3 VOLT DRY "A" PACKS

TYPE 20F2. A 100\% dry "A' battery for use with 2 volt battery radio sets. Provides minimum of 400 hours' service at $1 / 2$ ampere discharge for 3 hours有 A1002O. NET..
s2.35 TYPE 40F2. Similar to above but heavy-duty type 3 volt dry "A bat A 10019 . NET. A8933, Reducing Resistor. For either of above batteries used
with 2-volt sets having no voltage regulating device. NET......25c

## KNIGHT PLUG-IN "B" BATTERIES

A first qualityline of unusually well-built batteries, manufactured exclusively for ALLIED and sold solely under the KNIGHT name. Only the highest quality materials are used in the making of KNIGHT batteries. Each KNIGHT battery is scientifically protected against internal shorts by a unique sealing method. These batteries are perfectly climate-proof and are designed for long and full life of service. For maximum battery value-buy KNIGHT. Our quick turnover assures you of constantly Tresli stocks of all KNIGHT battery
types. Our remarkably low prices assure you of bigger savings and bigger profits every time you buy a supply.


| Catalog No. | Type | Volts | Size | Shipping Weight | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A8920 | Standard | 45 | $73 / 4 \times 6 \times 3$ * | 10 lbs . | \$0.94 |
| A8921 | Heavy-Duty | 45 | $63 / 4 \times 73 / 4 \times 4$ * | 12 lbs . | 1.28 |
| A8923 | "B" \& 'C" | 221/2 | $4 \times 21 / 2 \times 23 / 4$ 。 | 2 lbs . | . 61 |
| A8924 | "C" | 41/2 | $4 \times 3 \times 11 / 4^{*}$ | 1 lb . | . 24 |

Connector plugs are not included. They are supplied as follows: A8930. For Knight Standard or Heavy-Duty 45 V ."B". EA. . $31 / 2 \mathrm{C}$ A8931. For Knight $221 / 2$ Volt ""B" and "C $\qquad$ -...

## NO. 6 11/2 VOLT DRY CELLS

A standard $11 / 2$ volt dry-cell for use on buzzers, doorbells, etc. Packed with power. Recovers quickly after heavy drain. $6 \times 21 / 3$. Sbps. wt A8925. YOUR PRICE

TUBULAR FLASHLIGHT CELLS
 Celf For diail $17 / 3$ Cell. $15 / 6_{6}$ dia., $21 / 8 \quad$ EACH.


## KNIGHT "HOT SHOT" TYPE

Newly developed compact 6 volt batteries pro viding the full electrical equivalent of No. cells in less than half the space. Built for ef-fure-resistant metal case Size: Shpg. wt., 7 lbs .
A8940. NET $\qquad$
1.21


## GENERAL MIDGET PORTABLE

"A" AND "B" BATTERIES
Extremely small, light-weight portable bat terics. For use in portable radio receivers and transmitters, transceivers, monitors, hearing All General batteries are built of finest qual Aty meneral batteries are built of finest qualThe materials and are conservatively rated. hours; A8936 is 400 MA hours; A 8937 is 1000 MA hours; A8939 is 8 ampere hours; $A 8938$ is 15 ampere hours. A8936 and A8937 are plug-in types. All others have Fahenstock clips.


| NO. | Volts | Lgth. | Width | Ht, | Wt. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A8935 | 45 | 3" | 11/4* | 41/8" | 11 oz . | \$3.00 | \$2.00 |
| A8936 | 45 | 3 " | 21/4; | 41/8. | 22 oz. | 1.50 | 1.05 |
| A8937 | 45 | $41 / 4 *$ | $21 / 2$. | 51/2. | 50 oz . | 1.50 | 1.05 |
| A8938 | 3 | $31 / 2$. | 15/8" | $45 / 8$. | 20 oz . | . 60 | . 40 |
| A8939 | 3 | 2916 | 15/6* | $411 / 16$ * | 16 oz . | . 60 | .40 |

## EVEREADY AIR CELL "A" BATTERIES

For 2 Volts. Especially designed for use with the 2 volt "Air-Cell" battery radios. Now offered at new low prices giving even greater economy. Provide convenient. longlived operation-no recharging necessary. In leak-proof cases, $107 / 10 \times 63 / 8 \times 97 /{ }^{\circ}$. Shpg. Wt.,
24 lbs., except A 10035 which is 14 lbs . 24 lbs., except
A 10025 . Model A2600. For sets with maximum current drain of 660 M.A. Delivers 1000 hours of steady 2 volt current.

4.51 MET $\$ 5.51$. Less $2 \%$. A. Will give long service. $\$ 5.40$ A10035. MODEL A2300. A new economy model giving 500 hours Oi service. An exceptional value at this low price
$\$ 2.92$
For 1.4 Volt Receivers. MODEL A-1300. A brand new "Air-Cell" hours of service on sets drawing 200 M .A. Assures fullest 1.4 volt tubes. Delivers 1500 1.4 volt set owners. Shpg, wt. 8 lbs .

## BURGESS


" "A"'



## REPLACEMENT PLUG-IN BATTERIES FOR ALL PORTABLE SETS

ALLIED makes it easy for you to buy replacement plug-in batteries for any 1.4 Volt Portable Battery Set made. The listing below covers the battery requirements for all popular portables made, including the battery requirements Ror R.C.A. Philco, Zenith, Airline, Crosley, Emerson, Silvertone, Knight, R.C.A. Philco, Zenith, Airline, Crostey, Emerson, Simertone, and all the others. Simply note the brand name and type numbers on the original batteries in your set and refer to the listing below for replacements. All battery types interchangeable. For example, A8970 is identical with A9750 or A9780 and will replace Eveready battery 742 or Philco type P94.

These Burgess, General. and Ray-O-Vac batteries are built in accordance with specifications of the battery set manufacturers and will match, or in most cases surpass, the original batteries in efficiency and long life. of fresh batrenendous volume of sales and quick turn-over assure you correct receptacle alo ways. These exact replacements are equ supply all types of plug-in batteries as quickly as they are announced. If the battery you need is not listed below, give us type number and an exact replacement will be shipped promptly.


PORTABLE "A" AND "B" COMBINATION PACKS


## RAY-O-VAC CHROME-

## PLATED FLASHLIGHT

A new kiad of flashlight-pre-focused for a perfect round spot, sharp and bright. Built on new precision principle with fewer parts; head is drawn directly from the barrel Has lock-type and pushbutton switches. Beautifu chrome-plated brass case. Individualiy packed in gift box. Requires 2 No. 2 cells. (Less cells.)


* Use one of each for Majestic "Camera Type" portables.
** For Belmont 407 and Delco 1401 and 1402 .
** For Belmont 407 and Delco 1401 and 1402 .
+ For Philco "Mystery" control.


## COMBINATION BURGESS KITS

A9131. No. 430 Kit. $1-4 F$ and 2-B30. NET
A9132. No. 830 Kit. $1-8 F$ and 2-B30. NET.
.$\$ 2.45$
.$\$ 2.77$

## SENSATIONAL NEW PORTA-POWER!

## ADAPTS PORTABLE

 RADIOS FOR 110
## VOLTS A.C. OPERATION

Here's a newly developed power unit that will double the utility of any 1.4
volt portable battery radio. Portavolt portable battery radio. Porta1.4 volt battery set directly from 110 volt A.C. It's as easy to connect as the batteries in the set. When a portable get is to be used in the home for a long period of time, save your battery; plug in Porta-Power, and operate your
 set from A.C. When portability is again desired, you can remove the unit and replace the battery in a jiffy. Porta-Power fits the battery compartment of $99 \%$ of the portable sets on the market; convenient mounting flanges permit permanent installation when desired. Unit costs less than $5 c$ per hundred hours to operate. Equipped with composite sockel plus of Zyith ortable ideal for servicemen when testing nortable sets; saves on battery costs. Built into black wrinkle-finished metal case measuring only $31^{\prime \prime} \times 6^{\prime \prime} \times 2^{\prime \prime}$. Supplied complete with plup cord, and cord suritch Shpg ivt 5 lbs.
A9168. NET.
$\$ 441$ Dealers Don't waste batteries demonstrating portable sets. Save money with Porta Powerl Servicemen: Use Porta-Power for testing and

## BATTERIES - BATTERY CHARGERS

## KNIGHT LONG-LIFE STORAGE BATTERIES



## KNIGHT

2 VOLT
A Heavy-Duty battery giving 300 operating bours at $1 / 2$ ampere intermittent rate, without recharging. Rated at
150 Ampere hours at 150 Ampere hours at $41 / 4{ }^{2} \times 71 / 4{ }^{\text {rate }} 811 / 16$. Size, sets using $11 / 2$ or 2 venient handle Terminals are clearly marked for polarity A10456. 21 PLATE. Not mailable. Shipped express or by freight. Shpg. $\$ 3.29$
wt. 21 lbs. NET. A10455. 13 PLATE, Light-duty type. 100 ampere hours. 115 hours intermittent rate. by express or freight. Shpg. \$2. \$5
wt. 161 bs . NET. ..................


A10457. 13 PLATE. 95 Ampere Hours. NET NET Size, $1111 / 15 \times 7 \times 811 / 15^{\circ}$. Shpg. wt. force
7.49

## 6 VOLT HEAVY-DUTY

Husky, giant-size 6 volt storage batteries for use with radio or farm lighting plants. Ideal for use with windcharger or gas-enkine plants. amps intermittently for approximately 11 hours before requiring recharge. With handle. $11^{10460 \text {. Rated at }} 150$ ampere hours. Size: NET. bress or freight. 21' plate. \$8.45 A10461. Rated at 180 ampere hours. Size
 Wy ${ }^{\text {ExT }}$

6 VOLT

## Heavy-duty, solid ly constructed,

 leak-prool bat-teries that deliver maximum power. Thick plates, carefully sealed cells.
With radio terminals. Not mailable. Shipped by express or frelsht.

40 las. $\$ 4.75$ High-grade $S$ amp. unit for charg from $110 \mathrm{~V} .50 / 60$ cyele A.C. line. Famous General Electric quality construction. Delivers full 5 ampere charge to keep battery fully charged; automatic tapering
ture prevents overcharging ture prevents overcharging. Assures long battery life and freedom from rundown battery troubles. Supplied with steering post attachment, A.C. cord, charger cord, tungar buib, and full instructions. For 110
of the finest chargers made.
\$10.88
STANCOR POWER PACKS


Ideal for auto and battery radio sales deinonstration and for service test work. Eliminates need for batteries. Delivers filtered, metered D.C. output from 10 olt on cycle A.C. A damage by overloading. Scientifically designed damage by overloading.
A10145. Junior Model. Delivers 5 amps
 A10146. Standard Model. Delivers 12//
 A10147. Deluxe Model Dolvers 15
 A 10148 . 6 Volt Model. For Philco, RCA Audlola, Zenith. Erla 6 Volt \$14.70


## KING COLE

## CHARGING RESISTOR

## Resistance unit for charging any 6 volt radio

 or auto storage battery from 32 volt lighting systems. Maintains uniform charging rate and pense of lauling batteries to town. $\$ 7.7$HI-RATE TYPE
Provldes a fast. 10 amper charge, Has automatic taperammeter, 10 ft cibles and dash receptacle For 110 Volt 60 cycle A.C. Shps. wt 15 lbs
A10037.
\$11.47

## GENUINE G. E.

## TUNGAR TYPE



A". "B" \& PORTABLE BATTERY TESTERS Inexpensive, portable type "Battery testers. Batteries, Dry Cells, Storage Batteries, etc. Air Cell tester indicates condition of Air Cell Batteries as Good or "Bad ; also aids of battery. A real necessity for every serviceman now that so many battery sets, both home and portable, are in use. A6260. Storage Battery Tester. 59 c A6261é ${ }_{\text {cells }}{ }^{0-35}$ Amps. For testing dry 45 c A6262. 0050 Volts. For "B" Bat- 45 A6 263 . Combination $0-40$ Amp. 68 e A7340. Alr Cell Battery \$1.50 A6254. Portable Set Battery Tester NET Volts. $1 / 10$ volt divisions. $\$ 1.32$

## LEADER <br> HYDROMETER

Accurate, well-made hydrometer for testing storage batterles. Has beaded foat. Bulb is o


## POPULAR HOMCHARGERS

## 5-3 AMP. TYPE

 A 5 to 3 amp. tapering battery charger for autoor home use. Has stcering post connect or for mounting on car. No radio interference. Also ideal for Wounting in your garage. shane ep your battery in 110 Volts $50-60$ cycles. A1OO4O. $\$ 4.47$


6 AMP. TYPE Vibrator-type. For 6 Self-polarizing; entirely Wutomatic in operation cycles A.C. With cord plue, car clamp, and cables, Shpg. wt., 11 for trouble-free service A10041. NET.

## MALLORY VIBRAPACKS

Inexpensive, dependable source of power for portable radio receivers and ransmitters, P.A.. etc. rate from 6-volt storage battery. Willsupply up to 100 M.A. Models 551 and 552 are self-rectifying tube rectifier is supplicd with models 553 and 554 Less Filter. *Special dual packs for high output VP-5.55 supplies $200 \mathrm{M} . \mathrm{A}$.
UP-557 supplies $150 \mathrm{M} . \mathrm{A}$. UVPG556 operates on 12.6 volts (a) 100 M.A.
volts @ 100 M . A. The $754-1$ Relay in deved for controlling any single unit Vibrajack. for controlling any single unit
Operates on 6 V olts. Use 3 cells $(6 \mathrm{~V}$.) if used with 12 or 32 V . batteries. Wt., 10 lbs.

| $\begin{aligned} & \text { Cat. } \\ & \text { No. } \end{aligned}$ | Migr. Type | Output <br> Voltage | NEY |
| :---: | :---: | :---: | :---: |
| A11996 | VP-551 | 125-150-175-200 | 8.82 |
| A11997 | VP-552 | 225-250-275-300 | 10.88 |
| A11998 | VP-553 | 125-150-175-200 | 9.70 |
| A11999 | VP-554 | 225-250-275-300 | 11.76 |
| A12001* | VP-555 | 300 | 22.05 |
| A12002* | VP-557 | 400 | 22.05 |
| A12000 | VP-G556 | 225-250-275-300 | 11.76 |
| A12003 | VP-F558 | 225-250-275-300 | 11.76 |
| A12004 | 754-1 | Relay for Vibra packs | . 50 |

## MALLORY CHARGERS

 A beautiful black with chromium-plated handle. The meter on the front panel indicates battery is being charged. Output, 6 to 3 amps. Special oversizetransformer provides transformer provides
taper charging. Operates automatically reates automaticaly re-
gardless of the battery's condition-cannot injure battery. 9 amp
 s qasy to change. $73 / 4 \times 41 / 4{ }^{\circ} \times 41 / 2{ }^{\prime}$. Shings. wt., A11994. No. 5535A $\$ 7.52$

No. 3C BATTERY BOOSTER Designed to meet the need of present day car owners. Added squipment on your car tends to drag down your battery. Plug this Booster into your car for a lew nighis a week, and do amps. Special transformer regulates output to take care of variations in battery condition and ine voltage. $53 /{ }^{\circ} \times 37 /{ }^{\circ} \times 31 /{ }^{\circ}$. Shpe wt 5 lbs For 110115 V $\mathbf{A 1}$ 50-60 cycles. $\$ 9$. . $\$$

## RADIART PAK FOR ELECTRIC SHAVERS

Double the utility of your Electric Shaver I Shaver-Pak operates your 110 Volt Shaver from any 6 volt or 32 volt source. For use in cars. trailers, boats, trains
areas, Shpg, wt.. 5 lbs. A9158. Type S-6a. Portable
 For 6 volts. With $21 / 2 \mathrm{ft}$. cord and plug A9159. Type S-6b. For 6 volts. With per matent inounting bracket and $21 / 2 \mathrm{ft}$. cord A9160. Type S-32a. Portable. For 32 volts With 6 ft . cord and plug.
NET EACH
\$4.09

## A.T.R. "SHAVERPACKS"

A.T.R. Shaverpacks are midget inverters designed electric shavers in cars or other places having 6 volt D.C. supply. Ideally suited for electric shaver owners who travel extensively. Shaverpacks are housed in a black-wrinkle
 $41 /{ }^{\circ} \times 35 / 0^{\circ} \times 2 / 3^{\circ}$. Shpg, wt., 31 bs . Operates from
 A9176. The same Shaverpack as described above but designed to operate from 32 V . D.C. source as on trains, boats, or buses. Output cap., 15 watts. The A.T.R. Shaverpack gives


# GENEMOTORS - CONVERTERS 

CARTER GENEMOTORS


Thesmallest ${ }^{\text {complete rotary }}$ made. Built to made.
deliver
Bualts
to deliver years of Shielded, built-in filter also prevents interfering transients in output. Gives pure ripple-frce D.C. output at the
voltages indicat ed below. Grease sealed ball-bear ings insure quiet, smooth operation and eliminate oiling or from 6 v . battery. Size, Delivers full output
A 10235 . 135 Volt Medel. Operates from 6 volt battery and delivers 135 volts at 30 M . A tapped at $67 / 2$ volts. Draws 2.2 amps.
A10236. 180 Volt Model. Operates from M volt battery and delivers 180 volts at 30 M.A. tapped at 90 volts. Draws 2.6 amps. A10237. 200 Volt Model. Operates from vappedttery and delivers 200 volts at List Each, $\$ 16.50$. NET EACH
s12 $2^{12}$

## HEAYY-DUTY GENEMOTORS



Heavy-Duty Genemotor for use in two-way Police Ra-
dio systems, Aircraft Radio, High Power portable Amplifiers, etc. Bearings require no
oiling, adjustment. oiling, adjustment. Frame is ventilated for air-cooling. Special brushes insure long life. Commutator construction eliminates leakage and sparking. Pure D.C. outpnt is free from Fipple, hash, etc.. When used with filter below. relay (see note). Average wt., 11 lbs .

## 6 VOLT D.C. INPUT

Stock Type output Input $10100351-A+350$ M.A. Amps. NET $\begin{array}{llllll}\text { A } 10100 & 351-A & 350 & 100 & 10 & \$ 17.64 \\ \text { A } 10102 & 315-A & 300 & 150 & 15 & 19.40 \\ \text { A } 10101 & 355-A & 350 & 150 & 15 & 19.99\end{array}$ A10 A10 A 10105 520-At $500 \quad 200 \quad 33 \quad 26.46$ NOTE: For built-in filter add $\$ 7.06$ to types marked $;$ add $\$ 8.82$ to types marked $t$. For
starting relay add $\$ 2.65$.

## ELECTRO <br> A' AND "B" <br> ELIMINATORS



A ney "A-B" eliminat dry or replaces 2-volt ies and all " $\mathrm{B}^{\prime}$ " batteries on $11 / 2$ or 2 -volt recelv-
ers. Takes input power ers. Takes input power from 6 volt storage battery, generator, windcharger, etc. Heavy construction throughout fe operation and an unusuallong torage battery will supply power for be set for about 50 hours on a single ides 2 volt "A" voltage and "B" , 67, 90, 135 and 180 volts at 40 minals supply a maximum of 1 asily installed in receiver. Fully tch on receiver operates power 6 anpere drain on storage bat-
$11 / 2^{\prime \prime} \times 61 / 2^{\prime \prime}$. Shpg. wt., 14 lbs. odel J. "A-8" Power Supply on 6-volt direct current. Full ation. Complete with all neces-
Todel G. Silont ${ }^{5} 13.04$ 3 perates directly from 115 -volt Produces 6 volts D.C. at $31 / 2$ ug. NET........ $\$ 4.5$ Hodel E. 1.4 to 3 Volt "A-B" For operation from 115 volt, 60 output adjustable from zero to amp. Meter indicator. All "B" 180 volts at 50 M . A . With 6 ft . er plug.
s,14.65
"ATR" INVERTERS-D.C. TO A.C. It is now possible to obtain 110 volt 60 cycle A. batteries, 32 volt farm plants, or 110 volt D.C systems. These units are de or especially electric P. A. systems, fans, motors, etc. Plug-in vibrator lias ten $1 /{ }^{*}$ * diameter contacts which assure long life and reliable service. Features include: 4 -point voltage regulator, Models without filter are suitable for case, ert equipment having power factor as low as $60 \%$.

RADIO TYPE WITH FILTER

| Stock | Input Volts | Watts |  | NET |
| :---: | :---: | :---: | :---: | :---: |
| A 12072 |  | $\frac{\text { cont. }}{75}$ | $\frac{\text { Inter- }}{100}$ |  |
| A12073 | 12 | 100 | 125 | \$14.08 |
| A12074 | 32 | 100 | 150 | 15.26 |
| A12075 | 32 | 180 | 200 | 20.58 |
| A12076 | 110 | 150 | 250 | 15.26 |
| A12077* | 110 | 225 | 325 | 20.58 |
| A12078* | 110 | 350 | 500 | 4.99 |

INDUSTRIAL TYPE LESS FILTER


## "ATR" 6 VOLT "A" BATTERY ELIMINATOR



Especially designed for demonstrating and testing Auto Radio sets cycle A.C. lines. Supplies pure D.C.; eliminatea troublesome storers. Operates receiver as maximum efficiency at all times. Fully automatic. May be used as power supply for speaker field coils, exciter lamps, relays, etc. Full-wave dry-disc rectifier
A 12086 . Standard Model. Rated output, Shpg. wt., 19 lbs.
SET.
$\$ 14.67$
A12087. Heavy Duty Type. Rated output,
 NOTE: Add $10 \%$ to above prices for 220 volt models which are available.

## ELECTRONIC CONVERTERS

 The new Electronic Converters provide a highly efflcient means of supplying 110 volts, 60 cycle A.C. from various sources of direct current. Equipment such as Radio Address Amplifiers Test Equipment Motors, etc., de.
signed for A.C. operation, may be energized by these converters. Specific applications where such conversion is necessary, include rural dis-
tricts, railroad tralns boats, and the D.C. districts, railroad tralns, boats, and the D.C. districts found ln many large cities. Units have an
$85 \%$ efficiency at full load. Unusually guiet in operation Rugged construction insures long life and satisfactory performance. Vibrators are sturdy in construction and are built to carry heavy current for long periods of time. Average
shipping weight, 15 lbs . each. shipping weight, 15 lbs . each.

| Cat. | D.C. Imput | A.C. Output |
| :--- | :--- | :--- |
| No. | Volts Amps. Volts Watts |  | | A10141 | 6 | 14.7 | 110 | 75 | $\$ 16.17$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| A10142 | 12 | 10 | 110 | 100 | 16.17 |
| A10143 | 32 | 3.7 | 110 | 100 | 15.88 |
| A10144 | 110 | 1.6 | 110 | 150 | 18.23 |

NOTE: We can supply other Electronic Converters. Give requirements for prompt quotations covering the types you need

FAMOUS JANETTE ROTARY CONVERTERS


## NEW LOW PRICES

Converts D.C. to A.C. to permit the operation of A.C. radio sets, sound systerns, and other devices and appliances from 6 volt storage batteries, 32 volt light plants or 110 volt D.C lines. Compact, dynamically balanced, ruggedly designed, and built for long life. The arma ture is of dynamotor typc; field frames of rolled steel; laminated field poles. Janette rotary converters are the finest built; they have a national reputation for quality construction. Converters interfelow are equipped with special All-Wave interference filters, for all types of radio receivers. Assure exceptionally quiet reception.
$110-115$ YOLTS D.C. TO
10 VOLTS 80 CYCLE


## $\begin{array}{llllll}\text { A1O216 } & 40 & 18.0 & \text { CA-18-F } & \$ 33.37 \\ \text { A10217 } & 80 & 22.0 & \text { CA-18-F } & 41.75\end{array}$

We can supply all other types of Janecte converters, motor or gas-engine driven generators. etc., at lowest prices. Write describing your needs, for prompt quotation.

## KNIGHT POWER PACKS A9190. MODEL XPC. For Short Wave receivers or Wmave receivers or using $2-45$ tubes Delivers 300 volts D.C. at $65 \mathrm{M} . A$. tapped at 180,90 <br> Volts C Ties $31 / 2$ for flaments. Requires 80 tube. For 115 V. 60 cycle A.C. Less tube. A9187. Same as above, except has flament amps. Weight, 10 lbs. NET EACH.. 5 . 10 <br> A9191. MODEL XC. A power supply for tares Delivers 30 ors for crystal or buffer at 65 M .A., and $21 / 2$ volts A.C. center-tapped at 4 amps. for filaments. Built on steel chassis. For 115 Volts, 60 cycles. L.ess type 80 tube. <br> A9188. Same as above, except has filament amps. Weight, 9 lbs. NET EACH.. $\$ 4.25$

A9196. MODEL $0-1$ - A power supply for at $150 \mathrm{M} . \mathrm{A}$. and $71 / 2 \mathrm{~V}$. C.T. at 5 A . Steel chassis, black crackle finish. Operates on 115 V .60 cycles. Requires type 82 tube. $\$ 7$ Weight, 14 lbs. Less tube. NET...
W
A9198. MODEL J. For Short Wave Receiv ers Hum-rree. Substantially and neatly built. $221 / 2$ and 90 voits D.C. at 40 M .A., tapped a for filaments. Chassis size, $71 / 2 \times 4 \times 11 / 2$ inches. Weighs 9 lbs. Less the 80 tube
A9189, Same as above, except has flament winding for 6.3 vol

# GAS ENGINE PLANTS \& WINDCHARGERS 



## NEW PIONEER "BLUE-DIAMOND" 110 VOLT GAS-ELECTRIC PLANTS

Super-efficient, dual-purpose Electric Power Plants for supplying A.C. and battery-charging D.C. The A.C. plants deliver 110 volts for flickerless lighting, the same as supplied by power companies. Offer all the conveniences of 110 V. A.C. for areas where power-line electricity is not available. Engine is 4 cycle, air-cooled $5 / 5 \mathrm{H.P}$. type with built-in governors to
maintain constant engine speed. Generator is 4 -pole type, maintain constant engine speed. Generator is 4 -pole type, direct-connected to crankshaft of engine and encased in
rugged steel shell. Entire plant is sturdily built of finest rugged steel shell. Entire plant is sturdily built of finest
quality parts to furnish efficient. long-lived service. All have quality parts to furnish efficient. long-lived service. All have self-starting featurea. All plants except 16 hours. Size of al plants except 600 and 1000 watt models: $191 / 2^{\prime \prime} \times 14^{\prime *} \times 14^{\prime}$

300 WATT A.C. - 200 WATT D.C. A10953. Type BD6. Supplies both 300 Watts A.C. and 200 Watts D.C., sufficient to charge any 6 volt wet-cell battery, Less filter. gallon of fuel to run plant for $\$ 58.35$ 12 to 16 hrs . Wt., 116 lbs . NET.. 28.35 A10954. Type BDR6. Same specifications button starting and stopping. Shpg, wt., 120 lbs. NET.
58.70

## RADIO FILTERS

A10960. For 300 watt plant. Prevents disturbing noises from entering power lines. A10957. For 600 and 1000 watt plants.

## 1000 WATT A.C. MODEL

 Al0956. Model BA-100. Heavy-duty stralght A.C. Dower generator. Develops 1000 Watts at 110 V. A.C. For use in electrifying farms, resorts. camps, boats, etc. Air-cooled

## 600 WATT A.C. MODEL

Al0955. Model BA-60. A straight A.C. medium-duty generator. Supplies 110 Volts at 600 Watts maximum capacity. Ensine delivers 1 H.P. to generator. Tank holds 1 gallon. Self-

*Requires 12 volt battery, not supplicd. Standard equipment includes rope-pull starter.

WE CAN SUPPLY PIONEER gas engIne generators and electric power plant units for $6,12,32$, and 110 volts, and ud to 5000 watts. Write for attractive price quotations.


## 6 VOLT 240 WATT BATTERY CHARGER

Here's the greatest develodment in farm lighting equipment in years. This new power plant is equipped with a powerful SemiDiesel engine which burns gasoline, kerosene, or fuel oil Even the cheapest fuel will operate the unit for hours and develop up to 240 watts of 6 Volt D.C. Unit has convenient push-button self-starter, automatic cut-out, and fully enclosed engine and senerator.

FOR 6 VOLT BATTERIES
Charges 6 volt storage batteries for operating radios, farm lighting systems, etc. Ideal for all power needs in unwired areas and on etc Has only three moving parts-
s35.25

## KNIGHT WINDCHARGERS

## HY-TOWER CHARGER



Get FREE POWER from the wind with this new de luxe Hy-Tower Charger. Costs nothing to operate; delivers 6 volt storage batteries to supply current for radios, lighting service, etc. Features: weatherproofed, balanced propeller; automatic tilt-back regulator; heavy-duty generator which cuts in at 370 R.P.M.; automatic turntable brake; throw-out collar for easy starting or stopping. Supplied with 10 -foot all-steel tower, accessories, and instructions. Shpg. wt., 75 lbs .
Al0610. Complete Hy-Tower
Wind charger. Fig. A. List Price $\$ 29.50$
YOUR NET PRICE ..................... Your price when purchased with any KNIGHT

## NEW 32 VOLT WINDCHARGER

 A 10608.32 Volt 1000 watt direct-drive Windcharger. Less tower, but with universal all-steel tower adapter Write for descriptive literature. Shpg. WET., ${ }^{175}$ libs. F. O. B. Clarinda, Iowa. ............................... 177.50
## WINDMILL SIDE-TOWER CHARGER



Ideal for mounting on a windmill tower close to the house Has all features as described above: automatic tiltback regulator; heavy-duty generator; automatic turnof side of any wind mill tower. Wt. 75 lbs. FO Clarlada lowa
$\$ 79.75$ A10611. Fig. B. NET

## SKY-SCRAPER CHARGER

"The higher the tower, the greater the power." Includes same charger head as described above, but is supplied complete with a full $421 / 2$ oo ai-stecl sky-scrape tower. Captures every gust of wind even in areas of low charging. (For offering of tower only. see below.) Shpg charging (For offering of tower only. 215 lbs. F.O.B., Clarinda, lowa. A10612, Fig. CiCe List Price, \$17.00.
s33.75

## SKY-SCRAPER TOWER ONLY

 The $421 / 2$ foot all-steel Sky-Scraper tower is offeredseparately for Windcharger installations. Also ideal for separatery for wiskcharger antenna mast for Amateur station. Complete with guy wires. Shpg. wt., 154 lbs . F:O. B., Clarlnda, Iowa. Shipped unassembled; with hardware. $\$ 77.50$
A 10613 . ,ist, $\$ 22.50$. NET.......... 17.01

KATO A.C. PLANTS


## JUNIOR MODEL JRA3

These plants furnish a constant source of standard 110 volt 60 cycle A.C. current for light and power in small summer homes, suintion is 10 hours to one gallon of pasoline at 300 watts. Oil consumption, 2 oz. for each 10 hours operation. $3 / 4 \mathrm{h.p}$. air-cooled, single 10 hours operation. $3 / 4$ h.p. air-cooled, single type; speed 3600 R.P.M. Flyball-type governor, splash-type lubrication. Will charge 6 voit battery up to 10 amps. With convenient terminals, generator filter condenser, shielded isnition cable, suppressor, carrying handie. $V$-bele pulicy, muffer, and instruction manual. Peak rating, 350 watts.
Slipg wt.is 80 lbsi r PRICE.
$\$ 6720$

## JUNIOR MODEL JR35

As above, but with self-crank feature; charges 6 volt batterles up to 20 amps . Use a standard 6 volt battery for self-starting. 30 watts at 110 V . A.C. Shpg. wt., 80 lbs. . $\$ 7$ 3. 50
A 10126 . NET............

NEW HOMELIGHTING PLANT
A compact new gas-engine generator for home lighting use. Uses Johnson $5 / 8$ h.p. engine. Runs 10 hours on 1 gal. of gas. Has push-button starter, ammeter, built-in filter, etc.
350 WATTS A.C. 200 WATTS D.C.
Develops 350 watts, 110 V . A.C. for lixhting or 200 watts D.C. for charging 96 lbs. 1 Model 19A. NET $\$ 71.25$

6 VOLT LIGHTING SYSTEM AND ACCESSORIES


A complete kit of essen-
tial equiptial equipment for wir ing the rural
home. A 6 volt battery charged by Windcharger or gas-engine provides plenty of current. Kit includes: 1 -porcelain entrance foot roll No. 8 weatherproof wire; 25 -foot roll oot roll drop-cord; 6 pull-chain sockets; 6 twisted drop-cord; 6 pull-chain sockets porcelain cleats; 6 porcelain nail tape; $1-4$-oz. roll rubber tape; al instructions.
A3458. NET

## 6 VOLT LIGHT BULBS

These high-grade G.E. licensed light bulbs give maximum light from a 6 volt storage battery d inside KENRAD. Mave standa: Edison base. (Also available 12 volt type; write us for prices.

| No. | Watts | Drain |
| :--- | :---: | :---: |
| A890 | 15 | 2.5 AmI |
| A891 | 25 | 4.2 Amy |
| A892 | 50 | 8.5 Am | 4892 8.5 Am A5469. Pull-Chain socket. Standard Edi $\qquad$

LIGHT PLANT W
Weatherproof single conductor
charger or gas engine plants.
No.
A2490
A2 491
A2 493
A2 496

## Whath

a great Knight p.a. installation

## MONEY-BACK GUARANTEE! <br> is fairest and the strongest Sound

 This is the fairest you could ask for. We System guarantee the overall perform ask you to compare Khight Sound Systen ance of any kniger system now on the with that of any other sysou want, buying market. Order the model youts, and test it for Cash or on Time Pay ments, ap operating or aviurself, under your own operself.
ures. compare the he actual pertorm. Sound System if it

 Js, Zy/fry onty trans of thettion purchases. ureq . - too that every $\mathrm{Jos}_{1} \mathrm{H}_{3}$ The ind ind System is cov-
 ${ }^{5}$ S

E.R.P.I. LICENSED All Knighe Sound Systems are bicensed by Electrical Re-
search Products, search Products, Inc,
under patents of Wnder patents of

You get More Watts, More Quality, More Performance for less money when you buy 1940 KNIGHT P.A. Equipment. Each KNIGHT Sound System is the creation of the country's leading P.A. research engineers. the product of modern laboratories and precision workmanship. You buy with confidence, knowing that each KNIGHT Amplifier incorporates the finest circuit design, utilizing every tube to maximum advantage within safe rated limits; you know that you are getting practical features that count in the field; you know that you can depend on KNIGHT for ruggedness, power and flawless tone.

Sound experts supervise the assembling, testing and shipment of each KNIGHT Sound System. Each System comes to you complete, ready for operation. All you have to do is plug in and you're ready for perfect operation.
Competent ALLIED Sound Engineers invite you at all times to submit your P.A. problems to them. Authoritative and proper recommendations will be sent promptly without obligation on your part.
KNIGHT Sound Systems challenge comparison by any yardstick - compare Features, Specifications, Tone Quality, Power Output, Appearance, Materials or Workmanship-consider the Price-and you'll find that KNIGHT gives you more for your P.A. dollar!

## Buy Knight P.A. ON EASY TIME PAYMENTS

| SIMPLIFIED TABLE OF TERMS |  |  |  |
| :---: | :---: | :---: | :---: |
| 11 Cash Price of Order Amotants to | winimum Down Payment is $10 \%$ of Cash Price | To Find Carrylng Charges | $\begin{aligned} & \text { Monthly } \\ & \text { Pay- } \\ & \text { ments } \\ & \text { s Months } \end{aligned}$ |
| \$40.00 | \$4.00 |  | \$ 4.95 |
| 60.00 | 6.00 |  | 7.43 |
| 80.00 | 8.00 |  | 9.90 |
| 100.00 | 10.00 | - | 12.38 |
| 120.00 | 12.00 |  | 14.85 |
| 150.00 | 15.00 | O | 18.57 |
| 175.00 | 17.50 |  | 21.66 |
| 200.00 | 20.00 |  | 24.75 |
| 225.00 | 22.50 |  | 27.85 |
| 250.00 | 25.00 | - | 30.94 |

## USE OUR PRACTICAL, ATTRACTIVE PLAN

Don't lose big profits in P.A. for lack of Cash! You can get any of the profit-building Knight P.A. Equipment you need-NOW-and make it earn for you while it pays for itself. You can buy Knipht Public Address Equipment easily and conveniently on our attractive new Monthly Payment Terms, if your order comes to $\$ 40.00$ or more. You'll find our Time Payment Plan extremely attractive. Complete explanation appears below; table of terms appears at left. It will pay you to make your Public Address purchases from ALLIED. You get the finest equipment in the field at the lowest prices-and. in addition, you can, if you wish, buy it on the easiest terms you can get anywhere. Select the Knight Public Addrese Equipment you want now, and order, enclosing Down Payment, for quick service-or write for full details.

## SEND DEPOSIT WITH ORDER FOR SPEEDY SERVICE

Take eight months to pay. You pay just $10 \%$ down, and the balance in convenient monthly payments. Add $10 \%$ to the unpaid balance to cover carrying cliarges. Then divide by 8 to obtain the monthly payments required. Select the equipment you want, and send in your order with a $10 \%$ cash down payment, including your credit references. Credit investigation will be promptly handled and contract forins for your signature will be forwarded to you immediately afterward. Get started now 69
with the Sound Equipment you've been wanting.


Ideal for Paging - Store Window Demonstrations - Side Shows Carnivals Restaurants - Weighmasters - Churches - Sales Meelings Classrooms

- UniversalTnput
- Tont Control
- Eeampower Polarized Plugs
- Safory Output : PiM. Type Speaker Available for the first time- imerno rader priced quality Sound System! Here are surprising "extra" features to bring the P.A. user the aboolute maximum for his morey. Ideal for sunaler installations where moderate coverage is required with greatest econony.
- Easy to Operate. The Knight 6 Watt High-Gmin Systern comes complete, reary to set up oulekly and easily. Anyone cart opprate this complete equipment instantly. Everything is comphete from A. C. plug to speaker housing, perfectly matched. ready to operate nothing to add , nothing external to worry or fuss about. It's ready to play wherever there's A.C.
- Latest Features. Smooth-acting micro-Thone-phono fader is incorporated for controlling microphone or phonograph volume and for tading from one to the other. A variable Bass-Treble Control provides full tonal emphasis as required and compensates for varying acoustical conditions. Has universal microphone input for any high-impedance microA socket is provided for extra speaker (highimpedauce P.M. dynamic or maknetic) or headphones. Microphone and speaker receptacle: are polarized for rapld connection.



## AMPLIFIER SPECIFICATIONS

Output: Full 6 watts undistorted ( 8 watts peak), hum is inaudible; Output $1 \mathrm{~m}-$ pedance: $4000-4500$ ohms direct from plate of tube; For P. M. Speakers; No Geirl current provided; Input Channels: Two, on fader (one for mike, one for phono); Tome Control: for bass and treble, Galn: on microphone, 100 db . on phono. 70 db .; Frequency Response: $50-$ $8000 \mathrm{C} . \mathrm{P} . \mathrm{S}$. (amplifier): Tubes: $1-6 \mathrm{SC} 7$. Fused: fully fused for operation 70 watts: 120 volts, 60 cycles A.C.; Amplifier Size: $101 / 2^{\circ} 831^{*}{ }^{2} 714^{*}$ A. E.R.P.I. Licenseds Fully licensed by E.R.P.I. under patents of Weatern Electric and A. T. \& T.

- Modern Styling. The Knight 6 Watt Araplifier is beautifully presented in an all-steel case of compact, streamlined design, with handy carrying handle. Has two-tone tancrackle finish. Wiring diagram is mounted on base plate. No detail has been overlooked to bring the P.A. market the most for its money.

Cafes - Auctioneers - Fountains Lecturers - Market and Race Reports - Complete System, Complete 6 Watt Sys${ }_{1}$-Shure Crystal microphone (A) with 25 foot cable and polarized plus on with 25 $8^{*}$ P.M. Speaker with 30 foot cable and polarized plug mounted in wall baffle as illustrated; R.C.A. tube kit; complete operating instruc tions. For $110-120$ voles, 60
cycles A.C. Shps. wt., 351 bs . S A 12107 PRICE.
${ }^{5} 21{ }^{185}$
A12108. Complete 6 Watt System as above but with Knight-Astatic Dynamic mike (B) in place of Shure mike. Price. S47.50. NET PRICE... S23.95 A 12106 . Ampllifer Only. As described at left. but less tub
List Price, $\$ 16.50$.
NETCE
S: 45
A12150. R.C.A. Tube KIt. NET. \$1.83 Optional Equipment. For A 10550 floor stand in place of desk stand, and $\$ 2.35$. For extra $8^{\prime \prime}$ For steel-aluminum projector instead of walf baffle, add $\$ 3.15$.


Steel-Aluminum Baffle. To get greater directional effect and longer distance coverage, we suggest the use of A10290 steel-aluminum baffle described on paze 99 . If steelaluminum baffie is desired. in place of wall bafte, add $\$ 3.15$.


Bass-Treble Control is provided in the Knight 6 WroSystem ro give tonal emphasis as desired and to compensate for varying acoustical conditions. Also minimizes acoustical feedback. An important extra-value P.A. teature.


Phono Input. In addition to Phono input. In addition to
input for any high-impedance input for any high-imperance mrovided for any magnetic or provided ior any magnetic or a single fader control. For portable phonograph. see description on page 9.

## 6 WATT PORTABLE SOUND SYSTEM

The Knight 6 Watt Economy Sound System is offered also in modern, low-cost portable style Unusualy compact, well-balanced and convenient. The entre system is completely contained in a single airplane-cloth carrying case, $133 / 4^{2} \times 133 / 4 \times 9 / 2^{2}$. Weighs only 31 lbs. System comes complete in sturdy and attractive carrying case shown. Includes: 1-Knight 6 Watt Armplifier With tuber. Shure Crystal Microphone and desk stand with 25 foot cable and plug: i-8-inch P.M. Speaker with 30 foot cable and polarized plug-all in a single unit carrying case. For operation 120 vols, 60 cycles. Shps. wt. A 12109 . Complete 6 Watt Portable System with Shure Crystal Mike.


Suifable for Small Orchestras - Lecturers - Soles Meefings - Paging - Aucfloneers • Taverns - Garages Tent and Road Shows • Hofels • Parking Lols • Group Hearing Aids • Church Socials © Schools Court Rooms Clubs

Inverse Fecdback : Input Channeis
$\bullet$ Series Mixer - Series Mixer

- Bass-Treble Controi: Optlonal Phono
- Speaker Selector
- sllencer Jach

Here's a new P.A. System that's stripped for 14 action-no frills-no trimmings putting out low price 1 The Knight 14 Watt Economy System gives you top value in features, in ease of operation, in performance and looks.

- Complete. When you buy the Knight 14 Watt System, you know you're getting it complete, ready to set, up and operate instantly and easily. There's nothing else to add. nothing to worry about; anyone can set it up quickly and simply for instant operation
- New Features. Never before have you been offered so many quality features in an Economy greater output with ixetter inve qeedback for Sreater output with ixetter tone quality; new. of microphone and phono inputs; Univergal Input accommodates any high-impedance microphone and any crystal or magnetic pickup; Universal Output permits instant match to additional sueakers; Silencer Jack checks hum when mike is removed.


## AMPLIFIER SPECIFICATIONS

Output: Full) 14 watts undistorted (18 watts peak); hum is inaudible; Output 1 mpedance: $2.4 .6,8,16$ and 500 ohms on curtent; provided. Speakers: bo hield Two one for mike one for phono on ind vidual controls; Tone Control: for bass and treble; Gain: on microphone 120 db . on phono, 68 db .; Frequency Response: ${ }_{50}-8000 \mathrm{C}$. P. S. (amplifier); 7 $\mu$ bes: $1-6 \mathrm{~J} 7$ 1-6Z7G. 2-6V6G. 1-80; Line Drain: 75 watts; Fused: fully fused for operation from 110-120 volts, 60 cycles A. Cific:
 E. R. P. i. under patents of Western

- Optional Phono Top. Here's a new and excrailing Knight P.A. feature. Say goodbye to bother. You can buy phono cases, fuss and tem with built-in phono Knight limati R.P.M. synchronous motor, $9^{\circ}$ turntable, tilt head magnetic pickup, switch and arm rest.



## 14 WATT PORTABLE SOUND SYSTEM

The Knight 14 Watt High-Gain Sound Syatem with Shure Crystal Microphone is available also in a modern. low-cost portable system. All components are housed in a single split carrying case 14 Wodern des!g, $221 /{ }^{\prime \prime} \times 181 / 4^{\prime 2131 / 4}$. Weight complete is oniy 42 lbs. The complete Knight 14 Watt High-Gain Portabie System includes: 1 - Knight 14 Watt High-Gain amplifier; $1 \rightarrow$ with 30 foot microphone with desk stand and 25 foot cable and plugi 1-12-inch P.M. Speaker operation from 110 volts, 60 cycles A.C. Shpg. wt. 47 ibs .
Alit. 1 16.5. YOUR PRICE COMPLETE.
59195
A12187. Extra 12" Speaker with 30 foot cable. Fits in second half of case. NET... $\$ 4.50$

- Extra Features. Bass-Treble Control gives tonal emphasis as desired and reduces feedback: Output sockets are 2 -contact type; has provision for extra speakers; Octal selector permits instant speaker matching; wiring diakram is furnished on base plate of amplifier; beautiful new two-tone tan steel case styling
With handsome chromitum control panel.
- Complete 14 Watt System. Includes: 1Knight 14 Watt Amplifier less phono top: 1-Shure Crystal Microphone with 25 foot cable on desk stand; $12^{\text {Pable and plug. mounted in wall baffe as }}$ cable and plug, mounted in wal plete instructions. For 110 volts, 60 cycles A. C. Shpg. wt $45 \mathrm{lbs}, 85$ 60 cycles A. C. Shpg. wt. 45 lbs. o
A12 115 . List Price, $\$ 09.50$. 04
NET PRICE..................... A 12193 . Phono Top for above. For 110 V
60 cycles. Shpg. Wt. 15 lbs. NET.... $\$ 7.45$ A12114, 14 Watt Ampilifer Only. As described but less Phono Top and
Tubes. Shpa. wt., 25 1bs.
List Price, $\$ 34.50$. NET PRICE.
A12151.R. C. A. Tube Kit. NET. $\$ 3.24$ Optional Equipment: For A10550 floor stand in place of desk stand add $\$ 2.35$. For $\$ \mathbf{~ e x t r a}$. For steel-aluminum projector instead of wall haflle, add $\$ 2.30$.

Less Phomo Top. Illustration shows the 14 Watt amplifier appearance without Dhono
top. Removable top cover gives easy access to tubes. input and output sockets are ocated on side and rear base panels for quicis access.


Cholce of Mikes. In place of the Shure Crystal mike shown with Systery, you can have with System, you can have Astatic Dynamic, B-Astatic T-3 Crystal, or C-ElectroVoice V-1 Velocity, at an additlonal cost of $\$ 3.45$.


## The Ecanamy WFAT SYSTHM

## Knight SOUND SYSTEMS SATISFY THESE USERS!

Pindustry
American Airlines Americat Businesa Inst. Carnegie-Illinois Steel Cracker Jack Co. Co
Dominion Power Co
Nitrate Corp.
Pacific Coast Borax Co Piggly Wiggly
Quaker Oats Co.
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Dayton Public Schools Indiana University Jackson, O., Schools Northwestera Univ. Pundue University
University of Arkansas University of Chicago University of Michiga Saskatchewan Univ.
Washineton University Washineton Mary

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First Cong.. Moline Grace Evang., Chicago Holy Ghost Rectory, St. Christian Church. Euclid. Ohio and many others
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San Juan, P.R.

Amusements Bob Crosby's Band Buckeye State Shows Fairbanks Ice Carnival Greater Expri. Shows Peerless Shows Riverview Park, Chgo
C.C.C. Camps
C.C.C. Camps
Co. 2921 , Descuso, Cal Co. 2921, Descuso,
Co. 2116 . Colorado Co. 2618, Tuscola, Coverseas Users Overseas Users
A. Marbottle, VSGAO Hong Kong, China V. D. Fillipis,

Heliopolis, Egypt Ctablisscments Ara, M Hessal AlChakhidas M. HandiAlChakhidas Baghdad, Trad Automatic Telephone Tobis Portuguena S.A.R.L.. Lisbon

And Hundreds More

## HOW TO SELECT THE PROPER KNIGHT-SOUND SYSTEM

It's easy to select the Knight Sound System beat suited for your needs. Just follow these simple directions: (1) Measure the length and the width of the area to be covered. (2) Muitiply these two figures to determine the lotal number of square feet. (3) Locate on the chart in the column headed "Applications" the usp for which your system is intended. (4) Run your finger across until you reach the column including the square foot area obtained in Step 2. (5) The system you aeed is that indicated at the top of the appropriate column.
Example: You want a Knight Sound System ior a ballroom measuring 100 feet lonk and 50 feet wide. This is a total of 5.000 square feet ( $100 \times 50=5,(001)$. Reference to the chart shows that you requires a 14 or 15 watt system with $2-12$ speakers in wall balfes. If lucation is unusually noisy, order the next la
NOTE: A. If you know how many persons will be present and do not wish to incau ure the area, allow abbue 6 square feet per person. This will give you a sufficiently accurate figure for proper coverage.
8. If your location includes a balcony, or if you wish to place extension speakers in adjacent rooms, add these areas to the main area to determine the total area to the covered.
C. If your system is to cover a number of applications, choone the system required for the largest area. A larger system will easily cover smaller areas, but the reverse is not true.
D. If you wish to cover, two applications simultaneougly-e.g., church auditoriun and chimes for the tower-first find the size of system required to handle the auditorium alone; then find the size required for the chimes. Choose a system having a povet output equivalent to the sum of both (or use two separate amplifiers).

ALLIED's engineers are always reaty to help you. If your requiremente are specialized and are not covered by the chart, write to our Sound Ensineering Division, giving complete details and (if possible) enclose a rough sketch. Competent advice and price quotations based on a careful consideratlon of your problem will be forwarded you promptly.

THIS CHART SHOWS YOU HOW TO SELECT YOUR P.A. SYSTEM

| Applicatioms | $\begin{aligned} & 6 \text { WATTS } \\ & \text { (See p. } 70 \text { ) } \end{aligned}$ |  |  | 12-15 WATTS <br> (See pp. 71, 74, 80) |  |  | 20-35 WATTS(Sce pp. 72, 75, 76, 80) |  |  | $\begin{aligned} & \text { 40-70 WATTS } \\ & \text { (S.ee pp. } 77,79 \text { ) } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Area sq. ft . | Spkr. | Baffe | Area *q. ft. | Spler. | Bafle | Area 8r. ft. | Spkrs. | Baffle | Area se. | Splkr. | Baffle |
| Armories and Barracks | $\begin{aligned} & 1000 \\ & 2500 \end{aligned}$ | 1-8" | Wall | $\begin{aligned} & 2500 \\ & \text { to } \end{aligned}$ | 2-12* | Wall | $\begin{gathered} 6000 \\ 10000 \end{gathered}$ | 2-12* | Proj. | $\begin{aligned} & 14.000 \\ & 45.000 \end{aligned}$ | 2-4 Kni Trumpe |  |
| $\begin{aligned} & \text { Auditoriums } \\ & \text { \& Banquel } \end{aligned}$ Halls | $\begin{aligned} & 10 \times 0 \\ & 3500 \\ & 3500 \end{aligned}$ | 1-8* | Wall | $\begin{aligned} & 3500 \\ & t 0 \\ & 6500 \end{aligned}$ | 2-12* | Wall | $\begin{gathered} 6500 \\ 70 \\ 30.000 \end{gathered}$ | 2-12* | Wall | $\begin{aligned} & 30.000 \\ & 110.000 \end{aligned}$ | 4-12* | Proj. |
| Ballrooms \& Dance Halls. | $\begin{aligned} & 1000 \\ & 2500 \end{aligned}$ | 1-8* | Wall | $\begin{aligned} & 2500 \\ & 550 \\ & 500 \end{aligned}$ | 2-12* | Wall | $\begin{gathered} 5500 \\ \text { to } \\ 14.000 \end{gathered}$ | 2-12* | Proj. | $\begin{aligned} & 14.000 \\ & 45,000 \end{aligned}$ | 4-12* | Proj. |
| Carmivals 8. Fairs |  |  |  | $\begin{aligned} & 1000 \\ & 100 \\ & 3000 \end{aligned}$ | 2-12" | Proj. | $\begin{aligned} & 3000 \\ & 800 \\ & 800 \end{aligned}$ | 2-12* | Proj. | $\begin{gathered} 8000 \\ 55.000 \end{gathered}$ | 2-4 Knight Trumpets. |  |
| Chimes Amplification |  |  |  |  |  |  | $\begin{aligned} & 10.000 \\ & 70.000 \end{aligned}$ | 2-4 Knight Trumpets |  | $\begin{aligned} & 70.000 \\ & 1 / 2 \text { Mile } \end{aligned}$ | 4.6 Knight Trumpets |  |
| Churches | $\begin{aligned} & 1000 \\ & 2500 \end{aligned}$ | 1-8* | Wall | $\begin{aligned} & 2500 \\ & 650 \\ & 6500 \end{aligned}$ | 4-8* | Wall | $\begin{gathered} 6500 \\ \text { to } \\ 20,000 \\ \hline \end{gathered}$ | 8-8* | Wall |  |  |  |
| Factory Paging (Nolsy) | $\begin{gathered} 500 \\ 100 \\ 1000 \end{gathered}$ | 1-8* | Proj. | $\begin{aligned} & 1000 \\ & \text { to } \\ & 20000 \end{aligned}$ | 2-12" | Prol. | $\begin{aligned} & 2000 \\ & 6500 \end{aligned}$ | ${ }^{2+1}$ | Proj. | $\begin{gathered} 6500 \\ 14.000 \end{gathered}$ | 2 to 4 Knight Trumpets |  |
| Funeral Parlors. | $\begin{gathered} 500 \\ 100 \\ 1000 \end{gathered}$ | 1-12* | $\begin{aligned} & \text { Bass } \\ & \text { Retlex } \end{aligned}$ | $\begin{aligned} & 1000 \\ & 2500 \end{aligned}$ | 1-12* | $\begin{aligned} & \text { Bass } \\ & \text { Reflex } \end{aligned}$ | $\begin{array}{r} 2500 \\ \text { to } \\ 6500 \\ \hline \end{array}$ | 2-12* | $\begin{aligned} & \text { Bass } \\ & \text { Bexfex } \end{aligned}$ | $\begin{gathered} 6500 \\ 14,500 \\ \hline \end{gathered}$ | 4-12* | $\begin{gathered} \text { Hass } \\ \text { Reflex } \end{gathered}$ |
| Night Clubs <br> \&. Taverns. | $\begin{aligned} & 1000 \\ & 250 \\ & 2500 \end{aligned}$ | 1-8* | Wal! | $\begin{aligned} & 2500 \\ & 600 \\ & 6000 \end{aligned}$ | 2-12' | Wall | $\begin{gathered} 6000 \\ 14,000 \\ \hline \end{gathered}$ | 2-12* | Wall |  |  |  |
| Outdoor Ady. <br> \& Meetings. |  |  |  | $\begin{aligned} & 1500 \\ & \text { to } \\ & 4000 \end{aligned}$ | 2-12" | Proj. | $\begin{gathered} 4000 \\ 10,000 \\ \hline \end{gathered}$ | 2-12* | Proj. | $\begin{array}{r} 10,000 \\ 75.000 \end{array}$ | 2-4Knight Trumpets |  |
| Roller Skating Rinks |  |  |  |  |  |  | $\begin{aligned} & 2000 \\ & \text { to } \\ & 0000 \end{aligned}$ | ${ }_{12}{ }^{-4}$ | Proj. | $\begin{gathered} 6000 \\ 45.000 \end{gathered}$ | 2-4 Knight Trumpets |  |
| Stadiums, Athletic Flelds, Race Tracks | Areas given are those |  |  | Grandstand or |  | Bleachers. | $\begin{aligned} & 3000 \\ & \text { to } \\ & 80,00 \end{aligned}$ | 2 Trumpets |  | $\begin{gathered} 8000 \\ 55,000 \end{gathered}$ | 4-6 Knight Trumpets |  |
| Store \& Offlce Paglng | $\begin{aligned} & 1000 \\ & 3500 \end{aligned}$ | 1-8" | Wall | $\begin{aligned} & 3500 \\ & 6.500 \end{aligned}$ | 2-12" | Wall | $\begin{gathered} 6500 \\ 20.0000 \\ \hline \end{gathered}$ | 2-12* | Proj. | $\begin{aligned} & 20.000 \\ & 55,000 \\ & 50 \end{aligned}$ | 4-12* | Proj. |



## GROUP 1



## CHOICEOF

In place of Shune Crystal mike you can have you choice of mikes from the following groups: Group 1: A - Astatic T-3 Crystal G-Electro-voice V-1 Vatic Dynamic. For any one tatic Dynamic. For any one of these mikes, add $\$ 3.45$ to Sice of complete system of all the microphones above on pages 94 to 96 .

## Knight 12 watt p.A. SYSTEM

E. R. P. I.

LICENSED

Sultable for Orchestras - Schools - Churches - Lecturers - Store Demonstrations * Auctioneers - Small Theatres - Advertising Agencies • Recording Sludios • Lodges and Clubs, etc. - Political Rallies - Ladge Halls • Hotels

Input Channels OptionalphonoTop Dual Tone Controls Speaker Sefector - Inverse Feedback Jensen Speakers - Dual Phono input Optionalv.l. Meter The highest quality moderate-power Sound System offered on the market today, Complete, from A.C. plug to speaker housing, ready to und latorted with a lifelike quality of tone that leaves nothing more to be desired. Packed with important. useful features that spell the last word in P.A. versatility and convenience.

- 4 Input Channels. Will accommodate any two high-impedance microphones as well as any Individust eryal or magnetic phono pickups in a perfected mixer circuit, permit blending or "mixing" of mike and phono as desired.
- Inverse Feedback. Provides greater power utput; improves tone quality and minimize distortion. Permits operation at higher levels not possible in ordinary aystems.
- Dual Tome Controls. Separate controls are provided for bass and treble emphasis and to compensate for varying acoustical conditions.
- Optional Phono Top. You can buy the 12 Optional Phono Top. You can buy the 12
Watt System with the new built-in phono top Watt extra cases or tralling wires to bother with. Equipment includes: 78 R.P.M. synchronous motor with 10 turntabie. Shur plus-in connection.
- V.I. Meter or Momitor Speaker. Optional equipment. Illuminated neter indicates output evel of amplifier directly in decibels. Monitor check of quality and blending.



## AMPLIFIER SPECIFICATIONS

Output: Full 12 watts output undistorted: hum is inaudible; Output impedance: 2. 4, 6, 8, 16 and 500 ohms on salector rent provided; Input Chammels: Four two for high-gain mikes, each with individual controls; two for phonograph with fader; Tone Controls: one for basid. one treble; Galli: on microphone, 125 dt . on phono, 73 db.i Frequency Response: 40-10.000 C.P.S. (on amplifier); Tubes: 2-6J7, 2-6N7, $2-6 V 6 G_{i} 1-80$; Llme Drain: 75 watts; Fused: fully fused for operation from 110-120 voles, 60 cycles A.C.iA Ampllfier Slze: $205 / 8^{\circ} \times 11^{\circ}$ x $13^{\circ}$. patents of Western Electric and A.T.\&T.

- Extra Features. Speaker Selector Switch permits instant matching to any number of speakers. Silencer Jacks check hum when mike Jacks; diagram on base plate; two contact sacks; diagram on base plate; two contact fused; beautiful new tiwo-tone tan steel case with attractive chromium front panel case
- Complete 12 Watt System. Includes: 1 Kilght 12 Watt Amplifier less phono top -Shure Crystal Microphone with 25 foo cable on A 10550 floor stand; $2-12^{\prime \prime}$ Jenser P.M. 12C Speakers with 30 foot cables and plugs attached, mounted in 2 heavy-duty it: complete instructions. Less V.I. meter For 110 volts, 60 cycles A.C
Shpg. wt., 55 Ibs.
A12 113 . List Price, $\$ 105.00$. Sy
NET PRICE..........................
for 8 mos A 12194 . Phono Top for above. For 110 V 60 cycles, Shpg-wt., 15 lbs. $\$ 10.75$
A12182. V.I. Meter. NET....... . 54.50 A12183. M onitor Speaker Unit. $\$ 3.95$ A 12112 , 12 Watt Amplifier Only. As and tubes. Shpg. wt.. 28 jbs .
List Price. \$42.50.
NET PRICE
s20 85
A12153. R.C.A. Tube KIt. NET. $\$ 4.77$ Optlonal Equipment. For extra 12* Jenacn Speaker. cable and wall baffle, add $\$ 11.10$ add $\$ 6.25$ to price of system.


Mondtor speaker. Op tional with 12 and 20 Watt Systems-a 2 P.M. speake mounted on grizle frame which will exactly fit in V.I. meter cutout on front panel. Allows audible check of tone quality and of program blending.


Steel 6atile. For longer diseance coverage with greater directional effect we recommend the Al0935 steel baffe described on page 99 . If desired in place of wall baffe, specify steel baffies on order


Less Phomo Top. Illustration shows appearance of 12 and 20 wate amplifier without phono top Removable cover gives easy ac cess to all tubes. Input and output sockets are located on side and rear base panels for quick and convenient accessibility.

## KNIGHT 12 WATT PORTABLE SYSTEM

The Knght 12 Wate Sound Sytem is also available in convenient portable form. Has all of the advantages and fatures deacribed above. Entirely selfecontained in two casey one for amplifier
 Shure Crystal Microonone with 25 foot cable and plug: 1-A 10555 telesco 12 -inch 12C P.M. Dynamic Speakers with 30 foot cables and 2 -prong pluss: R C A tube fit and instructions. Shpg. wt., 751 lb
A 12111. Complete 12 Watt System (less meter and phono top)
CASHPRICE

E. R. P. I.

## LICENSED

## Knight 20 watt P.A.SYSTEM

Recommended for Orchestras * Record Reproduction - Road Shows - Theatres - Recording Studios Mortuaries - Rentals - Parks - Auditariums - Churches - Schools - C.C.Camps - Restaurants - Stores • Hotels • Ballrooms

- Input Channels Optional Phono
- Dual Toneciontrol. Dual Phono Input - Speaker Selector Universal Output - Jensen Speakers Remote Control

A complete ready-to-operate full 20 Watt Sound Systern that meets $75 \%$ of all $\mathbf{P}$. A. packed with practical features-irue-toned and quality-bulte to "take it" under the toughest kind of service. And yet the price defies all competition. Just check what you ret:

- Inverse Feedback. In perfected form; permits greater power output with less distortion; of tone on both mike and phono. of tone on
- 4 Chanmel Mixlng. Full mixing is provided by means of separate controls for any two high-impedance microphones, and two crystal or magnetic pickups on fader.
- Deal Tons Controls. Permit bass and treble adjustment to precise individual requirements; also minimizes feedback.
- Optional Phono Top. A new feature. You can buy the 20 Watt System with new built-in phono top to make it versatile and complete. includes is RPM. motor with $10^{*}$ turntahle, Zephyr Crystal pickup, switch, arm-rest and plug-in connection.


## AMPLIFIER SPECIFICATIONS

Output: Full 20 watts output, undistorted; hum is negligible; Output Imselector switch; for P.M. Speakers: no field current provided; Input channeis: Four, two for high-gain mikes, each with ndividual controls, two for phonograph with fader; Tone Controls: one for bass, one for treble; Galm: on microphone. 128 db., on phono, 75 db.; Frequency Response; $40-10.000 \mathrm{C} . \mathrm{P} . \mathrm{S}$. (on amplifier) Tubes: 2-6I7, 1-6L7, 1-6C8G, 2Fused fully fused for operation froin 110 120 volts, 60 cysed for A. Cperation Ampon 110 120 volts, 60 cycles A.C.; Amplifier Size: licensed by is.R.P. i. Licensed: Fully Western Electric and A. T. \& T.

- Pius These Features. Has Monitor Head phone Jacks; Booster Output Socket; Silencer Jacks which check bum when mike is removed; Two-contact outputs. Fused; Wiring diagram on base plate; has provision for plugging In Remote Control (optional).


Duall Phono ínput in provided for one or two crybtal or magnetic pickups. Tivo phonos or one phono unit in addition to Prated from duat besition control - erach controlled from either side of a zero position.


Speaker Matehing Switch permits instant selection of voice coil or speaker line output impedance to sperers to amplifier No gues-sing-just set switch where volume and quality are beat.


Remote Control. Optional with the 20 Watt System A compact new cable-con alate volume level output of amplifier from remote dis tances up to 1,000 feet from amplifier.

## 20 WATT PORTABLE SYSTEM

The Knight 20 Watt System is also available in handy portable form. Includes all of the advancer eatures described above. Entirely self-contained in two compact cases -one for amplifier ( $2111^{\prime \prime}$ x $16^{\prime \prime} \times 135 / 0^{\prime \prime}$ ), the other a split-case for the speakers ( $211 / 2^{*} \times 131 / 2^{\prime \prime} \times 81 / 2^{\prime \prime}$ ). The complete Knight 20 Watt Portable System incluces: 1-Knight 20 Watt Ampliner in portable carryiny case; 2Jensen $12^{\prime \prime}$ P.M. 12C Dynamic Speakers with 30 foot cables and plugs mounted in split carrying case; 1-Shure Crystal Microphone with 25 foot cable and plug; 1-A 10545 Teleacoping floor stand; R.C.A. tubes; and instructions. Shpg. wt.. 80 ibs.

Aist 122 complete (less V.I. meter and Phono Top) CASHPRICE.

Terms: 57.00 down, $\mathbf{5 8 . 6 6 \text { monthly for } 8 \text { months. }}$

- Speaker Setector. Matches additional speakers instantly - no guessing; just set for bent volume and quality
- V.I. Meter and Monitor. Optional equipment; illuminated meter indicates output level directly in decibels. Monitor Speaker allows audible check of tone ruality and blending.
- Complete 20 Watt System. Includes: 1Kmlght 20 Watt High-Gain Amplifier less phono top; 1-Shure Crystal Microphone with jensen cable on Alos50 foor stand; 12 C , 12 jend plugs attached mounted in 2 heavy-duty and plggs attached, mounted in fabicoid-covered wall bafles; R.A. tulve kit; complete instructions. Less V.i, meter.
 NET PRICE.
${ }^{5} 623$
Terms: $\mathbf{5 6 . 2 5}$ down, $\$ 7.74$ mo. for 8 mos.
A 12194 . Phono Top for above. For 110
V., 60 cycles. Shpg. wt. 15 ibs. NET $\$ 10.75$ Ai 60 cycles. Shpg. wt., 15 lbs. NET $\$ 10.75$ A12183. Monitor Speaker Unit . $\$ 3.95$ A12181. Remote Control with 75 ft. A12120. 20 Watt Ampllfer Only. As describer but leess tubes, Phono Top, and V.I. meter. Shpg, wt., 28 Jibs,
Liat Price $\$ 59.95$. Liat Price $\mathbf{\$ 5 9 . 9}$
s2950
A12154. R.C.A. Tube KIt. NET. \$4.91 Optlonal Equipment. For extra $12^{\prime \prime}$ Jensen Speaker, cable and wall baffle, add $\$ 11.10$ add $\$ 5,40$ each to price of system.





## CHOICE OF MICROPHONES

In place of the Knight-Astatic Dynamic Mike shown with systems. you can have your choice of nicrophones from the following two groups: Group ${ }^{1:}$ A - Astatie T-3. Crystal, Anercan D5-T Dynamic; Velocity; Group ${ }^{2 ;}$ Co Anmerican Kright Velocity; $\mathbf{F}$ - Brush "Al Crystali E Kure Kight velocity, Group 1, add $\$ 3.45$ to cost of complete system. For Group mike in Group 2, and $\$ 7.25$ to cout of complete any mike in Grouplem. Fo, coniplete description of microphones above, see payes 94-96.


## 70. WATT PORTABLE SYSTEM

The Knight 70 Watt Sound System is also available in bandy pertable form. Includes all featurea deacribed above. Entirely self-contained in three compact cases
-one for amplifier $\left(211 / 2^{*} \times 16^{\prime} \times 135 / 8^{\circ}\right)$ and 2 splitcone for amplifier ( $21 / /^{*} \times 16^{\prime \prime} \times 135 / /^{\circ}$ ) and 2 splitcases for the speakers ( $211 / 2^{\prime \prime} \times 131 / x^{*} \times 8 / 2^{\circ}$ ). The comKnight 70 Watt Amplifier in portable carrying case; foot cables and Mluse mourted inc speakers sith 30 foot cables and plugs mounted in split carrying cascs: cable and plugi 1-Knight Alos45 floor stand; R.C.A. tubes; and instructions. Shpg. we., 140 lbs . A12172. Complete (lexs V.i. meter List. $\$ 275 .(4)$.
CASH PRICE
Ter ms: $\$ 13.75$ down $\$ 17.02$ monthly for 0

## 70 WATT AMPLIFIER ONLY

A12170. 70 Watt Amplifier as described above but less tubes, Phono Top, and ViI. meter ${ }^{5}$ List Price, $\$ 117.50$. NET PRICE
s5850
A12156. R.C.A. Tube Kit. NET
$\$ 8.33$

## Knight 70 watt system

For Big Stadiums - Circuses - Fairs - Airports - Schools • Regattas - Carillons • Race Tracks • Rinks • Ball Parks • Political P.A. - Ships

## AMPLIFIER SPECIFICATIONS

O utput: Full 70 watts output. undistorted; hum is inaudible; Output 1 mpedance: 2,4 . ${ }^{\text {T, }} 8$, 16
and 500 ohms on dual selector switches; For P.M. and 500 ohms on dual selector switches; For P.M.
Speakers: no field current provided; Input Speakers: no field current provided; Input
Channels: Four, two for hish-gain mikes, two Channels: Four, two for hich-gain mity, Tone Controls: one for bass, one for treble; Galn: on microphone. 135 db . on phono. s (on realieney Response: $40-10.000 \mathrm{C}$ P. S. (on amplifier) ; -Z3; Line Drain: 215 watts; Fused: fully fused


- Dual Output Channels - Twin Inverse Feedback - Four input Channels
- Dual Tone Controls
- Dual Power Drivers
- Dual Speaker Selectors
- Dual Phono Provision
- Optional Phono Top
- A Jensen P.M. Dynamies
- Remote Control
- Monltor Speaker
- V.I. Meter Optional
- With Headphone Jacks
- With Booster Jack

For you who want tremendous apace conquering power-here's the new giant Knight 70 . Watt System 1 And we mean fo FULL WATTSI But that's not all we're bringing you for the first time stupendous power with entirely new and exclusive features, entirely new concepts of performance that set unbeatable standards in the giant power field.

- Dual Output Channels. An exclusive, thexible Knight feature, providing front panel controls which make it possible to drive two separate sets of speakers at difterent y
levels. Ordinary high-power amplifiers drive all speakers at same volume tuvel.
- Twin Inverse Feedback. Each output channel has separate Inverge Feedback. permits higher output levels by minimizing distortion and hum and improving tone.
Dual Power Drivers. Each pair of power output tubes is provided with its own power
driver, assures giganaic
- Optional Phono Top. Buy the Knight 70 Watt System with built-in Phono Top. Eliminates separate phono units and troublesome, trailing wires.
- 4 Input Channels. Accommodates any two high-imperfance microphones and two cystal or magnetic pickups; also blends and mixes,
- Dual Fone Controls. Give conal emphasis as desired and compensate for varying acoustical conditions: also minimize feedback
- Dual Speaker Selectors. Each output chanmel has individual speaker selector for quick accurate matching to additional speakers on either channel
- Optional Equipment. Remote Control-permits adjustment of amplifier output level at remote distances from amplifier. V.I. Meter-indicates output level of ampliner
directly in decibels. Monitor Speaker-allows audible chock of tone quality and blerding.
- Extra Features. Headphone Monitor Jacks; Silencer Jacks; Booster Ontlet; Fused; diagram on base plate. Handsome steel case in two-tone tan, with chromium panel.
- Complete 70 Watt System. Includes: 1-Knight 70 Watt High-Gain Amplifier, less phono top: 1-Knight-Astatic Dynamic microplone with 25 foot cable on Al0550 floor stand; 4 Jensen P.M. 12 H Speakers with 30 foot cables and plugs attached, mounted in 4 heavy-duty fabricoid-covered wall baflea; R.C.A. tulue kit: in- 8

Terms: $\$ 12.75$ down, $\$ 15.78$ monthly for 8 monthe
A 12195 Phono Top for above. For $110 \mathrm{~V}, 60$ cycles. Shpg. wt.. 15 Ibs . NETS 12.95 A12182.V.I. Meter. NET. $\$ 4.50$. A12 183. Monitor Spraker. NET.... 3.95 Optional Equipment. For extra $12^{\circ}$ Jensen speaker. cable and wall baflle, add $\$ 14.75$. Optionai Equipment. For extra 12 jensen speake. cable and wall bance, and 15 watt driver unit in place of Jermen Speaker and wall baffer, add $\$ 11.50$ per unit.



GROUP 1


Master Gain Control provides simultaneous control of the overall volume level of all the six input channels of the Kmight 40 Watt Systern ad justs the total volume level set An extra-value feature for easier operation.

GROUP 2


## CHOICE OF MICROPHONES

In (hace of the Kight-Astatic Dynamic Mike illustrated with the In place of the KnighteAstatic your clioice of microphones from the following two groups: Group 1: A-Astatic D-3 Crystal 2 Ellocero-voice V-1 Velocity, C-American D7-T Dynamic; Group 2: D-Brush "AP" Crystal, $\frac{1}{6}$ Knight Velocity, F-Shure Gmipex Crystal, G American DS-T Dynamic. For any mike in Group add $\$ 3.45$ to the total price of the system shown on the ne the system For any mike in Group 2, add sich Be sure tospecify your For detailed desc4-96. Fach of the above microphomes is of accepter above, see pages $94-96$. Each of the abolity and will give excellent resules in any P. A. installation.

4 Mike Inputs, Provision is made for using up to four high-impedance mikes at the same time; each has a separate volume control allowing blending or "mixing"' as desired. Microphones need not
necressarily be alike.


Dual Tone Equalizers permil attennation or boost of either bass or treble. Each control has dual action; turning control to left gives attenuation; turning control to right gives boosting action. Provides extreme flexibility to meet varying tonal emphasls as required


Speaker Selector switch permite instant sclection of voice coil or speaker line output impedance to match any number of P.M. dynamic speakers to the amplifier. No figuring or guessing-just set the switch at the position where volume and tone quality are best. An advanced Knight convenience feature.
A.V.S. and A.V.E. Automatic Vol ume Stabilizer and Automatic Volume Expansion. Ti e former automatically prevents feedback and level. A. Thaintaining constant volume providing h. is especially effective in reproduction De luxe phonograph features you will appreciate.


Phono-Mike Switch. A broadcast station feature incorporated cast station feature incorporated
for the first time in a P.A. system. Permits instant changeover from mermits instant changeover from out disturbing pre-set controls. Center position of switch permits normal mixing of microphone and phonograph controls.

Volume Level Meter is available at sinall additional cost. Indicates volume output of amplifier directly in decibels. Ideal for use where speakers are remotely located from the amplifier, to check the output level. Meter is fully Illuminated and can be easily and accurately read in any bight.

Dual Phomo Input Is provided for one or two crystal or magnetic phonograph pickups. Two separate phono units or one phono unit in addition to Phono Top may the used. Operated from individual controls on front panel. permitting blending action.

$$
\square
$$

## De Luxe 40 WATT SOUND SYSTEM

## (

Ampilifer Less Phono Top. Illustration above shows the appearance of the Knight to Watt Amplifier without the Phono Top. Attractive cover is removabie, giving easy access to alt tubes. Input and output sockets are located on side and rear bame pancls for quick and convenient access. No other P.A. ampdifier has so many advantages in its design. Absolute in $\mathrm{P} \Lambda$. convenience.


Stael Profector. For greater direc tional effect, coupled with longer dis tance criveragp. we recommend the use of the A 10935 steel baffles described on page 99. These are available at sinall extra cost (see below). Stee projectors are especially suited for direction of sound. The baffeg recom mended are noted for their fine acoustical design and rugredness.


Remote Control. An optional piece of equipment with many adantages. This compact, cableconnected device will regulate the rolume level output of the amplifer from remote distances up to Ideally anitable for dramatic orchestral school work, etc or initting the operator to sit out in front with the audience.


Manltor Speaker. Op-tional-a hikh-quality 2 P. M. dynamic speaicer mounted on grille frame meter exactly futs in $V$. meter cutont on the amplidible chect of tone ounaliey and blending action. Avail. able with the 40 Watt System at small extra cost.

Recommended for Broadcast Stations • Orchestras • Recording Studios • Churches • Schools • Yacht Clubs • Hotels • Theatres Restaurants • Night Clubs • Memorial Parks • Resorts - Parks • Political Rallies • Legislative Groups • Rinks • Armories

- Tone Equalizers

Mike-Phone Swlteh

- A.V.S. and A.V.E.
- Electrontc mixing

Speaker Selector

- Silencer Jacks
- Headphone Out put
- Inverse Feedbach - Power Driver - Master Control Universal Output - 3 Speaker Sockets - Booster Jack - Jensen Speakers
- Fully Fused

Here is our greatest Sound System-a stirring achievement of the greatest P.A. engineering skill-created for the most critical P.A. users. Ve have put into this complete 40 Watt De Luxe System the best In deaign knowledge, the very finest P.A. parte and craftemanship- the newest of practical, desirable features-and the f--created forb Sound Systemer penetration higli-fidelity tone and rugsed performance.

- six Input Channets. Input is provided for the une of any four high-impedance microphones and two crystal or magnetic pickups. Individual volume controls are provided for each input channel, combined in an electronic mixing circuit which permits any dexree of blending and "mixing" as desired. Versatile input arrangement offers you spare channels comparable to broadcast studio facilities
- Dual Tone Equalizers. Never before incorporated in a P.A. amplifier. Separate Tone Equalizer Controls permit attenuation or boost of either bass or treble. Each control
has dual action; turning control to left gives has dual action; turning control to le
- Mike-Phono Swlith. Applied to the two phono channels, and to two of the mike channels. Permits immediate transition from pre-adjusted mike channel to pre-adjusted phono channel, or vice vêrsa. Center position permits nontal mixe or - Extra Features. Headphone Monitor Jacks; Booster Connection; Silencer Jacks: dlagram on base plate; two-contact output sockets; fused; Beam Power tubes; provision or adding Remote Control, V.I. Indicator, or Monitor Speaker.


## AMPLIFIER SPECIFICATIONS

 Output: Full 40 watts ourtput. undistorted; hum is inaudible; output 1 m pedance: 2, 4, 6,8, 16 and 500 ohms on selector switch; For P.M. Speakers: no field current provided, Ioput Chanreis: Six. four for high-impedance mikes, two for phono, each with individual controls Tone Controls: individual attenua-tion-boost types for bass and treble; Gain: on microphone, 138 db ., on phono. go ab.; Frequency Response: 30-12,017 C.P.S.i Tubes: 4- 6 J 7 ; 3-6N7, Line -6L7. 190 watts; Fused; fully fused for operation from $110-120$ volts. 60 cycles A.C.; under patents of Western Electric and A.T. \& ${ }^{\text {a }}$.

- Quality Components. Two Jensen P.M 12 H heavy duty speakers are employed for high-fidelity reproduction. All accessory equipmed in design, with handsome chromium front lined in design, with handsome
panel: in two-tone tan finish.
- A.V.S. and A.V.E. Automatic Volume Stabilizer limits excessive peaks to eliminate feedback and blasting. Actually provides twice the usable power output. Automatic Volume Expansion provides realistic repro. duction by automatically builditig up the louder phono passages to preserve the proper saces of the original. Both A.V.S. and A.V.E. are continuously variable.
- Inverse Feedback. In new improved form: permits operation at higher levels by minimerming distortion and hum and improving tone quality.
- Selector Swltch. New apeaker matching switch permles instant selection of voice coil or speaker line output impedance to matc
any number of apeakers to the amplifier.
- Power Driver. An exclueive new circuit feature for greater reserve power-provides greater output with higher fidelity tone.
- Master Gain Control. Provides instant control of overall volume level. After setting the individual volume controls to desired degree of blending, the Master Control may be used to adjust the total volume level.
- Optiomal Phono Top. Get real P.A. convenience by ordering the Knight 40 Watt System with built-in Phono Top. Include motor, Zephyr pickup, plug-in, etc. No extra cates to worry about, no trailing wires to fuss with. Gives you complete P.A. convenience
Complete 40 Watt System. Includes: 1Knlght 40 Watt De Luxe Amplifier less phono top; 1—Knight-Astatic Dynamic Microphone with 25 foot cable on Al05s0 floor stand; $2-$ Jensen P.M. 12 H Speakers with 30 foot cables and plugs attached, mounted in 2 walnutfnished wall baffles; R.C.A. tube kit; com-
plete instructions. Less V.I. meter. For 110 plete instructions. Less V.I
volts. 60 cycles, A.C. Shps.
Al 2241 . 215.00 .
NET CASH PRICE
$\$ 1750$
Terms: $\$ 10.75$ down. $\$ 13.31$ monthly for 8 months.

A12195. Phono Top for above. For 110 V 12182 Shpg wt., 15 lbs . NET.... $\$ 12.95$ | A1 12182 . Monitor Speaker. NET. | 4.50 |
| :--- | :--- | A 12181 : Remote Control with 75 ft . cable. Optlonal Equipment. For extra $12^{\circ}$ Jengen Optional Equipment. For extra 12 Jensen Fpeaker, cable and wainut batre add steel projector in place of each wall baffle. add $\$ 4.30$.

A12240. 40 Watt Ampllfier Only. With V. 1 meter and tubes. Shpg. wt.. S5 50 List Price, $\$ 112.50$. NET PRICE... A12157. R.C.A. Tube Kit. NET. $\$ 9.93$

## 40 WATT PORTABLE

The finest high-quality Portable Sound System now available. Incorporates superb performance with unusual porcritical sound requirements; ideal for most exacting ane traveling orchestras, musical organizations night clubs funeral homes. lecturers, for portable recording work, etc. An unsually compact system. Contained in two handy carrying cases-one for the amplifier ( $2112^{\circ} \times 16^{\circ} \times 135 / /^{\prime \prime}$ ) and the other a split-case for the two speakers ( $211 / 2^{\circ} x$ $131 / 2^{\circ} x^{\circ} 81 / 2^{\prime \prime}$. Weighs only 85 lbs. complete. The 40 Watt Portable system includes all features described above. The complete portable system includes: 1-Knlght 40 Watt De Luxe Amplifer in portable carrying came; foot cabtes and pluge ir dual-speaker carrying case; 1-Shure "Uniand pluge in dual-speaker carrying case; Muspore Alex 055 takedown de luxe foor stand; R.C.A. tuhes, and complete inseructions. For 110 volts, 60 cycles A.C. Shpg. wt., 100 lbs .

```
A12242, Complete System (less V. I. meter and List, \(\$ 239.50\).
CASH PRICE
s/1950
```


## 

(For optional equipment listings of phono top, V.1. meter, Monitor Splaker, Rernote Control, extra speakers, stee Time Payment Plan, see page 60. .)


## CHOICE OF MICROPHONES

place of the Knight-Astatic Dynamic Mike illus in plated with the 20 Watt System, you can have your choice of mikes from the following groups. Gan D7-T A - Astatic T-3 Crystal; Knight Velocity; D Dynamic; Group 2: ${ }^{\mathbf{C}}{ }^{\text {Cot }}$ Knight American D5-T Shure "Uniplex" Crystal ${ }^{\text {P }}$." Crystal. For any mike Dynamic; F Brush. AP in Group ${ }^{1}$, add $\$ 3.4 .54-96$ for descriptions. add $\$ 7.25$

Steel Projector. Recommended for use where great er directional effect and longer distance coverage is required. See page 99 for full description. Available in place of wall baffles at additional cost of $\$ 4.25$ each Especially ideal for outdoor heavy-duty service.

Monitor Spoaker. A 2-inch P.M. speaker in grille-mount which fits into meter cutout on panel permits checking of volume, tone quality and mixing. A valuable piece of optional equipment that makes for casier con A12183. NET...S 3.95

Remote Control. Optional - a cable-connected device which permits regtances up to 1000 feet away from amplifier. Permits the operator to sit out in the audience and to check and control the program reA12 18181 . NET. $\$ 4.85$


## PLAYS FROM 6 VOLTS OR 110 VOLTS

Amerjca's lowest-priced Moblle Sound System. Features bigh-quality versatile performance, full 15 watts output and rugged dependabilityall at a price that's impossible to beat. Only Knight offers you so much quality and value in an "Economy" Mobile Sound System.

- Compact, Complete. The 15 Watt Mobile System is designed for versatile performance. Operates directy and entirely from any 6 volt storage battery or from any 110 volt A.C. line. Has bullt-in phonograph equipment of highest quality for complete operation
Latest Features. Newest 1940 P.A. features are incorporated. Includes Inverse Fsedback-oners higher usable outpue level by minimizing dis tortion-improves tone quality, Treble-Bass Controf-permits adjustment to reduce record scratch-assures clear speech. assists in overcoming feedback; wo Input Channels accommodates any modern high-impedance microphone and built-in phono pickup; Speaker Selector-permits instant and accurate matching of additional speakers; Stand-by Switehconserves power supply drain but keeps filaments ready for operation; Power Output-gives greater output with increased efficiency.
- Sturdy Construction. Built of the finest components, selected to with stand the punishment of heavy-duty Moblle use. All controls are assembled conveniently on front panel. Quickly removable top cover and base plate


# Universal 20 WATt De Luxe SYSTEM 

Americas only truly Unlversal Sound System. Plays anywhere, any time, from any voltage source available with superb output, amazing fidelity of tone, and astonishing ease of operation. Comes to you complete-with built-in phono top. With power supply for 6 volts, 32 volts, 110 volts D.
volts A.C. ready for operation anywhere.

- 4 Input Channels. Has individual controls for two high-impedance mikes, and for additional crystal or magnetic pickup
- Dual Tone Controls. Permit individual bass or treble empliasis as desired; minimize feedback.
- Inverse Feed back. Gives higher usable volume level by minimizing distortion and improving tone quality. An effective and desirable feature.
- Speaker Selector. Permits instant matching of gddtional speakers to amplifier. No more guessing: just set where tone and volume are at their best.
- Built-In Phono. No extra units, no trailing wires Buitt-In Phono. No extra units, no trailing wires.
Highese quality phono components 78 R.P.M. phono motor, Shure Crystal Pickup, etc.


## AMPLIFIER SPECIFICATIONS

Output: Full 20 watts output, undistorted; hum is Inaudible; Output Impedance: 2, 4,6. 8, 16 and 500 ohms on selector; For P.M. Speakers: no field current provided; Input Channels: Four, two for high-impedance mikes, two for phono, with individual controls; Tone Controls: evo, one for bass, one for treble Gain: on microphone, 135 db . on phono 80 db . Tubes: $2-6 \mathrm{~J} 7,1-6 \mathrm{~N} 7,1-6 \mathrm{~L} 7,1-6 \mathrm{C8G}$, 2-6L6G. 2-6XSG; LIne Drain: 100 wates; Fused ifully fused for operation on all voltages, 110 volts. 60 cycles A.C. or $6.32,110$ volts D.C.
 Amplifer Site Licensed: Fully licensed by E.R.P.I. under patents of Western Electric and A. T. \& T.

The P.A. world has been waiting for this Sound Systen for yeary! Imagine it-a System that will play anywhere, fom any voltage source! it's the perrect P.A. solution for Traveling Orchestras, Lecturers, Outdoor Advertising, Traveling Stock and munity Centers, Rural Schools. etc.

- Automatle Voltage Selection. Robot control 32 volts D.C. or 110 volts A C. or D.C. Change to 6 volts is accomplished in a jiffy by means of battery volts is accomplished in a jinfy by means
- Extra Features. Jensen P.M. 12C Speakers for exceptional fidelity; Stand-by switch for 6 volt economy; Silencer Jacks check hum when mike plug is removed; Headphone Monitor Jacks; fully fused; diasram mounted on base piate; provision for Meter. Monitor Speaker and Remote Conerol; two dual-contact speaker sockets, etc. A mpllfier case is streamined in design; bult into a beautiful weatifully etched dial plates; with chroraium handles.
- Complete 20 Watt Universal System: Includes: 1-Knight 20 Watt Universal Amplifier with phono topi-Knight-Astatic Dynamic Microphone with 25 foot cable on A10550 foor stand; 2-12 Jensen P.M. ${ }^{12 C}$ Speakers with 30 foot cords and plugs attached, mounted in 2 heavy-duty wainut wall baffles; R.C.A. tube kit; complete instructions. Less
V.I. meter. For 6 volts, 32 volts and 110 volts D.C. and 110 volts A.C., 60 cycles. Shpg. S 950 A1222 ${ }^{1}{ }^{2}$. ${ }^{2}$ Litt Price, $\$ 255.00$.
s2750
Terms: $\$ 12.75$ down, $\$ 15.78$ monthly for 8 months. A12182. V.I. Meter. NET.
.$\$ 4.50$ A 12220,20 Watt Ampllfier Only. Has all features described above, including phono top, but less List Price, $\$ 165.00$.

58250 NET PRICE
A 12159 (See opposite page for optional equipment.) 84


- Automatle Voltage Selectlon

Four Input Channels

- Dual Tone Controls
- With Inverse Feedback

With Romote Control

- Speaker Selector Swltch

With Stand-By Switeh

- Jensen P.M. Speakers
- Silencer MJke Inputs
- V.I. Meter and Monitor


Provision is made for the use of any two high impedance microphones at the same time. Mikes need not be alike. Eiach microphone has a separate "mixing" as desired. A highly de"mixing" as desired. A highly de-
sirable 1 . A. feature for more versatile sirable P.A. feature for more versatile
P.A. operation. You get wonderful P.A. operation. You get wonderful
versatility, not only in the ability to operate from every power source, but in inputs as well.

## 20 WATT PORTABLE SYSTEM

The Knight 20 Watt Universal Sound System is aiso available in convenient portable form as illustrated. Includes all of the advanced features described above. A highly desirable outfit, ideal for rental installations." Makes possible spcedy installation and operation and offers versatile application. Entirely sclf-contained in two compact cases-one for amplifier ( $211 / 2^{\text {" }} x$ $135 / /^{\prime} \times 16^{\circ}$ ), the other a spiticase for the speakers
$\left(211 / 2^{=} \times 131 / 2\right)^{2} 8182^{2}$. The couplete Knight 20 Watt Watt Amplifier, turntable and plekup. in portable carrying case; $2-$ Jensen $12^{\circ}$ F.M. $12 \mathrm{C}^{\text {in }}$ Dymamic Speakers with 30 foot cables and plugs, mounted in split carrying case; 1 -Shure "Uniplex" Microphone with 25 foot cable and plugs; 1-A10545 floor stand; R.C.A. tubes; and instructions. America's most universal portable sound system, designed to cover prac-
tically every P.A. need anywhere. Shng. wt. 125 Ibs. Aist. 3275.00 . complete (less V.I. meter). S 1750 CASH PRRICE

Terms: $\$ 13.75$ down, $\$ 17.02$ monthly for 8 months.


## 15 WATT MOBILE SYSTEM

IDEAL FOR STREET ADVERTISING - COUNTRYFAIRS • EVANGELICALWORK - CAMPS
RESORTS - SOUND TRUCKS • DEMONSTRATORS • POLITICAL RALLES • CARNIVALS

- Two Input Channels
- Bass-Treble Control
- Bullt-In Phone Top
- For 110 V. A.C-6 V. D.C.
- Universal Output
- Beam Power Tubes


## AMPLIFIER SPECIFICATIONS

Output: Full 15 watts output. undistorted (18 watts peak); hum is inaudible; Output Impeddance: $2,4,6,8,16$ and 500 ohms on selector, Input Channels: Two field current provided, mike, one for built-in phono with individual controls; Tone Control: One bass-treble control; Gain: on microphone, 120 db ., on phono. 68 db . Tubes: 1-617. 1-6Z7G, 2-6L6G, 2-6X5G LIne Draln: 70 watts; Fuse d: fully fused for operation on 6 volts D.C. $17{ }^{\text {or }} 110$ volts. 60 cycles
 patents of Western Electrlc and A. T. \& T.

- Extra Features. Two 2 -contact output sockets for easy speaker connections; separate pilot light and switch; fully fused for protection; has diagram on amplifier base plate; highest quality heavy-duty $12^{\circ}$ P.M. Dynamics; finest phono components- 78 R.P.M. motor and offset-head pickup; in one of the most
handsome A mplifier cases ever built.
- Complete 15 Watt Mobile System. Includes: 1 -Knlght 15 Watt 6 Volt- 110 volt Amplifier with built-in phono equipment; choice of Shure Crystal Microphone with Shoulder Mount or Desk Stand (specify which) and 25 foot cable and plug; $2-12^{\prime \prime}$ P.M. Dynamic Speakers with 30 foot cabless and plugs mounted in 2 steel-aluininum projectors; R.C.A. tube kit; complete instructions. For 110


## A12213.

 List Price \$135.00.${ }^{5} 6750$
Terms: $\$ 6.75$ down, $\$ 8.36$ monthly for 8 months. If system above is desired with Universal Crystal Hand-Mike, deduct $\$ 1.50$ from above price. HandiMike is ideal for all close-taking re
sound trucks, sports announcing, etc.
A 12212 . 15 Watt Moblle Ampliflor Only. Has all features described above, including phono top. but less tubes.

S3950
A 12160 . R.C.A. Tube Kit. NET

UNIVERSAL MIKE INPUT


## BASS-TPEBLE CONTROL




Inclined Battes. For excellent tonal results and convenience in installation, we recommend the use of the attractive de luxe illustrated above. Solinly constructed; good-looking aind efficient. See full descriztion of balle A 10934 on page 100 .

## (2)

Monltor Speaker, Optional-a Finch P. M. Speaker mounted un a Rrille frame which wil on front panel. Allows audible check of tone quality and blending. Available at smal extra cost. You can use eitber the Monitor Speaker or the V.I. meter for checking the wutput. You will find each valusble.

Remote Control. Optional with Mobile System. A compact new cable-connected device which will amplifier from remel output of up to 1000 feet from the amplifier Available at small extra cost invaluable device for dramatic presentations, outdoor work, etc.


Dual Tone Controls are nro vided to give individual bass or treble emphasis and to aid in compensating for varying acousti cal conditions. Individual controls have no effect on one another which is a significant atvance in P.A. deaign. ft creates a high degrece of tonal excellence which must be heard to be appreciated.

## GROUP 1



## CHOICE OF MICROPHONES

In place of the microphones illustrated swith system above, you can In place of the microphones inustrated withe following two groups: have youp : A Astatic T-3 Crystal, B-Electro-Voice V-t Velocity C Ameriran D7-T Dynamic; Group 2: D-Brush . For complete C-American descriptions of these microphones. see pages 94-96


Splaker Selector Switch permits Instant impedance matching of ad ditional speakers to the amplifierNofikuring or guessing-just set the switch at che position where volume and tone quality are the best. Im 500 ohms to match all standard voice coils 500 ohn tan is for uw with extremely long spoaker limes Fou will like this big feature.


6 Volts or 110 Volts In a jiffy! Just substitute the A. C. cord for the battery cable, and you're rearly to work from A.C. Plugs are troublefree heavy-duty type: impossible o make a wrong conmection; with locking feature. Here is the last word in P.A. versatility coupled with un110 volt system offers operation with such fine results of

Quality Phono Equipment is used throughout. Motor maintains constant is R. F. M. spreed on either 110 yolts A. C. or 6 volts D. C. A high-quality balancettracking Shure Crystal Pickup is mployed for exceptional hdellty. witch The entire plouno conuipment is designed ior maximum convenience. It has the ruggedness and dependability rexuired for heavy-luty P.A. work.
A. Stand-8y Switoh. Saves battery by conserving curreat drain, yet by conserving curreat drain. yee Reduces batery current drain by pearly one-haif during "stand-by" perloils. A real economy feature that is highly desirable in a Moblle P.A. System. B. Silencer Jacks. Check hum when mlerophone plus is rethoved; locking-type; prevents accidental discounection of tricrophone plug. A valuable and ux-



- 110 V. A. C. or 6 V. - Inverse Feedback - 4 Input Channels Built-In Phono - Electronlc Mixing Stand-hy Swltch - Dual Tone Controls Remote Control
- Speaker Selector Universal Output - Jensen Speakers - Sillencer Jack
- Beam Power Tubes - Fully Fused

The most versatile Mobile Sound System on the market 1 Here's the last word in ease of peration, in high-power, in full-bodied faithrul tone. Heres rugged ness to meet any P. A. ity coupled with features you can't get in any other mobile system at any price!

- Versatlle. The 30 Watt Mobile System operates entirely and directly from any 6 voit storage battery where A. C. is not available or may be operated irom any ycle A. C. outlet. Deliverif Ideal for use invoors or outdoors. Unrivalled in the ficld for versatility, power and quality
- Four Input Channels. Accommodates any wo high-imperdance microphones and one ad ditional crystal or magnetic type phono pickup. Individual volume contols for mike inputs and action as desired.
- Inverse Foedback. In new and improved form; permits operation at higher output level by minimizing distortion and hum and improv ng tone quality.
Dual Tone Controls. Separate controls provide bass or treble empliasis as deaired and aid in reducing feedback.
- Romote Control. Amplificr has special jack for accommodating Remote Control device which permits regulation of volume level output from remote distance as far as 1000 feet from the amplif
speaker Selcetor Swltch. Permits instant selection of voice or speaker line outpu mpedance to match any number of additiona speakers to the amplifer. No guessing-no bother-just set where quality is best.


## AMPLIFIER SPECIFICATIONS

Output: Full 30 watts output, undis orted; hum is inaud 1 , ance: $2,4,6,8$, 16 , and 500 ohms on apcaker select excitation provided speak Channels: Four two for high-gain mikes Channels: Four, two for high-gain mikes, or phono on fadter control (one externail phono may be used in addition to built-in phono top); Tone Controls: Two, attenuator type, one for treble, one for bass; Galn: On microphone, 130 DB ., on phona
75 DB.; Frequency Responsei $30-12,001$ C. P. S. (on amplifier); Tubes: ${ }^{2-6}$ ) $7, \frac{1}{2}$ $6 \times 5$ G; Line Draln: 140 wats. A. C. . 24 Amps.. D, C.; Fused: Fully fused on both Swlich: To conserve battery Standby Switch: To conserve battery drain Amplfier Size: ${ }^{\text {E. R P. I. Licensed: Fully licensed by }}$ E . R. P. I., under patents of Western Electric and A. T. \& I
V. I. Meter and Monitor. Optional equipment. Illuminated V. 1. Meter aftords visual mels. Monitor Speaker (2* P. M. dynamic bels. Monitor in grille to fit V.I. meter cutout on panel) permits audible check of output, tone quality and "mixing.

- Compact Single Unit Design. The entire 30 Watt De Luxe Mobile System is built around the compact single amplifier unit. Amplifier, high-grade single-speed motor, sturdy crystal pickup. 6 volt and 110 volt power supplies, and all controls and connecting receptacles are asembled in one compact
modern steel case, $205 \%^{*}$ a $131 \%^{\circ} \times 15^{\circ}$.
- Highest Qualliy Accessorles. Two genuine 12 -inch Jensen type P.M. 12 H dyaamic speakers are included for finest reproduction. A high nuality single-speed synchronous phono moto with 12 -inch turntable is incorporated. Constant 78 R.P.M. type whether used from 6
volts D.C. or 110 volts A.C. High-grade Shure volts D.C. or 110 vots A.C. High-grade
- Extra Features. Has stand-By Economizer Switch; Silencer Jacks check hum when mike plug is removed; Two-contact Dual Speaker on base plate; Headphone Monitor Jacks.
6 Volts or 110 Volts In a Jiffy. Anyone can change the Knight 30 Wate De Luxe System from 6 volts to 110 volts in an instant.
- Complete De Luze Universal System. Includes: $1-$ Knlght 30 Watt High-Gain phonograph motor and pickup. 6 volt and 110 volt power supplies, 1-Knight-Astatic Dynamic Microphone with 25 foot cord and polarized plug (or choose any type mike described in Group 1 on opposite page 82. Shoulder Mount will be supplied-otherwise Knight-Astatic Mike with Mount will be shipped); 2 -Jensen 12-inch P.M. 12H dynamic speakers with generous 30 foot rubber-covered cords and 2-prong plugs R.C.A. tube kit, and instructions. For 6 volts D.C. or 110 vole A 12231 . Complete 30 Watt Mobile System (less V. 1. meter and 9150
steel projectors),
List Price. S200.00.
CASHPRICE.
Terms: 59.95 down, 512.32 monthlyfor 8 mo. A 12232 . Complete 30 Watt Moblle System as described, but with Uniplex Crystal Mike (or choose any type mike in Grous 2"Uniplex": with mount will be shipped). Less meter and steel projectors. List Price, $\$ 215.00$


## CASHPRICE.

$5106^{15}$
Terms: $\$ 10.67$ down, $\$ 13.22 \mathrm{mo}$. for 8 mo . A12177. Steel Projector with mounting A10934. Fabricoid Baffe EACH. . $\$ 2.19 .9$ A10934. Fabricoid Raffe. EACM. . $\$ 2.75$
A12182. VI. Meter. NET... NET.... 4.50
A12183. Monitor Speaker. NET A12183. Monitor Speaker. NET A12515: Speaker Car-Top Platiorm. For A10550 Floor Stand in place of Shoulder Mount. add $\$ 1.81$.

Marline Horns. Recommended for use where maximum ruggedness and absolute weatherfor complete description. If Marine Horns with units and mounting brackets are desired with above system, in place of Jensen speakers, add $\$ 22.95$ for each.

## KNIGHT 30 WATT PORTABLE SYSTEM

The Knight 30 Watt Mobile Sound System is also available in convenient portable torm as nllustrated at right. Includes all of the advanced features described above. A highly desirable outnt, ideal for rental installations. Makes possible sppedy installation and operation and offers versatile application. Entirely self-contained in two compact rases-one for amplifier ( $211 / 3^{\circ} x$
 This system cale portable System includes: 1-Knight 30 Watt Amplifier turntable and pickup in portable carrying case; 2 - - Jensen $12^{\prime \prime} \mathrm{PM} 12 \mathrm{H}$ Permanent table and pickup in portable carrying case; 2-Jensen 12 PM 12H Permanent Magnet Dynamic Speakers with 3 foot cables and plugs mounted in split carrying case; 1-Shure paiplex Crystal Microphone with. 2 foot cable instructions. Shpg. wt., 130 lbs . A12233, Complete (less V. I. meter). CASHPRICE
${ }^{\text {S }} 122^{50}$
Terms: 512.25 down, 515.16 monthly for 8 months.
For optional equipment (V. I. meter, Monitor. Baffes. Projectors, etc.) see completc listing at right above. Take advantage of our convenient and attractive Time Payment Plan. Own The Knight 30 Watt Mobile System now.
and put it to work earning profits for you. See page 69 for full details of our and put it to work earning


## KNIGHT 20 WATT PHONO AMPLIFIER

## Recommonded for Homes - Schools - Lodges - Music

 Dealers - Recording Studios Advertising Agencies - Sound Effects Communipy Centers Small Rinks - Mortuaries For High Fidelity Phono ReproductionHere is a truly deluxe, high-fidelity amplifier, designed to fill every requirement for rich. full-bodied tonal reproduction of all types of recorded music, from "Swing" to "Symphonic." Incorporating the together withe of ad yanced reatures in design and encineering amplifier will find a host of applications in providing truc life-like reproduction of all commercial or transcription type records

## SPECIFICATIONS

Inputs Two for any high impedance type crystal or maknetic pickups. Gain: 80 DB , Volume Control: Fader type, controlling one input channel on each side of zero position center. Input Connectors: Two twin tip jacks. Tone Controls: Two, one for Bass and one for Treble emphasis. Outputis 2, 4, 6, 8, 16, and 500 ohms available at two st and ard two-prong speaker receptacles with instant selection of impedance by Speaker Selector switch. Power Soterce: 110 volts, 60 cycles. Line Drain: 85 watts. Tubes : $1-$ incorporates. Inverse Feedback; Provision for $171 / 4 \times 93 / \times 111 /{ }^{\prime \prime}$. Also incorporates: Inverse Feedback; Provision for addition of Remote Diagram on base plate. Licenserl by Electrical kesearch Product Diagram on base plate. Licenserl by Electrical Kesearch Products, A. T. R T. The incorporation of Inverse Feedback in this fine phono amplifier permits greater power output with legs distortion and hum and achieves a higher fidelity of tone. Single fader type volume control for two phono pickups, with zero center position, is extremely valuable in shifting from one turntable to another for uninterrupted glaying of a series of records or for background and
sound effects. Operates from 110 volts, 61 cycles. Shpg. wt., 251 lbs . A12123. 20 Watt Phono Amplifier only, less S 550 tubes, and Remote Control, List, $\$ 54.50$ YOUR PRICE

## COMPLETE 20 WATT PLAYER

 AMPLIFIER, SPEAKER, CHANGER IN CONSOLEHere is the unit you have been waiting for-a complete highfidelity electric phouograph with automatic record changer, amplifier and speaker, completely assembled in a beautiful console cabinet. Will enable you to "njoy phonograph entertainment at its fest, with superb, fawless reproduction that brings to life the performance of the recording artists. Incorporates the 20 watt phonograph amplifier described above, with R.C.A. tubes-not just an ity reproduction of all types of recorded sound. Develops a full 20 watts of undistorted and hum-free output, and matcher with a genuine Jens'n PM- 12 H permanent-magnet dynamic speaker of the very finest type, brings you smooth and uniform frequency response from lieavy bass notex to an incredibly high treble range Completely loused in a handsome console, and equipped witis an R.C.A. Automatic Record Changer of the very latest type that plays

A15209. Console Phonograph as above, but with Garrard Automatic Record Changer (see page 91) Instead of R.C.A changer. Complete with tubes. For 110 volts, 60 cycles A.C.
Shpg. wt., $901 \mathrm{bs}$.
NET. 599.50

## Kmight 30 watt booster

## ADD MORE WATTS WITH THIS LOW-COST POWER STAGE

## Offered exclusively by ALLIED, an ideal Power Stage unit

 for use with any type of amplifier. Especially suitable for the 1940 Knight Amplifiers which are equipped with power stage driver taps. You can add full 30 watts power inex pensively to your present equipment to take care of an increased number of speakera for larger installations. For example. if your present amplifier is rated at 30 watts and you add this new 30 watt Booster Amplifier, you get full 60 plifier is entirely self-contained in an attractive modern-styled case, $171 / 4^{\prime \prime} \times 93 / /^{\circ} x 111 / 5^{\circ}$, and finished in two-tone tan and brown. Easy to hook up to any amplifier. Has built-in driver stage which requires only signal voltage from amplifier for excitation. Draws no power from amptifier since it makes use of an ingenious bridging type input. Users the following tubes: 2 - 6557 . 2-6L6G, 1-5Z3. Beam-power out put with Inverse Feedback results in greater power with less distortion, hum and noise. Also improves tone quality appreciably. Frequency response is from 40 to 10,000 cycles. Front panei holds A.C. switch, jewelell pilot light and Speaker Selector Sonitor Speaker, if desired. Also includes Speaker Selector Switch which makes available 2, 4, 6, 8, 16 or 500 ohm output taps at the two standard two-contact shielded cable for connection to driver amplifier. Any P.M dynamic or self-excited dynamic speaker may be Any P.M. Al2 133. 3n Watt Booster Amplifier. Slipg. wt. 28 Ibs
YOUR PRICE
A 12162 . R.C.A. Tube Kit. NET.
AI2183. Monitor Speaker. NET.
$\$ 3.49$
4.50


## DE LUXE CALL SYSTEMS

21/4 WATT MASTER SELECTIVE SYSTEM. An entirely new licensed Intercommunication System which permits instant. direct contact between adjacent rooins, offices, departments, etc., in all types of business institutions and factories, System consists of Master station and as many as 10 Sub-station units. Master station can select and talk in complete privacy with any one sub-station, or all at once. Sub stations can call Master station but canmot communicate with other Substations. Easy to operate; press smale 110 volts, AgC or D.C. Stations may be any distance apart (up to 2,000 feet) and are connected by inconspicuous cable. A12342. Master Station unit for 10 stations. Complete with tubes,
s2450
A12345. Master Station unit as above, but with prlvacy $\$ 31.95$
A1 2343 . Sub-station unit NET EACH.
.$\$ 7.95$
8 WATT MASTER SELECTIVE. Similar to Master Selective Station system described above, but with audio power of full 8 watts. Ideally suited for paging purposes in all types of business institutions; fine as calling and paging system in small plants or manufacturing buildings
where noise level is moderately low. Complete system may consist of where noise level is moderately low. Complete system may
Master Station unit and up to as many as 10 sub-stations. A 12326 . Master station unit for 10 stations. ComA12326. Master station unit for 10 stat
plete with tubes, junct
A 12328 . Sub-station unit. NET EACH

AI2344. Connecting Cable. PER 10 FEET.. SUPER-SELECTIVESYSTEM. Similar to unit above, but dewigned so that up to 10 stations may be ured ; permits as many as nive private 2 -way conversations to be conducted sinuitaneousiy without interference, cross-takk or eavesdropping. Operates even when much as 3,000 feet apart. Operates from 110 volts, A.C. or D.C. Unusually economical; current consumed costs as little as isc per month. In attractive walnut cabinet, size $11 / 426 \times 7 / 4$. Lasily installer A 12346 . Master $S$ tation Unit for 10 stations. Com-
plete with tubes.junctlon box, and instructions.
YOUR NET PRICE................................................
A12347. Master Station as above, but with prlvacy earphone. NET
Alvacy earphone. NET Connecting Cahle. PER io FEET

## STANDARD CALL SYSTEMS

MASTER SELECTIVE SYSTEM. A new Inter-communication System offering many fine features at a remarkably low price. This licensed system incorporates a Master station unit and as many as five Sub-stations. Master Station can call any one of the individual Substations or all at one time. Permits instant, automatic, direct contact isetween adjacent rooms, offices. etc. Essential to all modern businesses. homes, andinstitutions. Much faster and more convenient than telephone location: permits instant contact between two (or more) points and the switch, station selector switeh, P.M. Dynamic Microphone-speakers in each unit; faithful voice reproduction; economical operation, etc. Junc tion box not required for Master Station. Operates from 110 volts A.C or D.C. Master Station unit is housed in attractive walnut cabinet while Sub-station units are housed in metal cabinets, each equipped with call switch. Sub-stations can call Master Station but cannot call other Substations. Sub-stations can also communicate with the Master Station without operating the switch.
A12337. Master Statton for 5 Sub-stations.
Complete with tubes and instructions
53 ${ }^{95}$ A12338. Sub-station unit. NET EACH

SUPER-SELECTIVE SYSTEM, Similar to the Master Systern a hove, but designed to provide maximum flexibility of operation. Consists of a number of Super-Selective station units (up to a total of 5) each of which may hold private conversation with any other station. When five stations are used, two separate private conversations may be held without into each station zo permit perfect operation apend able amplin to 3,000 feet between statlons. Ideal for use between oftices, or office and various other deparments. Maximum of five stations may be user. Operate from 110 volts A.C. or D.C.; exceedingiy economical to operate; costs only a few pennies per month for current consumed. In attractive walnut cabinet with on-off switch, station selector swltch, and press-totalk switch on frant panel.
Alour Net Pupirgelective Station Unit, complete.
S/645
A12325. Connecting cable for Super-Selective Station Units.
SPECIAL SYSTEMS CANBE MADE UP FOR YOUR REQUIRE. MENTS. WRITE US, GIVING DETAILS OF YOUR NEEDS, AND YOU WILL RECEIVE OUR HELP AND PRICES PROMPTLY.

## Knight TRANSCRIPTION PLAYER

This new 1940 instrument is the very finest high quality, truly highfidelity transcription player made today. Ideal for schools and colleges Broadcasting stations, recording studios, advertising agencies, and busi ness firms who demand the finest phonograph record reproduction. Has $16^{\circ}$ balanced cast aluminum turntable for all records and transcriptions up to $16^{\prime \prime}$ commercial discs, and Astatic $12^{\prime \prime}$ transcription type pickup
The built-in amplifier is conservatively rated at full 4 watts undistorted The built-in ampifier is conservatively rated at full 4 watts undistorted more than $31 / 2 \mathrm{sq}$. ft . of baffle area. Speaker uses oversize Alnico magne and has sperial cone for proper bass emphasis. Compact remote contro box with 30 -foot weatherproof cable and plug permits turning phonograph motor on and off and controlling volume of amplifier at any distance within 30 feet of player. A heavy-duty Green Flyer induction motor of dual-speed type operates at uniform, unvarying apeeds of $331 / 3$ or 78 R.P.M. Motor operates with equal efficiency from 110 volts A.C. or D.C.. 25 or 60 cycles. Built-in Tone Control on amplifier unit permits varying emphasis for best reproduction of voice or music. Loudspeaker and lid may be detached from case and set up wherever desired;
supplied with 30 -foot weatherproof cable. Record chamber holds 5 diecs up to $16^{\circ}$ size and stores turntable when case is closed Sturdy reinforced black leatherette-covered case measures only $16^{1 / 2 "} \times 16^{\circ} / 2^{\circ} \times 81 /{ }^{\circ}{ }^{\circ}$ forced black
Weight, only 38 lbs . net. For universal operation from $1 / 20$ volts, $25-60$ cyclest A.C. or D.C. Unsurpassed for faithful conal reproduction; equally valuable for either music or speech recordings. Sturti ed to take hard usage. Compact and convenient for true portability
ALZ
NE
s7995
A1236.1. Economy Model. Similar to above but less remote control. With $12^{\text {m }}$ turntable. For 110 voles. 60 cycles A.C. only. 6450. A12362. Standard Model. Sane as Economy Model with $12^{\circ}$ NET.... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 56.40

## Knight MUSICAL INSTRUMENT AMPLIFIER



## HEARING-AID ACCESSORIES

Highest quality. For use with the
Knlght any similar unit. Earphones are crystal type and provide crisp reproduction without diatortion. Volume control box permits individual listeners to adjust volume to suit individual requirements.
A12178. Fig. C. Crystal Earphome with headband and 4 foot Cord.
A12179, Flg. B. Lorknette Type Crystal Earphone with 4 foo NET. $\$ 4.41$
A 12089 Fig. A. Hearing-Aid $23 / 4^{\prime \prime}$. Tip contro Box. Only $11 / 2 \times 2 \times$ 50,000 ohta volume control. Brown crystalline finish. With 4 foot cord. NETH.
$\$ 1.59$

The latest development in electrical amplification for musical instruments, offering distinctive new musical effects. "Swing" and "smooth" bands both acclaim the electrical instrument amplifier. Ideal for use with the guitar or the eltcier atring or ment amplifer this amplifier helps to put new pep into swing arrangements, to brins up feature passages, for fades, overtones, treble endings. etc. So pasy to attach and to operate that even a child can do lt. The new K NIGHY Electrical Instrument Amplifier conslsts of a KNIGHT 8 Watt High Gain Portable Sound System with the Amperite Model SKH Kontak instrument pickup with foot-pedal volume control supplied in place of conventional microphone. Slmply place the tiny inconspicuous pickup unit under the strings of any instrument, plug the cable from the foot-operated volume control into the amplifier, and you're all set to
produce practically any effect you desire.

## FOR USE WITH ANY INSTRUMENT

A small slip of adhesive tape or special clamp (wee P. 96) holds pickup securely in place. With a flip of the fingers it is instantly removed for portahle use or for attachment to another instrument if deslred. The Foot-pedal Control leaves both hands free to play; it regulates volume as desired and makes it casy to get tremolo, fading effects, ctc. The entire unit is especially designed for easy operation, and no technica tures out above even a large orchestra. Operates from any solo feas $50-60$ cycle AC outlet. Full $8^{\prime \prime}$ dynamlc speaker mounted in portable case is equipped with 25 foot cable permitting operation at some distance from amplifier unit. Supplled complete, ready to operate, including RCA tubes, amplifier and carrying case with speaker, and Amperite Model SKH Kontak pickup with Foot-pedal Volume Control and 25 foot cord. Ideal for all orchestra and broadcasting work; used by learding soloists everywhere
A 12100 , Complete System as described.
YOUR NET PRICE
59395

## 30 WATT MUSICAL INSTRUMENT MODEL

A new and more powerful musical instrument amplifier. with ample volume for use in the largest auditoriums. Full 30 watts output will adequately serve the largest. audience either indoors or outdoors. Conslats of a Knight 30 watt "Econony"" amplifier with tubes; Amperite Professional Model KTH Kontak pickup with foot-pedal type volume control and 25 foot cable; two heavy-duty $12^{* \prime}$ I'M. M. dynamic speakers. $^{\text {enth }}$. each with 30 foot cable and plug, and complete instructions. Amplifier in single dual type portable case. For 110 case; speakers are mounted A 12134 . 30 Watt Model complete. List, $\$ 130.00$.

S6450

## Knight HEARING-AID SYSTEM

IDEAL FOR ALL MULTIPLE HEARING-AID INSTALLATIONS-EASY TO INSTALL
Here, for the first time, is a truly fine high-fidellty amplifying system for use in churches, theatres, schools. lodges, etc., to bring new pleasure and enjoyment to hard-of-hearing members of any audience, at re maice or music; is capable of sensitive; picks up all sound, whether with absolute freedom from annoying hum crisp. clear, life-like tones


## EASILY INSTALLED ANYWHERE

Can be quickly installed anywhere. Installation is unusually simple and can be made by anyone from clear, easy-to-follow instructions provided, no technical knowledge is required, Just place amplifier unit in any convenient soot, and plug into nearby wall outlet. Place special sound pickup unit in desired location and insert pluy at end of 25 foot cable into amplifier input socket. All complicated wiring for individual hearing aid units is eliminated. It is only necessary to run a single two-
conductor cable or a single conductor shielded wire from the pluy-in conductor cable or a single conductor shielded wire from the plug-in type output socket of amplifier to the seats where outlets are desired, and connect a volume control box at each seat location. Volume for the entire systent may be pre-set at the amplifier by means of amplifier vequirements by means of the small volume control boxes.

## HANDLES UP TO 50 EARPHONE UNITS

The Knight Hearing Aid System delivers a full 8 watts of undistorted power without hum or extraneous noige. Will adequately handle up to 50 earphone units of the crystal type. (See listings at left.) Amplifier has polarized input and output socketsi impossible to hook up wrong. Has tone control and volume control. AC switch and pilot light on front panel. Sound pickup unit is special high sensitivity static velocity type with wide-range frequency response; equipped with 25
foot cord and plug. Amplifier is housed in modern metal case finished in foot cord and plug. Amplifier is housed in modern metal case finished in grey-crackle with black base. For 110 volts, 60 cycles.
A12180. Knight Hearing Aid System as described, with
tubes and instructions. (Select accessories at left.)
YOUR PRICE ...............................................



## KNIGHT 4 WATT PHONO AMPLIFIER

Now, for the first time. you can get a high quality AC-DC amplifier around which to build your own record-reproducing unit at economical cost. Especially designed by ALLfED's engineers to provide low-cost record reproduction with highest quality; sacrifices nothing; uses the pact record or transcription-playing devices either for portable use or for permanent installation. Also suitable for use in modernizing old phono equipment in order to achieve full realistic reproduction of all types of recordings of either voice or music. The Knight 4 Watt AC-DC Amplifier is extremely compact in size; measures only $4^{\prime \prime}$ wide, $8^{*}$ long, and $2^{\circ}$ high exclusive of tubes. Overall height with tubes inserted is only $61 / 2$. Uses $1-6 C 8 G, 2-25 L 6 G .1-2575$ tubes, and 1 ballast. Will operate from any 110 volt AC or DC outlet; produces full 4 watts output, more than enough for the home or for small audience groups up to approximately 250 persons.

## PHONO REPRODUCTION AT LOW COST

The Kntght 4 Watt AC-DC Amplifier has input circuit with tip-iacks designed for hikh-impedance crybtal pickup. Output circuit is high-impedance and designed to operate with a Permanent Magnet dynamic speaker having an output transformer to match the 2 beam-power $25 L$.6G tubes in push-pull. Volume control on front is equipped with "On-off" switch; tone control permits accentuation of treble or bass ranges as desired. Can be quickly and easily installed. Select one of the
many fine crystal pickups and P.M. speakers listed in this catalog, many fine crystal pickups and P.M. speakers listed in this catalog, and with the Knight Watt A.C.-D,C. Ampilfer and a phono motor, you cam buid a fine record-pla
A10055. Knight 4 Watt A.C.-D.C. Ampllfler, less tubes and speaker. Shpg. wt., 8 lbs .
\$5 85 NET,
.$\$ 2.85$

## Kright vorume expander



A complete, self-contained, self-powered unit for use with any amplither lacking an effective volume expander. Designed to recreate the original tonal realism of phonograph recordings. When recordings are made. It the softer passages to the louder passages and to increase the level of adjacent grooves. This results in a reduction of contrast and brilliance in the recording. To recreate the original rendition properly, the Volume Expander automatically builds up the louder phonograph passages to their true volume relationship, maintaining a correct balance between the loud and soft passages of the original recording. Brings out the exact original recorded rendition and actually minimizes surface noise. The Knight Volume Expander is compactly built, size, $113 /{ }^{\prime \prime} \times 61 / \mathrm{I}^{\prime \prime}$ x $81 / \mathrm{K}^{\prime \prime}$ Uses the following tubes: $1-6 N 7 \mathrm{G}, 1-6 \mathrm{~K} 7 \mathrm{G}$, $1-6 \mathrm{H} 6 \mathrm{G}, 1-6 \times 5 \mathrm{G}$. Two controls are used, one for control of volume, the other to control the degrete of expansion. Has tip-jack output to connect directly into the phonograph input circuit of any amplifer. Bring your present equipment graph record reproduction. The Knight Volume Expander is also suitable for coupling with high-grade home-type phonograph equipment not provided with this feature. Adds immeasurably to wider tonal response. Recommended for use with Knight Economy and Standard amplifiers to provide unsurpassed phonograph reproduction.
A9850. The Knight Volume Expander. For 110 Volts, $50-60$ cycles A.C. Shpg. wt., 12 lbs. Less tubes. (Note: The Volume Expander is intended only for use as an accessory with record playing equipment it is not in itself a complete record-playing device.)
List. \$23.50.

## YOUR PRICE

S1095
A9851. R.C.A. Tube KIt. NET
. $\$ 2.60$


## FAMOUS MEISSNER R.F. TUNERS

New, highefficiency P.A. Tuners for every requirement. Ideal for monitoring of broadcast programs, for School and Educational Broad cast reception and for use in off-the-air Recording Studios. Supplied in completely assembled and wired form, ready for inmediate use

## MEISSNER UTILITY TUNER

A small, compact, general-purpose P.A. tuner unit for local as well as distant reception. Compactly designed to permit use with portable P.A. systems, or for use in permanent institutional sound systems circuits to provide greatest posslble sensitivity with very gopd seleccircuits to provide greatest possible sensitivity with very gobd selec broadcast band from 530 KC to 160 O KC. RF coils are shielded Ferro cart type. Has full AVC with absolute minimum hum level. Built-in power supply is highly stabilized and filtered. Has monitoring jack on front panel for headphones; ingenous circuit prevents any diaturbance to program when phones are plugred in or disconnected. Output im pedance from low-gain coupline tage is 2500 and 10,000 ohms. Has both volume and tone controls. Housed in black wrinkle-finished steel cabinet $31 / 6^{\circ} \times 88^{3} 7^{\circ} \times 121 / 2^{\circ}$. Uses $3 \rightarrow 0 \mathrm{~K} 7$, $1-6 \mathrm{H6}$, 1-6F8G, and $1-5 Z 4$ tubes A 9852 . Meissner Uellity Tuner, hess tubes.
A9853. R.C.A. Tube Kit. NET

## MEISSNER HIGH-FIDELITY TUNER

Designed entirely for reception from local or nearby powerful broad cast atations. Has wide-band selectivity to permit true high-fidelity reception. Audio response is essentially flat from 40 to 10,000 cycles. Uses circuit of the band-pass TRF type and uses 2-6K7. 1-6H6 $1-6 \mathrm{~F} 8 \mathrm{G}$, and $1-52 \mathrm{Z4}$ tubes. Tuning range covers broadcast band only from 530 to 1600 KC . Has full AVC, monitoring phone jack 4 gang condenser, and stabilized power supply. Linear calibrated $51 / 4$ dial

A98.
A9855. R.C.A. Tube Kit. NET
ร3950

## MEISSNER DUAL-BAND TUNER

A new tuner unit for distant broadcast or Short-Wave reception. Tuning range covers 540 to 1600 KC and 5.9 . to 18.8 MC . Uses superhet circuit with separate RF stage on each band. Other features include monitor jack. Tuning Eye. stabilized power supply, AVC, 2500 and 10,000 ohm output, and $71 / /^{\prime \prime}$ slide-rule dial. Uses $2-6 \mathrm{~K} 7.1-6 \mathrm{~K} 8$, $1-6 \mathrm{H} 6$, ${ }^{1-60}$ cycles.
Aycles. Melssmer Dual-Band Tuner, less tubes.
A9866. R.C.A, Tube Kit, NET
§34. 5


Designed to provide constant AC line voltage to electrical devices where line voltage is irregular and varles over wide limits. When used with equipment such as P.A, amplifiers, recording equipment, telephone equipment and similar AC-operated unies, it eliminates fauty and irregular operation due to line voltage charges. These Raytheon voltage regulators have prove constant unvarying line voltage is an important factor in correct operation of any type of AC-operated equipment. They automatically stabilize at any load within their ratlng. AC output voltage is held constant within plus or minus 1 percent. Will operate successfully with line variations over a ranke of from 95 to 130 volts, 60 cycles, single phase only. Regulating action is practically instantaneous and entirely automatic; there are no moving parts or adjustments. Housed in sturdy metal cases for complete protection at all times. May be used on 60 cycle supply lines wherever synchronous type electric clocks operate correctly. Please consult our engineering Department, indicating the
A11675. Model VR-2. Load capacity, 60 watts. Shpg. 7700 A1 1676. ModeI VR-3. Load capacity, 120 watte. Shpg. S36. 0 . 12 A11677. Modol VR-4. Load capacity, 250 watts. Shpg 557.50


## PRESTO MODEL J RECORDER

Here is a complete recorder. phonograph. and public-address system in one, offered at a very low price. Simple in construction, trouble-free, and easy to operate. Designed for instantaneous recording of voice or music. Idead for use by husiness executives for making permanent records of husiness meetings or sales talks. Schools and agencies will find it useful in speech or dramatic correction work and similar applications. With the Presto Model Recorder, you can make records at home of conversacast program microphone on a floo sith a high sensitivity capacity on front panel permits quick connection tick up sounds as far as 20 feet a way. Jack acetate diacs un to $12^{\prime \prime}$ in diameter, at 100 linus set. Grooves and records on blank availahle on request). in one single operation. Turntable speed is standard $78 \mathrm{R} . \mathrm{P}$. M The Model J consists of a $12^{\circ}$ balanced turntable with exclusive rabd 78 R.P.M. drive; self-starting constant-speed motor; fine cutting head and playback pickup of dynamic type, each having range of 80 to 5000 cycies; 5 watt Class A amplifier; and Amplifier control panel counted in a single brown leatherette-covered carrying case. and play back, on-off switch, and tone evel meter. volume controlfor both recording commercial $10^{\circ}$ and $12^{\circ}$ phonograph records with exceptionally fine play back all $38^{\text {and }}$ volume. Complete recorder in case measures only $10^{\circ} \times 16^{\prime \prime} \times 20^{\circ}$. Weight only 38 ibs. For 110 volts, 60 cycles AC. Shpg, wh., 67 lbs. Additional descriptive literature and detailed information will be sent upon request.
A12371. Complete Model $\perp$ Recorder with capacity nimo- $\$ 100$
NET. and floor stand.
Time Payments: $\mathbf{\$ 1 6 . 9 5}$ down, $\mathbf{5 2 0 . 9 8}$ monthly for 8 months.
A12372. Model J Recorder as above but for 78 and 33 L. RPM. S 184.50
Time Payments: $\mathbf{5 1 8 . 4 5}$ down, $\mathbf{5 2 2 . 8 3}$ monthly for 8 months.

## COMPLETE SEHECTION OF RECORDING DISCS



Here is the largest selerting diacs nationally famous re today. Aleavailable any of dises is compou of LIED fast-moving prompt service and fast discs and prompt prices. fresh discs and
$\qquad$


PRESTO "GREEN SEAL" DISCS The finest recording disc for professional work: the Presto " $Q$ " type ng studios, schools, etc. Has extraheavy aluminum base with mirror smooth coating. Low surface noise.


## ALUMINUM DISCS

Made of hardened aluminuin alloy; mirro polished. Asnure maximum volume and life.

## PREGROOVED PLAIN

Double-faced discs; Extra - heavy blank records on both sides. aluminum. $036^{\circ}$ thick. $\begin{array}{ccccc}\text { No Dia. } & \text { NET No. } & \text { Dia. NET } \\ \text { A8005 } & 6^{\circ} & 16 \mathrm{C} & \text { A8O09 } 0^{\circ} & 15 \mathrm{C}\end{array}$ $\begin{array}{llllll}A 8006 & 8^{\circ} & 23 \mathrm{c} & A 8010 & 8^{\circ} & 20 \mathrm{c} \\ 48007 & 10^{\circ} & 39 \mathrm{C} & \mathrm{A} 8011 & 10^{\circ} & 29 \mathrm{C}\end{array}$


## LOW-PRICED ACETATE DISCS

Inexpensive mirror-smooth acetate discs. Made of highest quality material. Low surface noise.

| No. | Dia. | Thickness | NET |
| :---: | :---: | :---: | :---: |
| A8014 | $6{ }^{\circ}$ | 047* | 35 c |
| A8015 | $8{ }^{\circ}$ | 047* | 45 c |
| A8016 | $10^{\circ}$ | 047* | 58 c |
| 48017 | $12^{\prime \prime}$ | 047* | 72 c |
| 48018 | $16^{\circ}$ | .051 ${ }^{7}$ | \$1.32 |

## RCA HOME-RECORDING DISCS

| A8055 | $6^{\circ}$ | Pkg. of 4.75 c |
| :--- | :--- | :--- |
| A8O56 | $10^{\circ}$ | Pkg. of $2 . .75 \mathrm{C}$ |
| A8057 | $12^{\circ}$ | EACH...68c |

FLEXIBLE PLASTIC RECORDING DISCS

## -priced record

 isting of platic surface on enduring bristol board base Unfiform surface-low noise level and excellent frequency response. Non for schools. recording studius, etc. for schools. recording studius. etc| No. | Dia. | $\begin{aligned} & \text { LIST } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & 10 \text { H5 } \\ & 1-49 \end{aligned}$ | $\begin{aligned} & \text { EACH } \\ & \text { Iots } \\ & 50-100 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| A8155 | ${ }^{*} 6$ | 20 c |  | 13 c |
| A8156 | $8^{\prime \prime}$ | 30 c | 2 | c |
| A8158 | ${ }_{10}$ | 45 c | 34 c | 30 c |
| A8160 | $12^{*}$ | 75 | 56c | 40 C 50 c |

*One side discs. All others have double face coating for recording on both sides.

## RECORDING NEEDLES


"Q" ORANGE SEAL DISCS
Identical in every respect to Presto 0 Green seal discs except for slightly lace nois.; sood base. Very low surCenter is suitabie for labeling.

| $A 8150$ | $6^{\prime \prime}$ | $.036^{\circ}$ | $\$ 0.40$ |
| :--- | :---: | :---: | ---: |
| $A 8151$ | $8^{\prime \prime}$ | $.036^{\prime \prime}$ | .55 |
| $A 8152$ | $10^{\prime \prime}$ | $.036^{\prime \prime}$ | .80 |
| $A 8153$ | $12^{\prime \prime}$ | $.036^{\circ}$ | 1.00 |

Special Quanifty Discounts to Schools, Universities, etc.

## MAILING ENVELOPES

FOR RECORDING DISCS
Heavy envelopes with cardboard in
 A8191. For 8 disc. Per Doz. 58 c A8193. For $12^{\text {n disc. Doz. } \$ 1.14}$

## PRESTO MONOGRAM DISCS

A new economically-priced high-quality acetate disc ideally suited for use In Schools and Educational insititutions or wherever permanent recordings are not an absolute necessity. Mirror-smooth surface of Presto " Q " material is applied in an evea coating to high-grade cardboard stock base. Total thickness, $05^{\circ}$. Have center and one suide hole.

No. Size EACH Quantity users-write for atA8185 $6^{\circ} \quad 25 \mathrm{c}$ tractive special quantity dis$A 8186 \quad 8^{\circ} \quad 40 \mathrm{C}$ fresh stocks of Presto Mono

steel needtes. Secial alloy steel hand-polished to a razor edge. For cuttink acetate discs.
A2 249 . For 78 or $331 / 3$ R. P. M. Fig. B. A2641. Fig. B. Presto long shank for use in $\mathbf{1 B} 1.00$ A2648. Presto short flat shank for use in $\mathbf{\$ 1 . 0 0}$ A8004. RCA Victor Steel Home Recording 25 Needies, For pregrouved discs. Phg. of B..........25C

## RANGERTONE STELLITE CUTTING NEEDLES

A high-grade steel recording needle ground and nolished cut alt acatate blanku Made of special high ensile alloy called stelite; cuts ciean grooves with minimum of
A8020. Fig. B. NETEACH
$\$ 1.00$

## PLAYBACK NEEDLES

A8000. BAMBOO NEEDLES. Pkg. of $100 \ldots . .55 \mathrm{C}$ A8001. KACTI NEEDLES Pkg of 10 A8OO2. RED SHANK STEELNEEDLES. FIg. C. FOT A8003 TRAILING SHOE NEEDLES 100...38C A2622. "WALCO" SAPPHIRE NEEDLE. Lasts A2622. "WALCO" SAPPHIRE NEEDLE. Lasts

## RECORDING ACCESSORIES

Increased record life and reduced surface nolse are assured by proper use of the lubricants listed below. A8060. Cutting Lubricant. For application to dise surface before record is cut. Reduces surface noise by lowering friction of cutting stylus. For acetate or 29 C
aluminum discs. In 2 oz. bottle. NET............ 29 A8071. Record-Lube. For application to disc after cutting. Polishes and seals off surface to lengthen 21 C


## PRESTO MODEL "G" RECORDER

The Presto Model G Recorder has been especially designed for use by schools, band leaders. agencies, in fact for everyone who requires a combination recorder-record-player and public-address system. Compactly designed. Magretic cutting head is driven by positive worm geat system: cuts 100 lines per inch. outside to in (inside to out available on request). Turntable will accommodate any disc up to $12^{\circ}$ size for recording or playback. Operates at either 78 or $331 / 3$ R.P.M. Selfstarting constant-speed motor with ingenious rubler tire drive prevents transmitting motor vibration to disc. Both cutting head and magnetic playback pickup have wide response from 80 to 5000 cycles. Has simple device for uljustment of cutting angle and pressure; cam lever to cutting sead prevents accidental damage to cuttian needle or diac. Th of 120 db recoraer contains a four-stage amplifier having a total gain of 120 do. tion for recording sounds at distances up to 30 feet from microphone jack also permits radio connection for off-the-air recording. Complete recorder is housed in compact carrying case with separate dual case for the two $10^{\circ} \mathrm{P} . \mathrm{M}$. speakers. Write for complete descriptive literature For 110 voits, 60 cycles A.C. ShpR. wt. 98 lhe. Dhone and floor stand.

3250


## PRESTO MODEL "Y" RECORDER

The Presto Model " $Y$ " Recorder fills a lonk-felt need for a portable $16^{\circ}$ transcription unit capable of producing high quality recordings. Ideal for schools, broadcasting stations, akencies, and recording studios. Will make records at 78 or $331 / 3 \mathrm{R}$. I'. M. and cut any diwe up to $171 /{ }^{\circ}$. In addition to recording. the Morkel " $Y$ " plays all phonograph records and transcriptions up to $16^{\circ}$. As a public-address system, it will provide ample sound for audjences up to 1000 persons. Exclusive Presto rimdrive turntable eliminatey vibration; speed change is instantaneous Cuts 112 lines per inch. either inside to out or outside to in, and permits cutting eccentric or spiral finish groove for use on antomatic record changers. $y$ ype $1-$ cutcing head records uniformly from su to 6500 cytles; $u l y$ protected type feed mechanism. Recorder is housed in
carrying case. $201 / 2 \times 11 \times 191 / 2^{\prime \prime}$. Separate case contains recording carrying case. $201 / 2^{*} \times 1{ }^{*} 191 / 2^{\prime \prime}$. Separate case contains recording DB., with 10 watts undistorted output. Equipped with high and low frequency equalizers. mizer for two microphones and phono, volume level meter, monitoring phone jack. and selector awitch permitting instant use for recording. playback from built-in pickup, or public iddress. Amplifier and speaker case size, $231 / 2^{\circ} \times 12^{\prime \prime} \times 20^{\circ}$. Total weight is 155 lbs . For 110 volts, 60 cycles.
A 12368 . Model ${ }^{\text {Y }}$ Y only, less microphone and 1
Time Payments: $\$ 59.50$ down, $\$ 49.09$ monthly for 12 months. and floor stand. NET
$\$ 644.00$
Time Payments: $\$ 64.40$ down. $\$ 53.13$ monthly for 12 months.


## KNIGHT RECORDER

Designed to meet the demand for a high-quality recording unit at a price that everyone can afford. Will produce uniform, high-quality recordings with a minimum of experferice in the art of recording. Schools and educational institutions can use the Knight Portable Recorder with present Public Address amplifier and microphone equipment; connections to recorder are simple and easy to make. Permits making records of speech or music for dramatic sketches, important radio prosrams, etc. It solves the problem of making home recordings of professional type at ecomomical cost also. Used with a small amplifier and microphone, it enables you to make interesting records of your family and fiends, or, connected to a radio set, will provide an easy important radio broadcasts. Flush-level massive turntable to accommodate all records and diens up to $12^{\prime \prime}$ size, is rim-driven by a powerf ul 110 volt 60 cycle motor; turntable is dynamlcally balanced for smooth vibrationless operation at constant and unvarying speed of 78 R, P.M. Positive drive type lead-screw is accurately machined and fully enclosed in protective housing. Horizontal type cutting head with ranke of low-frenuencies to insure faithful reproduction of for low-irequencies to insure faithful reproduction of all
recorded sound; impulance is 500 ohms. Has dualrecorded sound; impriance is 500 ohms. Has dualaction control to engage lead screw and lower inside to outside. Supplied complete, including



99ㅡㅡㄹ
Time Payments: $\$ 9.95$ down.
$\$ 12.32$ monthly tor $\mathbf{8}$ months.
A12382. Mnight Portable Recorder. as above but for 78 and $331 / 3$ R.P.M. Available to cut inside-to-outside, or outside-to-in; specify which
is dewited. NET..................................
$\mathbf{3 1}$

Time Payments: 513.19 down,
516.33 monthiy for 8 months.


Now 1 Home Recording at a price everyone can afford I This excellent recording assembly will convert your presente electric phonograph or Public Address system into a modern. highly efficient recording machine. Although best resules will be obtained when a powerfui recording type motor is employed, any good constant-speed plionograph motor and turntable may be used. Recordings may be made either through a microphone (not supplied) or from programs taken onthe-air watis of audio. Feed-screw moves cutting head from insifle to outside en provide ony 2 wats of aunio. Feed-screw moves cutsing inomsted on carriage at factory-set angle. Spring adjustment permits altering depth of cut.

## 12-INCH MODEL

16-INCH MODEL
Will record on any acetate or composition Will record on any acetate or composition
disc up to $12^{\circ}$. The complete cutting head, disc up to $16^{\circ}$. The complete cutting head carriage. drive mechanism, hardware, and, disc up to io drive mechanisn, hardware Shpg and A2590. 8 Ohms. Shps. A2591. 50 hms. NETEACH0 Ohms.

8 lhs. and full ingtructions.
39 A2592. 0 hm.
A2593. S00 Ohm.
ร35를

## PORTABLE HOME RECORDER

A complete portable recording unit for home or semiabove complete with recording type 78 RPM motor with 12 balanced turntable, and high-grade maknetic type playback pickup. Can be used with any good amplifier or radio set which will supply 2 or more watta of audio for driving the cutting head. Groovea and records all acetate dises in one operation; cuts inside to out. Completely assembled in compact carrying case, $173 / 4 \times 173 / 4 \times$ A2594. NET

S4975



## POPULAR PORTABLE PHONOS

A dependable portable electric phonograph. suitable for use with any amplifier or radio set having a high-impedance phono input circuit. Incorporates a highgrade single speed 78 R.P.M. motor, self-starting syachronous type; maintains constant speed regardless of line voltage variations. Equlpped with 12 -inch turn table. Uses a high-impedance Knignt Astatic off-get head type Crystal pickup which has excellent frequency response. Pickup cord is equipped with convenient phone tip ends. Includes built-in volume control. Has needle cup and pickup arm rest. The entire assembly is housed in a compact. sturdy case which measures
 plane-luggage cloth with tan tweed effect and liarmonizing maroon striping compactly built for easy portability. Ideal for top. Entire unit is light in welght; compactry built for easy portability. Ideal for use with any Knight or other set having proper input. This dependable record player is built to stand up under heavy-duty use, and its convenient portability makes it unusually versatile it will provide unusually fine quality reproduction whether used with amplifier or with radio set. Operates with lld closed. The splendid features of this new Knight Portable Phono, plus its bandsome streamlined case, make it an exceptional value at our very low price. Make your P.A. system really complece by adding the Knlght Portable Phono to your equipment. Includes approved 6 foot cord and plug. For operation on 110 volts, 60 cycles A.C. Shpg. wt., 29 lbs. A12311. Complete with General Industries single-speed MOUR PRRICE.

53 3 고
A 12312 . Identical in characteristics and construction to above but incorporates a General Industries dual-speed. 78 and $331 / 3$ R.P.M. motor. For 110 volt. 60 cycle operation.
$\$ 18.85$
A12313. Equipped with single-speed. 78 R.P.M. Garrard Universal AC-DC Yotor. For $100-130$ and 200-250 volts DC or AC $25-60$ cycles.
$\$ 24.95$


KNIGHT RECORD PLAYER AND AMPLIFIER
Here is an outstanding value in a combination Record Player and Amplifier. This completely portable self-contained unit meets a wide demand for a high quality, self-powered Phonograph Player. Ideal for use in homes, schools. fratercamps, etc. Can be used wherever 110 volt 60 cycle A.C. is available. Built of highest quality components to assure long life and trouble-tree operation. Single usit carrying case contains zelf-starting 78 R.F.M, phono motor and turntable, off-set head crystal pickup. and built-in amplifier, with permanent magnet dyname, speaker. Pickup, amplifier and speaker are accurately matched to provide the finest ype of record reproduction. Delivers ample volume for a large-size room. Will play 8,10 and $12^{\prime \prime}$ records with the lid closed, thus reducing needle-scratch and surface noise. Hinged cover is removable. Buitt-in volume control permits operation at either high or low levels as desired. A.C. switch is attached to volume control for convenience of operation. Housed in attractively styled airplane luggage type case with metal, reinforcing comers, and securely fastened carrying handle; has snaptype cover locks. Turntable panel also has needle cup and pick-up arm post which wide and $9^{*}$ deep. Weighs place while carrying. size closed. $141 / 4 \mathrm{high}$. $31 / 4$ in one single case; ideal for reproduction of plionograph records with unusual power and quality. Offered at a remarkably low price.

A12316.
YOUR PRICE


## RC-50 MIXER-CHANGER

The ultimate in record-changing, record-playing units. This unit accomplishes every conceivable purpose you could demand of an Automatic Record Changer. It will play any make of record in either 10 or 12 , size, in any combination or assortment. Plays eight records of either size automatically. Sllent. smooth-running, infallible mechanism performs its duty in an almost human manner. The RC-50 contains all of the features of standard units together with several of its own exclusive features. It utilizes a swivel head on the pickup arm and uses a specially curved arm which places the needle at a true tangent to the record groove. The driving motor is the finest phonograph motor tiat can be built. Includes automatic stop which turns motor off as soon as last record has been played. Uses finest type of Crystal plckup. Provides or automatic rejection of any record $16^{\prime \prime}$ long, $14^{\prime \prime}$ wide, $51 / 2^{\prime \prime}$ above plate and $43 / 4$ below. Wt. 35 Ibs.
A12052. Garrard Model RC-50 Changer. For
$100-130$ volts and 200
YOUR NET PRICE
$\$ 5290$
A12053. Garrard Model RC-51 AC-DC Record Changer. For 100.130, 200-250 volts D.C. or $25-60$ cycles A.C.

## RC-10 AUTOMATIC CHANGER

Another trlumph in record-changing, record-playing equipment. The RC-10 embodics many of the outstanding, unique features of the RC-50. It will play either eight $10^{\prime \prime}$ or $12^{\prime \prime}$ records of any make automatically Motor is mounted on a metal plate with the necessary controls. This changer features automatic stop, tangent pickup arm, autamatic re jection knob. non-slip spindle, and spring mounting for the elimination of. acoustic feed-back. The unit is silent and smooth in operation. Crystal pickup is of the bimorph type which incorporates finest fiezo electric cartridge. Crystals are molded into a spects phosphor-bronze compound. Garrard s owerful motor bearings are of the self-lubricating byphings, bearings and fittings. Rotor bearings are of the sef ase. Overall type requiring only a few dirops of oil aiter $10,1{ }^{\prime \prime}$ wide, $41^{\prime \prime}$ clearance above plate and $41 / 2^{\prime \prime}$ below. Wt., 30 lbs .
A12050. Garrard Model RC-10 Changer. For \$1 1222 YOUR NET PRICE.
A12051. Garrard Model RC-11 Record Changer. Universal A.C.-D.C. motor for $100-130$ volts and $200-250$ volts, 25 to 60 cycles. YOUR
NET PRICE
$\$ 44.10$

## CASES FOR MODELS RC-10-11

A12054. Wainut finish case with beautiful hand-rubbed finish. Con Ains niotor board. NET
$\$ 11.65$
A12056. Airplane luggage type carrying case. designed to give good
wear. With motor board. NET................................................ 6.90

A12055. Beautiful, hand-rubbed walnut finish cabinet. Rounded
12057 . A 12057 . Sturdy alrplane luggage type portable case. Leather cor-
ners. With motor board. NET................................ $\mathbf{5} .50$

## GARRARD ACCESSORIES



Garrard Motor OII. Years of experience in the phono motor velopment of an oil particularly suited to lubricate all makes of phono motors and record chankers. Use this oil to keep your record changer in perfect runA8O65. Per Bottle. NET. 35 C


B
A8066. Garrard Chromic Needles. An excellent longplaying semi-permanent needle designed for use with automatic
equipment. Eacks needle will play 10 reconds. 10 OF $10 \ldots$.

A combination high-grade constant-speed motor and Garrard high-fidelity, true tangent crystal pick-up arm on a compact single-unit plate for simplified installation. Comes completely furnished with motor. pick-up. pick-up arm rest, ${ }^{10 "}$ turntable
and all necessary hard ware. All parta $\ln -1$ and all necessary hard ware. All parts including shielded pick-up leads are bonded
for grounding. Specially curved arm places for grounding. Snecially curved arm places the needle at a true tangent to the record est grade phosphor-bronze bearings. Mainest krade phosphor-bronze searings. Manfew drops of oil every 1000 hours of use keeps motor in perfect running condition. Motor will operate at a constant speed of 78 R.P. M. without adjustment. For opera tion on $100-130$ volt, $50-60$ cycle lines. A12058 Assembly YOUR NE

GARRARD TYPE F PHONO ASSEMBLY



## PORTABLE CASES

## LUGGAGE TYPE CASE

A perfectly constructed, sturdy airplane luggage type carrying case designed to stand up under extreme conditions of portable gervice. Leather reinforcing corners, Double clasp locks. positive in action, will not snap open while carrying. Sturdy Record Changers.
A10098. Portable Case.
\$6.75

## WOOD TABLE MODEL CASE

A luxuriously finished, hand-rubbed walhut finish table model case deaigned to house the RCA Automatic Record ChangAmple room above and below board for mechanism.
A10069. Table Model Case. $\$ 11.65$

## RCA AUTOMATIC RECORD CHANGER

 Now! At a New Low Price-RCA De Luxe Record Changer!Here is the genuine new "Gentle-Action" R.C.A. De Luxe Changer-designed for those who desire the hishest-quallty record-changhos mechanism Identically the same as used in newest RCA: Victor Radio-Phono Combinations. Will autoinatically play eight $10^{\prime \prime}$ or seven $12^{\prime \prime}$ records. When loaded with $12^{\prime \prime}$ records, it will provide 35 minutes of uninterrupted entertainment. New RCA Senior Crystal pickup is of the latest inertia type, balanced to assure ininimum record wear and surface noise. Top-loading makes needlechanging fast and easy; no fumbling; simply drop needem is of simple fool-proof design, built to proanism is of simple fool-prooi design, built to pro-
vide continuous trouble-free operation. Shockvide continuous trouble-free operation. Shockabsorbent coupling between motor and turn-
table eliminates vibration. Hikh-fidelity type high-impedance crystal pickur has output of 1.5 volts at 1000 cycles; range is 70 to 7000 C.P.S.

Will play all types and sizes of records up to $1^{\prime \prime}$ manually. All records with standard atopping groove will operate the automatic mechanmum record wear is obtained by proper positioning of the arm. Needle is off-set and balanced to exert a pressure of only 3 ounces. Pick-up impedance is $100,000 \mathrm{ohms}$ at 1000 cycles. Finished in very attractive brown wrinkle with polished chrome trim. Motorboard measures $143 / 4$ Inches wide by $111 / 2$ inches deep. Space required above A.C. Shpk. wt. 35 lbs , A10075. NO. 9865.


## CRYSTAL PICKUPS

Fig. B. Junlor Model. Another new RCA erystal pickup at a sensationally low price. Imperdance at 1000 cycles is 100,000 ohms. Frequency ressonse is 70
to 7,000 cycles. The offset needle position assures



Bakelite Junlor Model. Incorporates all of the features of the model described above, but is housed in an unusually atcractive brown bakelite case that blends well with any type of cabinet. Needle insercion A7588. ReA 9868 . List, $\$ 5.45$. NET
$\$ 3.20$
Flg. A. Sentor Model. An outstanding RCA development featuring top needle-loading and automatic needle rejection. Frequency response. $70-7000$ cycles lacquer. A truly delure pickup. A7592. Needle Box and Pickup Rest. May be used
with any phonograph and pickup. NET......59c

An accurately balanced high-impedance crystal pickup at a sensationally low price. The crystal is a grafoil Bimorply type especially treated to give long life under adverse weather conditions. Cartridge is set at a tangent to assure proper needletracking for minimum wear and surface noise. Has exceptionally wide frequency
response. Needle pressure is $23 / 4$ ounces. response. Needle pressure is $23 / 4$ ounces.
Overall length, $81 / 2^{\prime \prime}$, height, $11 / 4^{\prime \prime}$. Output Overall lengeh. $81 / 2^{\prime \prime}$; height, $11 / 4^{\prime \prime}$. Output
is 2.9 volts at 1.000 C.P.S. across $1 / 2$ mexohm load. Handsomely finished in brown crackle. Shpg. At. 7527 . NET.
s245

## GARRARD

CRYSTAL MODEL. The well-known Garrard high-impedance crystal pickup incorporates many advanced features. The tangent area times, assuring perfect tracking groove at all record wear. A perfect tracking and minimum record wear. A unique swivel head permits rubbed bronze finish, Completc with mand rest, basc supports and shielded S588 A8092. NET
$\$ 588$
A8093. MAGNETIC MODEL. High impedance type. High quality construction
as above. NET. . . . . . . . . . . . . . . . .
$\mathbf{N}$

## RCA-VICTOR PICKUP HEADS



RCA 9676. An exact duplicate of the ariginal pickup head used on the
Models RE45 and RE75. Impedance АА

RCA 9666. Same electrical and ficationsas the orignat head the orignal head used on pedance: 30 ohms


Pickup Trans: former. Correctly designed transformer for connecting a 30 ohm pickup to the grid of a A11279.8220


MODEL AB-8. A new, ultra modern Crystal Pickup. Features spring axial cushioning to prevent motor vibration reaching arm. A crystal sealed in bakelite assures for optimum tracking. Conven ient single hole mounting With fort shielded cable. For $10^{\circ}$ or $12^{4}$ records. Standard statuary brown
 A8073. As above, but finished

STANDARD TYPE. Carefully balanced for correct needle pres sure. Frequency response may be varied for either treble or bass. A widely used quality piekup. A8074. S-8. For $10^{\circ}$ and $12^{\circ}$ records. List, $\$ 10.00$. S5. 88 A8075. S-12. For $10^{\prime \prime}$ to $16^{\circ}$ Avoros. List: si2.50. 77.35 A8083. Crystal cartridges for
above pickups. NET... $\$ 2.94$

TRU-TAN TYPE. Offset head holds needle trire to tangent through entire record playing surface. Arm rotates on double-row ball-bearings. Top-loading.
A8076. $\mathrm{B}-10$. For $10^{\prime \prime}$ and $12^{\circ}$ records. List. \$17.50. §10.29 A8077, B-16. For all records
 above pickups. NET. Crystridges for

TYPE 07. Offset bead type to as sure minimum tracking error and reduction of surface noise. Combines easy needle-loading with correct cushioning akainst vibration. $21 / 20 z$. needle preasure. For $10^{*}$ or $12^{n}$ records. A popular. good-fidelity pickup of famous Make at an unusually low price emboased trim lines. 89.82 A8085. Crystal cartridge for


Scratch Filter. Completely sealed and tuned to resonate at point of greatest scratch intensity. For use with any crystal or magnetic pickup to eiminate excessive needle noise and greatiy improve phono cuit type: sealed in metal case as illustrated.
A8079. NET.............. 88 C

New Crystal Plckup. Frequency response is 50 to 8500 cycles Needle pressure 2.5 ounces. Arm is rubber-cushioned. Single hole A8098. NET
$\$ 2.91$ A8099. As above hut with 6.3 volt pilot-light mounted $\mathbf{\text { in arm. NET............. } 3 . 2 0}$

Standard Crystal Pickup. Has excellent frequency response. Impedance is 130,000 ohms; output. 2 volts at 1,000 cycles. Tangent type arm assures mimmum record A8095. NET.
$\$ 3.47$
A8086. Crystal cartridge only
for model above. NET... $\$ 2.85$

Streamlline Magnetic. A true high-fidelity magnetic pickup. Correctly damped. Output. 1 volt at 1.000 C.P.S. Impedance A8096. NET PRICE... 4.70 48097. Streamline Crystal. Similar to above but has crystal pickup set at tangent. 9298


ZEPHYR CRYSTAL PICKUP, A crystal pickup with uniform frequency response from 50 to 100 cycles. 1 mp . is 8 . 0 ohms. Can be coupled directly to grid, Neerle-tilt angle keeps neerle tangent to and centered in record
groove. Needle pressure, $23 / 4$ ounces. Mieasures $111 / 2 z^{\prime \prime}$ long. Has fiat type mounting. Tone arm is molded bakelite. With cable and arm rest. A7528. 99C.Black. 7529 . 99CW. Wainut. EACH.... 44.41
92 A 75524 . 98A. Black. mounting type.


NEW MAGNETIC PICKUP. This Model W-83 magneric pickup is a new development by Webster-Chicago. The magnetic principle natural lifelike reproduction. Structire utilizes new alloys for improved outpur level and freedom from temperature or climatic effects. The new arm provides free action in any direction by means of jointed head and the swivel base mounting. Fquipped with $18^{\circ}$ of shielded cable. Output is 1.4 volt; impedance. 5,000 وhms: record pressure, Ne ounces. \$..... 8.97


Adjustable tone compensation network which connects between any crystal pickup and amplifier: It varies the response characteristics rotary switch provides 3 difircumstances. A rotary switch provides 3 different equalizing circule-bass, medium and hi-fidelity. Fourth position cuts equalzer out of circuit. Unit is Single hole moun.. A dial plate and knob and complete instructions are supplied with each unit. Ideal for all crystal pickups.
A8OT 9.
$\$ 1.91$


## GENERAL INDUSTRIES PHONOGRAPH MOTORS

## GREEN FLYER MOTORS

Model A. Single-Speed 78 R.P.M. Heavyduty governor-controlled induction type motor. Operates constantly and quietly at 78 R.P.M Has silent, helical-cut gears sealed in oin plate, and speed control lever. Hardware supplied. For 110 volts, 60 cycles. Shpg. wt., 10 lbs.
A 10070 . List, $\$ 12.75$. NET...
576 Model V. Identical to Model A above except with serew type speed regulator and less A10051. NET $\$ 6.75$

## 2 SPEED 78 - $33^{1 / 3}$ R.P.M.

Model D. A heavy-duty motor suitable for all records and transcription-playing requirempeed change lever, and hardware. Motor size: $87^{3 \prime}$ " $\left.1 ., 53\right]^{\prime \prime}$ w., $33 /^{\prime \prime}$ deep. For 110 volts. 60 cycleps, Shp., wt. 13 lbs.
A10072. List. $\$ 17.50$. NET...... $\$ 10.50$ A10071. As above but with $10^{\circ}$ turntable.

## 6 VOLT 2 SPEED MOTOR

Model R. An exceptional money-saving value. Operates from a 6 volt battery. Battery drain is only 2.8 amperes. Features dual-speed for either 78 or
Wt., 14 lis.
$\$ 10.75$
A10074. List, $\$ 24.50$. NET Weighted $12^{\prime \prime}$ Turntable for $331 / 3$ R.P.M. instead of standard $\$ 1.80$ to prices given above.
A7624. Automatic Stop. For use with


An efficient phono-oscillator at amazingly low price. It permits the playing of phonograph records through any radio. Acts as a miniature Broadcast station, producing a signal which your radio picks up in the regular way and then reproduces through the loudspeaker. Quickly and easily attached to the antenna and ground connections on the set. Measures ${ }^{\text {ater }}$ Complete Ateractively finiahed metal case. Complete wolts. A.C or D.C. Wt., $21 / 2 \mathrm{lbs}$.
ATET....
s2 29

## RCA PHONOGRAPH NEEDLES

A7613. Soft Tone. 100 to package.
A7605. Malf Tone. 75 to package
A7606. Full Tone. 100 to package Per Pkge, 9 c. 10 Pkgs. for ............ 75 A7610. Tungstone. Full Tone. A7611. Tunger to pkg Per pkge

18 C
A7612. Home Recording Needies.
8 to pkge, Per phge.
A7620. Permo-point. Plays over 2000 records. Prolongs record life. 50 . Lots of 5, EACH.......45 A8066. Garrard Chromle Needies: 9C


NEEDLE CUPS
A7601. Fig. A. Atractive cup of Fits $1 / /{ }^{*}$ round $5 C$ A8070. Fig. B. Similar to type $A$ above, but has a spring
hinge type cover. NET. ................

## MODEL CX SPECIAL VALUE

A turntable unit providing dependable perormance at exceptionally low cost. The 78 R.P.M. direct-drive, self-starting motor is of the induction type. Fan-cooling and proper ventilatlon permit installation in small cases without danger of overheating. Silent operation is assured by the fully enclosed, helical-cu gears running in a bath of oil. Turntable is 8 in diameter. Special drive shaft insulates motor from turntable. Furnished with mounting plate, metal and rubber turntable drive washer screws, washers, and nuts. For 110 volts, 60 cycles. Shpg. wt., 10 libs.

## A100052.

$S 210$
Model KX. Similar to the Model CX above but with slightly smaller motor. \$4.26
A10085. NET.
4.26

12-Inch Turntable. For 12 -inch turntable, add 45 c to the prices given above.
A7624. Automatic Stop. For use with eitber Model CX or Model KX. NET...90c


NEW MODEL RX RIM-DRIVE

## A dependable, low-priced unit. Uses a 78

 R.P.M. rim-driven, self-starting, induction motor. Driving pulley, idler, and $8^{\prime \prime}$ turntable aligned in one plane for efficient. trouble-free performance. Motor is insulated from mounting plate for quiet operation. For 110 voles, 60 cycles. Shpg. wt., 10 lbs.
## A100086

s354
10-Inch Turntable. For 10 -inch turntable add 15 c to the price given above.
A7624. Autamatic Stop. For use with the
Model


HEAVY-DUTY "BLUE-FLYER"
Uses a very powerful. single speed 78 R.P.M. induction motor. Recommended highly for recording purposes. Oversize lubricator provided for the governor brake. Has excellent speed regulation and will not overheat. Silent gears run in a bath of oil and are fully enclosed. Furnished with special weighted $12^{\prime \prime}$ turntable, metal and rubler turntable drive washers, pointer speed regulator, mounting plate screws. nuts, washers, etc. For 110 vol. 15 ibs. 110 A10084.


KNIGHT SPECIAL VALUE MOTOR
A wonderful "buy" in a high-quality phono motor. The $9^{\prime \prime}$ turntable is driven by a new 78 R.P.M. constant-speed sef-starting motor record drag or variations in line voltage and record drag or variations in line vartage and operating temperature. Large bearings wear ample oif reserves and special helical-cut gears Motor is fan-cooled and allovss free ventilation For 110 volts 60 cycles A.C. Shpg. wt., 8 lbs A real phono motor bargain

## A10089

YOUR SPECIAL PRICE
s395

## KNIGHT FRICTION-DRIVE MOTOR

A dependable unit at a sensationally low price Smooth-running friction rim-drive eliminates gears. Motor is shock-mounted to prevent vibration. Has forced ventilation for cool oper ation. $9^{\circ}$ turntable. For 110 volts, Slipg. wt. 7 lbs.
A100. 0 .
s2 25
A7624. Automatic stop. For use with either of the above Knight motors. NET. 900


## GARRARD PHONO MOTORS

Model A6-C. Features an efficient 78 R.P.M nduction type motor. Phosphor bronze bear ings, bushings, and fittings are used. Has an exclusive. fully automatic start and stop mechanism. All parts are mounted on a bronz piate to facilitate installation. Turntahle size. $200-250$ volts. $50-60$ cycles, A.C. Shpg. wt. 15 lbs
A100091.
S1088
A10092. Model U5-C. As above but for 100-130 and $200-250$ V., $25-60$ cycles. A.C. or DET.
$\$ 16.76$


RCA SYNCHRONOUS MOTOR
A midget type phono motor identically the same as used in the R.C.A. portable record players. An ideal motor assembly for use in all types of portable record-playing equipment. for modernizing or wherever space is limited. Synchronous type; manual-starting. Operates at 78 R.P.M. from $105-125$ volts, 60 cycles, A.C., without wows or vibration. Power con10 aud 12 inch records, and shock-proof 10 and 12 inch records, and shock-proof A9 491
List. $\$ 6.50$. R.C.A. No. 9841.

5482


## STROBOSCOPE

A7331, Checks 78 I $331 / 3$ R.P.M. Curn table speed. 12C

## RCA PHONO OSCILLATOR

With this unit you may easily connect either a phonograph pickup or a high impedance microphone to your Broadcast receiver regardless of its type. Oscillator furnisies a modulated signal which is fed into the input of the radio for better record reproduction. Uses a type 12A7 tube which is supplied. Frenuency range, 900 K.C. to 1100 K.C. Designed for use on 115 volts A.C. or D.C.
With instructions. Shpg. wt., 3 lbs. With instructions. Shpg. wt., 3 lbs. 84.38
A7 626 . NET...................... 8.

## SHURE MICROPFONES



## "UNIPLEX" CRYSTAL MODEL 730-A

A sensational new type of crystal microphone that provides true uni-directional operation. Has high sensitivity from front, with practically zero pickup from rear. Solves feedback, room lems in even the most critical Sound installatlons. Tilts up for as wide as 360 degree pickup is desired. Smooth high-quality wide-range response; output, -62 db . Satin-chrome finish Epuipped with polarized cable connector and 25 foot shielded cable. $5 / 8-27$ thread. Wt. $11 / 2 \mathrm{Ib}$. This microphone is ideally suited for true reproduction of both volce and music. \$
A2554, 11
List, $\$ 32.50$. NET.... . . . . . . . . . . . . . .


THE NEW SHURE "STREAMLINERS"

## MODEL 7A CRYSTAL

A new economy type crystal mike having typical Shure quality. Fully moistureproofed crystal in shock-proof mounting. Smooth wide-range response from 30 to 10.000 cycles. Output, -53DB. Satin chrome case. $5 / 8-27$ thread. Complete with 7 ft . cable.
A2565. List. $\$ 16.50$. NET. $\$ 9.70$
A2560. Model 7A with 25 ft cable.

## MODEL 5 G DYNAMIC

A new pressure-operated moving conductor type mike in same case as Model A above. Output, - 63 DB. High imA2559. List, $\$ 21.00$. NET. . 12.35 A2555. With 25 ft . cable. . . $\$ 13.23$


## FAMOUS "ROCKET" TYPES

 MODEL 705-A CRYSTAL Seml-directional crystal microphone having many fine features. Satinchrome finish. Exceptionally wide frequency responec; output of -55 DB. With cable connector and 25 foot cable. $5 / 6-27$ thread. Wt., $13 / 4$ 1bs. A2552.NET
$\$ 14.70$

## MODEL 50-C DYNAMIC

New Shure moving conductor type mike with smooth responge from 70 to 7000 CPS. Suitable for all general ap-built-in blgh impedance type with DB. With 7 foot cable A25 68. List, \$26.00. NET \$15.29 A 2567 . Model 50 C with $\$ 16.17$ A3929. Snap-on baffle

## COMMUNICATION MIKES

Crystal Type. Designed to provide clear. crisp reproduction for Amateur phone transmitters. Has built-in RF insulated for safety. Streamlined dety mount in grey finish. Compled des stand and 7 ft. cable.
A2582. List, $\$ 19.50$. NET $\$ 11.47$
Dynamic Type. Same case and stand as Crystal mike above. Output. - 42 DB. Built-in RF filter; insulated for safety. Excellent response curve. With A2tand and 7 ft . cable. . Nist, $\$ 24.00$. NET $\$ 14.11$

A2581. Desk Stand Only. Streamlined desk type mike mounting as $5 / 8-27$ thread. NET.


## LAPEL MIKE

MODEL W. High sensiti vity, light weight, and general compactness of design make this a perfeet "wateh inter-office systems. detectaplones P.A. systems, experimental etc. Impedance. 200 ohms Equipped with new low-hiss carbon button and spot center diaphragm. Completely enclosed in all-metal case which protects it against injury in handlling or use. Only $17 / 8^{\prime \prime}$ diameter. 1/0" thick. Output, $\mathbf{A 8} 208$ DB. List. $\$ 3.00$. NET $\$ 1.76$

We can supply all Universal Microphones, Including special units for Mobile and Aircraft use, also all Universal Recording equipment. Write for complete Universal catalog.

## UNIVERSAL "HANDI-MIKES"

Single Button Carbon. New style balanced grip body in polished chrome Impedance. 200 ohms. Output, -40 DB. Close-talking type. With foot cord and built-in on-off swlteh. Wt. 642 . List, $\$ 10.00$. NET.
$\$ 5.88$
Dauble-Button Carbon. Similar to above; impedance 200 ohms per button. Output. - 55 AB. 6 foot cord and on-off switch. 88.82
Crystal Type. Body style as above. Moisture sealed crystal with curvilinear dlaphragm. Response, 50 to 5000 cycles. High impedance. Output. 70 DB. With 10 foot cable and onA25 switch. Wh., $11 / 2 \mathrm{lbs}$. List . $\$ 18.50$. NET. ..... S 10.88 Dynamic Type, Style as above. Response, mpedance type. With 10 foot cable 33 ohm impedance type. With 10 toot cable and on-off
switch. Wt. $11 / 21$ lbs.


ULTRA-WIDE RANGE CRYSTAL MIKES
Efficiently designed, quality-built, ultra wide-range mikes to meet all P.A. requirements. Dual-drive hich rapacity crystal meet all P.A. requirentents. Dual-drive hom to 10,000 C. . S. moisture-scaled lyy special process. Output level is - 53 DB. Acoustically correct. curvilinear diaphragim. All models have $5 / 8-27$ thread polarized cable connector, and 25 foot cable. A2561. Model 702D. Fig. A. Spherical semi-non-direcWt., 1 lyp. Complete with 25 foot cable. Satin-chrome finish.
A2562, Model 700D. Fig. B. Semi-directional type Swive arrangement for tilting head. Chromium finish. $23 / \mathbf{R}^{* \prime}$,
Shpg. wt., 2 lbs. Complete with 25 foot cable
A2563, Model 7710 . ${ }^{\circ}$ Ig. ${ }^{\circ}$ C. Grille type case; Satinchrome finish. $31 / 1 / 6^{" 1} \times 25 /$ / $^{\prime \prime} \times 11 / 4^{" \prime}$. Wt., 1 lb . Complete with 25 foot cable.

## YOUR PRICE EACH.



Snap-On Baffle for 700D Mike. Quickly and easily fastened on mike with spring clips. Decreases side and rear pickup. A3932. NET.
$\$ 1.47$


FAMOUS BRUNO MICROPHONES
FIG. A. Famous static-velocity type microphone which can be used with cables up to 2000 feet long. Has high sensitivity and bi-directional pickup. Sturdy case with
swivel type mountling yoke and rubiber shock swivel type mountling yoke and rubber thock aboorber.
High impedance type; output. - 50 DB. Gunmetal finish. Less cable. $5 / 3-27$ thread and cable connector. Less cable. $5 / 8-27$ thread and cable connector. S13.23
A3938. Model MB. List, $\$ 22.50$. NET.... $\$ 1.2$ A3937. 25 foot shielded cable for above. NETS 1.47

FIG. B. Special purpose microphone for musical instrument pickup. detectaphone, lapel mike, call systems, etc. Only $27 / 8^{\prime \prime} x^{21 / /^{\prime \prime}} x^{1 / 2^{\prime \prime}}$. Response from 30 to 14,000 C.P.S., high impedance; output, -55 DB . Wt., 4 oz. With three foot cable and connector plug. This amazingly compact desired. It is ideal for Church or School Honcealed if systems because of its high sensitivity and wide-angle pickup. Housed in a protective metal screen with sturdy base.
A3935. Model MP.
$\$ 7.94$


NEW BRUSH

## ALL-PURPOSE MIKE

Type AP. A new, universal type crystal mike for general purpose applications. Housed in chrome finished die-cast case; rennovable back permits access to termina 200, and 500 ohms as well as high Impedance. Output. -48 DB . Suitable for indoor or outdoor use. New swivel design provides adjustable position feature. Built-in variable tone control. With 25 foot cable and connector. Can be used with 200 or 500 ohm line of any desired length for P.A. in stallations where long distances are required between microplione and amplifier. Shpg. wt.. 5 lbs. A2540. List. \$29.50. S17.35


## JT-30 CRYSTAL

Semi-directional type with fixed angle head for optimum usefulness. Has uniform wide range response from 30 to 6000 ycles; output level, -52 DB . Internal suspension construc tion prevents pickup of vibration noises. Designed to pro vide really good performance at low price. The jelished housed in a complact, polished to fit all stands. JT-31C also has cable-disconnecting plug Shp cable- $11 / 2 \mathrm{lb}$ $2542 \quad 1 / 2$ los aitl 7 foot Model JT-30C List, $\$ 16.50$. NET.... $\$ 9.70$ A2543. Model JT-31C List. $\$ 19.00$. NET
$\$ 11.17$


## DN DYNAMIC

Featuring a new unitary moving coll and acoustic design together with highest quality Alnico maknets. this Astatic dynamic mike provides smooth and substantially flat response from 50 to 7000 cycles. High impedance type with output of -55 DB . Attractive modern style case with tilting feature is finished in two-tone opalescent gray and
chrome. May be used in practically all types of P.A. and Sound work. Supplied with stand-type plug and connector. spring cable protector, and 25 foot shielder cable. Shpg. wt. $21 / 2$ lbs. Excellent for use with outdoor P.A. installations.
A254 1. List, $\$ 22.50 . \$ 13.23$

## POPULAR ELECTRO-VOICE MICROPHONES

## CARBON MICROPHONES

FIG. A. An extreniely popular double-button type carbon mike in modern sireamlined case, Impedance 200 ohms per button. Frequency response from 40 to 8000 cycles. Entire button and diaphragm assembly suspended internally on live rubber. Gunmetal finish With 6 foot cable
A2644. NET..
辟 A2643. Above mike with desk stand and 25 foot NET. A 10579 Desk stand only. $5^{\prime \prime}$ hish. $5 / 8-27$ thread NET

FIG. B. An outstanding value in an inexpensive double-button carbon mike. Frequency response from 45 to 7000 C.P.S. 1 mp is 200 olims per button. Stret hed duralunin diaphragm. This unusually efficient high-grade carbon mike will give excellent service at low cost.
A2566. NET...

## A2566. NET..



D7 DYNAMIC
A rugged general-purpose dynamic microphone with exceptionally fine frequency response. Good quality at economical cost. Output level is - 55 DB , Semidirectional pickup. Chrome finish cast metal case; size. ${ }^{21 / 2^{\prime \prime}}$ high ${ }^{1} 1 / 2{ }^{2}$ "dian in
 plied With $121 / 2$ foot cable. With polarized Alug. 52. D7 50 Ohms. $\$ 11.76$
NET......... A2353, D7T Impedance $\$ 13.23$

D6 DYNAMIC
An excellent dynamic Anpe microphone for general P.A. purposes. Chrome finish case with tilting mount for directional or nondirectional pickup. Output. 46 DB. Can be used with cables up to several hundred feet in length. Response.
$50-8000$
C.P.S With $121 / 2$ foot cable and connector plus. and A2348. D 6.
${ }_{50} 0 \mathrm{hm}$.
List NET \$25.0n $\$ 14.70$
A2349. D6T
Algh Impedance List. \$27.50. \$16.17

## D5 DYNAMIC

An all-purpose dynamic type microphone for all installations which require high quality re production. Output, - 55 DB. Semi-directional; with tilting bracket; $3 / /^{\phi}-27$ thread. Finished in Chrome. Size. ${ }^{31 / 2{ }^{\prime \prime}}$ long, ${ }^{21 / 2 \prime}$ diain. Complete with 25 feet of shielded cable. gives true reproduction of both voice and music. A2350. D5.
50 Ohms. S16.17
A2351. D5T. HIgh
Impedance. S19. 10

C6 CRYSTAL
A high-level output type crystal mike with extreme sensitivity and broad response curve resulting from improved bass response. Swivel-head case finished in polished chrome. Mechanical duced to minimum by internal suspension mounting. Output mounting. Output. with cables up to 250 feet long. $5 / 8-27$ thread. Equipperl with 7 foot cable and connector plug.
A2587.
NET

Fig. A. V-2 VELOCITY. High-fidelity response characteristics make this mike suitable for all sound pickup requirements. Overall response is essentially flat from 35-11.000 C.P.S.; output level, - 64 DB. Housing and case design eliminates cavity resonance. Cradle type foot cable A2579. 200 Ohm Model.
A 2580 . High impedance.
$\$ 20.58$
FIG. B. V-1 VELOCITY. Combines highquality performance and extremely compact size. Cradle type suspension with buile-in onOutput levesponse DB. Slockproof type mounting; $5 / 3^{3}-27$ thread. With 20 foot cable A2577. 2000 hm Model. A2578. Migh impedanc\&. ..... \$14.70

DYNAMIC MICROPHONES
FIG. A. Model 620. A high-fidelity dynamic microphone with response from $40-10,000$ C.F.S. With rising characteristics. Output level, - 55 DB . Plug-type removable mounting with $3 / 8,-27$ thread. directional pickup. With 20 foot cable Finished in attractive gunmetal. A 2358.500 hms . A2 360 . Hlgh linpedance.
$\$ 16.17$
FIG. B. Model 630. Designed for highest quality pickup and for general Sound use. Builtin acoustical network provides smooth response from 40 to 10,000 cycles. Semi-directional. High impedance; output, -56 DB . Tilting feature. With onGunnetal finish. 25.00 . NET...S14.70


## R.C.A. AERODYNAMIC

An outstanding dynamic type microphone for all P.A. Amateur. and general Sound purposes. Trim, streamlined appearance; chrome Impervious to changes in temchrome. Impervious to changea in temdoors or outdoors with equally faithful r sponse. Frequency range from 100 to 6000 cycles. Average output. - 68 DB. Output impedance 40.000 ohms. Microptione head has fixed position. With 30 foot cable and adapter to fit all $5 / 8=27$ thread stands. I1lustrated mounter on RCA M1-6227 table model mike stand listed directly below. Shpe. wt. 21/2 lbs. Supplied less the stand Illustraterd
A2588. RCA MI-62288. S12.90 A2589. RCA MI-6227. Table model mike stand. Finished in chrome and black.
$1 / 8^{\circ}$ pipe thread. List, $\$ 3.75$. NET $\$ 2.20$

AMPERITE MICROPHONES


## VELOCITY TYPES WITH ACOUSTIC COMPENSATOR

Highest quality velocity microphones with the Acoustic Compensator which is extremely valuable in adapting the microphone to varying acoustic conditions. These Amperite velocity microphones feature: heavy cast gunmetalfinished casc; hand-hammered ribbons; genuine Alnico magnets; triplershiciding against RF and magnetic fields, and high Wutput. Range removable cable plug and 25 feet With removable cable plug and 25 feet switch in base of mounting yoke. Swlvel type mounting. Live-rubber shock absorber. Threaded $5 / 6^{-27}$. Output. 65 db. Has handy acoustic compensator control in the form of a sliding button which is easily adjusted for correct tonal cases at no extra charge. Specify when ordering. if chrome is desired.
A3600. RBMK, 200 ohms,

## A3601. RBHK.

High Impedance.
NET
s240

## STUDIO VELOCITY TYPE

A real Broadcast Studio type mike. Frequeney response has plus or minus 1 db . variation from 40 to 15000 C.P.S. Exceptionally well-suited for Broadcast station or Recording studio or for Sound installations. Has swivel mounting, rubber ghock absorber, on-off switch, lockIng type cable plug, and $2^{\prime}$ cable. Gunmetal finish. Threaded $5 / /^{\prime \prime}-27$. Output, - 56 db . Avallable in chrome finish at no extra charge. Specify when ordering. A3602. SRBOn. 200 ohm model. A3603. SR 80 Hn . Hizh impedance model. List. \$80.00.

53120


KONTAK MIKES FOR MUSICAL INSTRUMENTS
For use with all string or percussion type instruments. Can be quickly attached to any amplifier or radio. Exceptonally fine frequency response. Permits covering large area with small amplifier.


QUALITY MICROPHONE FLOOR STANDS
Floor stands to suit every need. Adjustable in height. Heavy bases prevent tipping. Lock prevents extended sectlon from slipping.

## STANDARD ADJUSTABLE

FIG. A. Cbrome-finished tele scoplic stem. Grey crinkle-fin ished, $10^{\prime \prime}, 10 \mathrm{lb}$. base. Adjustable freaded $5 /{ }^{-2}-27$ Positive inches. Threaded action prevents slipping. Ship-
ping welght, 15 lbs.
A10550. NET...... 3.60 Alo 5bigh. NET..

## DE LUXE ADJUSTABLE

FIG. B. Base and telescoping standard finished in higinly polished chrome $10^{\prime \prime}$ diameter base, weighs 10 lbs. Height adjustable from 37 to 70 inches. Positive action clutch locks stem in place A 10551 . NET.
$\$ 4.65$

## DE LUXE TAKE-DOWN

 FIG. C. Collapsible, three-sertion take-down stem finished in chrome. Can be assembled or taken apart in a few seconds. Each section has male thread to fit base; provides correct height for any purpose in a jiffy. May be used as a banquet type or floor stand. $10^{\prime \prime}, 10 \mathrm{lb}$. base. Adjustable, 20 to $59^{\prime \prime}$. Shpg. wt., 17Aio553. NET....... S5. 45

DE LUXE 3 SECTION
FiG. D. A high-quality telescoping mjerophone stand finished in an attractive satin hand-
brushed bright metal. 3 section brushed bright inetal. 3 section stem allows extension from $25^{\prime \prime}$ diameter base weighs 11 lbs. Newly developed clutehes have fiber inserts which prevent any possibility of stem slipping after adjustment is made. Shpg. wt.: $141 / 2 \mathrm{lbs}$.
A 10545 . NET....... $\$ 5.25$

## FOLDING TRIPOD

FIG. E. Music type folding tripod stand of heavy material. $20^{\circ}$ base spread, When folded reanires only $21^{*}$ of space. $5 / 8{ }^{*}-27$ thread. Rubber feet. Chrome finish. Fully adjustable from 26 to $60^{\circ}$, without dismantling. Ideal for use witt all types of portable Public Address equipment. Wt., A10546 $\qquad$ $\$ 4.95$
A10547. 4 Section. Same construction as above but ad-
justable from $27^{\prime \prime}$ to $78^{\prime \prime}$. $\$ 5.35$

STANDARD MODEES
Type SKH. Frequency response from 60 to 6,000 cycles per second. High impedance. \$7.06
Type KKH. Flg. A. As above but with hand volume control.


A3609. Fig. B. Foot pedal volume control for all models, NET $\$ 7.06$ A3610: Kontak Clamp. Clamps Mike to String Inst NET 59 C


## MODEL RAH VELOCITY

A very popular, excellent Velocity inicrophone which answers the demand for a highequality unit at a moderate price. Outstanding in periormance. Excellent for both speech and music. Construction minimizes feed back. Frequency range of 60 to 500 C.F.S. Qutput, - 68 D B. Fitted with heavy shock absorbers.
A3612. Model RAH. (high imp.) 12 Cable.
$\$ 12.94$
A3613. Model RAL. Same as Model NET........................... . $\$ 12.94$
 TYPE KTH. Fig. C. High ImA3604. S12. 94 TYPE KKHH. As above, but with hand volume control. A3605.
$\$ 16.46$ highequalley unit at a moderate 60 to 7500 C.P. S. Output, - 68 D B. Fitted


DESK AND BANQUET MIKE STANDS
Stands of all popular types for banquet table and executive's desk Wide selection permits sulting personal preference. Attractively designed.

FIG $10^{\prime \prime}$ DESK STAND
FIG. B. $10^{*}$ Desk Stand. Well-finHas standard s/ polished chrome. Has standard is finished in grey wrinkle. Stem Aroper level. Wt., 6 lbs. S 1.10 A 10564 . Same construction as basc are finished in chrome. S1 45 ADJUSTABLE BANQUET
FIG. C. A deluxe microphone stand for crystal miker. Telescopic, two section type. Chrome base and
stem Adjustable from $16^{\circ}$ to $27^{\prime \prime}$. Shpg, wt. 7 lbs. $\$ 275$
A10560. NET $\qquad$ $\$ 2.75$


## FLEXIBLE PBX ARM

FI. D. DBk or telephone arm Mounts top or side. Pivots and revolves at base and tilts up or length $21^{\circ}$. Chrome finish. S1.95

## 3 WAY STAND

FIG. A. Comb. desk, hand or suspension type. 1-6" Chrome Stem pension link. We. 4 lbs. \$1.95

## FOR CARBON MIKE

FIG. E. Octagonal ring $53 / 9^{\prime \prime}$ In dia. Black wrinkle finish. With 8



## CARBON MIKE RING

FIG. A. $61 / 4^{\prime \prime}$ dia. Chrome finEsh. Supplied with 8 springs $5 /{ }^{*}{ }^{*}-27$ thread. Wt., 3 1bs, A1OT55.
$\$ 1.25$

## MIKE HANDLE

FIG. B. Makes any mike a ${ }_{27}$ handmike for ${ }^{\prime \prime}$ portable use. ${ }^{5 / m^{\prime \prime}-}$ A10556.


MICROPHONE TRANSFORMERS

## EXTERNAL INPUT COUPLING TYPE

Compact transformer with balanced winding; couples ail low impedance microphones to high impedance amplifier grid circuit. Completely shields all connections by metal cover Especially de-
signed for high-gain A3919.

## A6050. For single

 button carbon microphone, Hi-impedance secondary for connectamplifier. Fully shicld amplifier. Fully shield A6051. A6051. Same a s ton type. Fully shielded These are of the finest

2 BUTTON
Fully shielded, dou-ble-button carbon microphone transformer. Primary 200 ohms each side of cenance tap. High imped ance secondary for into grid circuit of amplifier stage. Has flexible wire leads A $^{3} \mathrm{~N}^{1818}$. $\$ 2.06$


## CABLE GUIDES

 A9879. Soft Rub ber Guirle Keep mike cords from swinging loose and tangling. Fits al stands up to $11 / 4$ diam. Makes a neat installation. 710 A9891. Safety-Pin Clasp Type Rubin covered Fits Rubber

## STAND SWITCH

For use with any type micruphone. Fits any standard $3 / 3$ - 27 threader stand. Dependal le topsle cype switch per-
mits cutting mike in or out of circuit without out of circuit without
disturbing gain control setting. Case $21 / 2^{*}$ high finislied in satin black. Model A80B. Marle by "Shure." An effective ${ }^{203878 .}$ ${ }^{108 \overbrace{}^{78}}$
$\$ 1.47$ A.A.

## SHOCK ABSORBER

 Prevents floor vibracions from reaching microphone A necessity with all mikes wade ol heavy bram finish Has live gumrubber cushions. $5 / 8^{\circ \prime}-27$ threads. male and female. Will improve microphone performance and stab

MIKE STAND SWIVELS
FIG. A. These swivels permit tilt ing the milcrophone to any angle for obtaining the maximum amount of pickup. Allows adjustment to suit pepsonal preference.


NET
ЕАС

## CARBON GRANULES

FIG. D. No. 100 size. Highest A2597. NET.............406

RECEPTACLES AND PLUGS
Standard receptarles and plugs set in hcavy aluminum shells. Receptacle extends $3 / 16^{*}$ above and plug recessed $13 / 16^{\prime \prime}$ below surface A3881. Fic.
A 3882 , Polarlzed Piug. 11 FIG. C. Receptade. Accommodates both plugs above. One elongated slot, one standard. 11 C

## MICROPHONE SPRINGS

FIG. E. Highest quality tempered steel springs for mounting microAhone in ring holder $\mathbf{A} 557$. Set of 8 . NET...15C

QUALITY MICROPHONE CABLE

## UTILITY CABLE

A weatherproof cable fully protected against all outdoor climatic conditions. Individual conductors are of high grade stranded copper. rubber-covered with full cotton serving. Completely shielded. Heavy rubber cover ing; will stand up under most severe conditions of use. Ideal for outdoor sound installations, portable microphones, etc.

| CAT. | Cond. | $\begin{aligned} & \text { PER } \\ & \text { FY. } \end{aligned}$ | FEET |
| :---: | :---: | :---: | :---: |
| $43515$ | $\begin{aligned} & 2 \\ & 3 \\ & 4 \end{aligned}$ |  | $4$ |



## HIGH IMPEDANCE

For crystal, dynamic and velocity mikes. Internal conductor made of highest quality stranded copper wire. Live rubber outer covering assures ample flexibility. Completely shielded. Dependable mike cable at truly low prices.

SINGLE CONDUCTOR

A2499. PER FOOT.

DOUBLE CONDUCTOR A2498. PER FOOT PER $100^{\circ}$ FEET
33.25
$85^{1 / 2} \mathrm{C}$
See Pages 138 to 140 for additional cable Ustlings of all types. Our cable stocks are always complete; quick turnover ass ures you
of freshness and top quallty.

## MICROPHONE ACCESSORIES



## HIGH-GRADE CABLE CONNECTORS

## SINGLE CONDUCTOR

Ruggedly constructed. chrome finished pligs and receptacles. Equipped with spring cord protectors and coupling ring lock.
AK161. FIG. A. PIug. 246
A4162, FIG. C.
Receptacle.
…....................... . . .
MINIATURE TYPE
Molded bakelite connectors housed in cadmium-plated brass shells. $3 / \mathrm{s}^{n}$ long $11 / 3^{\prime \prime}$ outside dianneter Bakelite element held in place by set-screw. For cables up to $1 / 4$ ".

| Flg. D. <br> Male | Con- <br> tacts | Fig. B <br> Female | NET |
| :--- | :---: | :---: | :---: |
| $A 3876$ | 3 | A3878 | 18 c |
| A3877 | 4 | A3879 | 19 C |



## CHASSIS CONNECTORS

A4163. Fig. A. Standard for single conductor microphone cable. TheT. 18 C A3875. Fig. B. Closed circuit connector. When cable connector is removed, circuit automatically
closes. NET

A4 164 . Fig. C. Connects two microphones or speakers in parallel to a single input or output of an Amplifier.
$\$ 1.18$

## COMPACT CONNECTORS

Chassis connectors which mount in $3 / 16^{\prime \prime}$ hole. With knurled mounting ing, washer and locking nut. Wellmade for dependable service.

Fig. D. Con- FIg.E.| Male tacts Female NET | A4167 | 3 | A4165 | 29 C |
| :--- | :--- | :--- | :--- |
| A4 168 | 4 | A4 166 | 32 C | A4169, FiG. F. Cap and Chalm. For sealing chassis connector outlets. Polished chromeNetated brass cap. .29



MICROPHONE CONNECTORS
Machined heavy brass shell, finished in polished chrome. Male section carries coupling ring; female secized; may be securely tocked together. Contactsareofsturdy bronze molded in genuine bakelite. The standard connector formike cables. housings. Bakelite elements are interchangeable. For use on standard microphone housings or as mike cable connector.

| Flg. B. | Con- | Fig. A. |
| :--- | :--- | :--- |
| Male | tacts | Fiemale | A1965 $\quad 3 \quad$ A 196759 C

SHIELDED PLUG AND JACK
FIG. A. Fully insulated 2 and 3 circuit plugs and jacks. Plug only illustrated. Nickel-plated brass.

## 2 CIRCUIT

A5666. PLUG. EACH... 44 C
A5667. JACK. EACH
3 CIRCUIT
A5666. PLUG.
A5667. JACK. EACH... 446
3 CIRCUIT A5668. PLUG. EACH...59C A5669: РАСК. ЕАС. 59 C

MIDGET JACK
FiG. C. A three contact microphone jack essrecially designed to ht the plug described to the left, absures purdy spring construction

## ARMORED CONNECTORS

Sturdy, heavy-duty connectors for microphone cables. Molded bakelite body encased in substantial metal shell. Ideal for places where rough usage would result in break age of the ordinary type plug or socket. Polarized type; prevents possibility of making incor.ect connection. Substantial knife-blade contacts will handle up to 10 ainperes at 250 volts. Spring insert in socket assures positive contact. AdA7579. FIG. C. 3 Prong 18 Plug. NET..................48C A7578, FIG. D. Polarized 69C
 Mounes in a sincle 3 with plug. A8957. PLUG. A895 ............................ 35

PORTABLE JACK
FIG. D. Insulated portable jack for microphone extension cords. Black bakelite shell.
A5665.
.35 c


## AMPLIFIER-SPEAKER CASE

A sturdy, all-purpose case. Just what you have been looking for to house your present amplliher and speaker. Has convenient carrying handle. Haadsotac tan airplane-cloth coverling. Weatherproof. Has grille for $12^{y}$ speaker, cayend with attractive cloch. Grille is backed with heavy metal acreen. Special blocks with strap holders wermit carrying de stype mike stand. Web straps hold apeaker cable in place. Inside si
x $11^{\circ}$. Shgg. wt. 18 lbs.
A12061.
$\$ 5.95$


## SINGLE SPEAKER CASE

An attractive case for any $12^{n}$ dynamic speaker. Ideal for portable sound systems. Speaker opening with grille cloth is backed with heavy metal screen. Removable back fitted with snaptype trunk clasps. Constructed of heavy plywood. Has carrying handle; with rubber feet on bottom. Inside size: $123 / 4 x 123 / 4 \times 81 /{ }^{\prime \prime}$.
Shpg, wt.. 9 its. whpg, wht., 9 lbs. A popular case A 12066.
$\$ 3.50$
A12064. Siinilar to above but



PHONOGRAPH CASE
An attractively designed case for bousing phonographs. Construction is of sturdy plywood for long, hard usage. Has blank motor board. Finished in handsome, durable air-plane-luggage material with tan tweed effect and harmonizing maroon striping. Corners are reinforced for added strength. Inside
size: $163 / 4 \times 13 \times 9$. Shpg. wt., 131 bs .
A1 2068.
material with
diriping
for adden string strength.
$3 \times 9 \%$. Shpg. wt., 13 lbs
$\$ 4.75$

## DUAL SPEAKER CASE

Permits casy carrying of two $12^{\circ}$ speakers. Case divides into separate units, servins as baffles when speakers are in use, Has attractive airplane cloth covering and sturdy carrying handle. Speaker grilles are backed with heavy metal screen. Heavy ply= wood construction; snap-type trunk clasps, rubber Fet on bottom of each sectlont. Extremely ceptionally well-made carrying case at a remarkably low price. Size inside closed, $20^{\circ} \times 123 / 4^{\prime \prime} x$ $81 / 2^{\prime \prime}$. Wt., 12 lbs .
A12065.
$\$ 5.75$

SPEAKERS-AMP. CASE
Designed to make most large sound systems completely portable Use it for your present amplifer and accessorles. The attractive airplane cloth-covered case has ample room to carry amplifier and two $12^{\circ}$ dynanic speakers. Separates into three units, two of which serve as speaker baffes; holds am-
plifier in botcom plifier in bottom section. All units fasten securely together with wood with reinforced corners. Inside size: $25 \times 201 / 2 \times 15^{\prime \prime}$. Shpp. wt 28 lbs . An unusually well-built and extremely handy case. A12063.
$\$ 9.25$
ments: $21 / 2 \times 17 / 4 \times 1214$. Shps. we. 21 lbs. A12060. $\$ 6.95$
.. 40.


Will accommodate Knlght 14 and 30 watt Economy amplifiers and one or two 12 inch speakers. Heavy plywood construction throughout. Speaker openings have protective cloth grille. Has attractive alrplane luggage finish and sturdy carrying handle. Snap-type trunk clasps. Inside measure-

## AMPLIFIER-SPEAKER CASE

,

$\square$
.
$\qquad$
$\qquad$



$\qquad$


-


## AMPLIFIER CASE ONLY

This case has treen especially designed to house any 1940 Knight amplifier. Will alse give portability to other amplifiers of simsilar dimensions. Construction is of heavy plywood with reinforced corners. Handsome airplane-luggenge finish. With convenient carrying handle. Inside measurements: $21^{1 "} \times 15^{\circ} \times 135 /{ }^{"}$. Shpg, wt., 15 lbe. Here's a real value in a dependable portable case
A12059.
$\$ 5.95$


## PIONEER 300 WATTS A.C. GAS-ELECTRIC PLANTS

Here is the ideal solution to the problem of using standard 110 volt A.C. amplifiers and sound equipment in advertising trucks and cars. Super efficient, dual-purpose power plants provional D.C stant A.C. voltage output volt storage battery if output Engine is 4 cycle, air-cooled $/$ onstant type with built-in governor to maintain constant type with Tank holds one gallon of gasoline; enough to operate engine for 12 to 16 hours. Generatornd dual type, supplying 110 volts 60 cycle A.C. A.C battery charging D.C. Load capacity capacity, generator is 300 watts;
units, and for sign-lighting purposes. Can be used while truck is in operation. Self-starting type
Size. $1912^{*} \times 14^{\prime \prime} \times 14^{\text {. }}$. Wt. 120 lbs . A dependable plant. A10953. Type BD6. 55835
A10954. Type BDRG. Same as BD6 unit but with remote control pushrbutton starting and stopping.
NET....
SEE PAGE 68 FOR ADDITIONAL POWER CONVERTERS AND GAS PLANTS

## 240 WATT 6 VOLT POWER CHARGER

A new development in Lighting Plants that gives A new developinent in lower cost. The patented you higher power at ine is designed to operate semi-Diese type economically on gasoline, keroefficiently and economicalig advantages are: no sere, or fael oits, carburetor, valve springs, timing
valves, tappete valves, tappets, caf running out of oll. Complete unears or atamatically lubricated. It is smoother running than any other engine of its type years of market, assuring you of A 6 volt storage battery satisfaction and service. A o volton permit self(not supplied) and a push-button Engine is starting.
coupled directly to generator. Latter is equipped couth 4 poleas and 4 brushes. Output is 240 watts wit 6 V . D.C. This is sufficient power to furnish at lights for the average 6 room house. Unit is attractively finished in red. Fully guaranteed for 6 months against defective, 75 lbs. material. Approx. shpg. wt., 75 lbs. A10963.
s3525
SEEPAGES G6 AND 68 FOR BATTERIES SEE PAGES 66 AND 68 FOR BATHERIES
AND FARM LIGHTING ACCESSORIES

$$
3
$$

## KNIG\&T PROJECTORS, BAFFLES, Etc.



## 8" PROJECTOR

A specially deslgned unit for obtaining Rne sound reproduction. Enables even efficiency. Will sot rattle for maximum ing frequency. Construction is of heavy spun steel alloy, light in weight, yet very strong. For any $8^{\prime \prime}$ speaker. This unit is particularly well-sulted for call systems in offices, schools, auditoriums, hospitals. etc. The convenlent, adjustable mounting bracket described below permits either wall or ceiling mounting. Fixture to which bracket attaches is malleable iron and welded to the baffe to give additional strength. Bell diameter is $14^{\prime \prime}$; overall length of unit, $17^{\prime \prime}$; fare extension, and $^{\text {". Seautif }}$. Beale enamel finish. Speaker nockle enamel fintsh, Speak-
er not
Inded. Shipping weight, 5 lbs. A10293. NET
A10294. Bracket for use with above


## DELUXE STEEL-ALUMINUM

Designed to afford complete speaker protection as well as adequate sound distribution for either outdoor or indoor sound installations. Baffe is made of 18 gauge aluminum. Back is heavy gauge $17^{\prime \prime}$. Will Completely equipped or 12 speaker. loops and all necessary hardware. For smaller speakers, use reducer rings listed below. Finished in attractive weather-resisting battleship gray. Shpg. wt., 15 lbs.
AETO290.
\$425
Al0282. Similar to the De luxe Model described above, but of allaluminum construction. Shpg. \$3.50 A10280. Reducer ring for $8^{\circ}$ speaker. A1O281. Reducer ring for $10^{\circ}$ speaker.


## DELUXE ALL-STEEL PROJECTOR

Beautifully and ruggedly constructed of sheet steel. Impossible to damage; rattle-proof. Will house all types of $12^{\prime \prime}$ speakers with or without matching transformers. Steel-spun $20^{\circ}$ in sections, bell flare and speaker housing. Measures tension. With screened breather opening in apeaker housing for proper back pressure release. Has baked-on grey art metal finish. Shpg. wt., 8 lbs. A10935. Steel Baffe, less bracket. NET.
\$695
A10936. Mountimg Bracket for above. NET.


## AUTO TOP \& WALL MOUNT

For use with any of the Steel-Aluminum Baffes listed above. Heavy rigid construction. $12^{*}$ high with cast mounting base 7* baffle to the angle for maximum coverage. Easily mounts on roof of any car A10568. Auto top and wall mount finished in black wrinkle. 8 lbs .
A10569. As above but finished 9705 in aluminum. Wt. 8 ibs . NET....... $\mathbf{4} 2.55$


PROJECTOR STAND ONLY
Strong. sturdy floar stand. Swivel per${ }_{46^{\circ}}$ mits to $76^{\circ}$. ${ }^{\text {Has }}$ locking type clutch Collapsible tripod base folds like a music stand. Black enamel finish. Less projector. For use with De Luxe AllSteel Projector
A 10935 , upper right. Shpg. wh., ${ }^{\text {right. }} 15 \mathrm{lbs}$.

A 10566 A
above but for
De above but for De Luxe Steel-Aluminum baftes above
center.
NET
NET...... $\$ 5.95$
SEE
NEXT PAGE FOR ADDED BAFFLE
LISTINGS


CAR PLATFORM FOR BAFFLES
Designed for mounting baffles, projectors or horns on ronf of auto. Unnecessary to drill any holes, and platform will not mar finish of car in any way. Made of varnished maple fully weather-proofed. Vacuum cups and adjustable straps hold platform firmly in place. Quickly and easily attached or removed from any car. A12515.

## LOW-COST DEMOUNTABLE BAFFLES

Fig. A. For use with any $10^{\prime \prime}$ or $12^{\circ}$ speaker. Will greatly increase sound coverage. Weatherproof construction ior either outdoor or indoor use. Bell speaker housing. See listing below. Shipped knocked down. Shpg. wt., is lbs. Good quality; low cost. $\mathbf{A} 10270$. Baffle only. NET $\mathbf{~} 50$ A 10271 : Batfie only. NET S2. 35


Fig. B. Semi-directional type demountable weatherproof baffe for moderate directional elfert broad type projection. Bell measuress $34^{\circ}$ deep. Will house $10^{x}$ to $12^{\text {x }}$ speak. ers. Supplied less speaker houging. See listing below. Shipned knocked down. Shpg. wt., 10 lbs .
A 10276 . Baffle only NET $\$ 4.12$
A 10271 .


KNIGHT MARINE HORN
Especially designed for weatherproof nstallations on mobile Sound Trucks, Police and Fire cars, Airports, Stadiums, etc. Bell and housing are spun of heavy gauge steel alloy. Light in weight, yet very strong. Possible physical damage to cone of speaker position. The speaker faces the inside position. The speaker faces the inside tion will withstand exposure to rain snow and wind. Bell opening, $221 / /^{\pi}$; soverall length. $173 / 4^{\prime \prime}$; helght from base, $27^{\circ}$. Designed to house any $8^{7}$ speaker or unit. With adjustable mounting bracket. Less speaker. Quality-built for dependable, and lasting service. $\$ 914$
Shpg. wt. 25 ibs. AIO938. NET. . . . . . .
\$ 1814


ATLAS HORNS
A completely new type of weatherproot horn designed especially to withstand severe weather conditlons of all kinds. For use with moblle Sound Trucks, Police and Fire cars, etc. Speaker unit mounts in inverted position in heavy steel horn which is acoustically treated
A 10572 , WX-8. Horn only for $8^{\circ}$ speaker. 18 diam.' 12 deep. Less Speaker and fixture. 9 lb
$\$ 9.11$
A10573. WX-8HP. Complete horn with $8^{\prime \prime}, 16$ watt speaker. Less MET........................... 17.05
A10574. wX-12. Horn only for $12^{\prime \prime}$ speaker. $24^{*}$ diam., $16^{*}$ deep. Less speaker and fixture. 18 lbs. . 17.64 A10575. WX-125P. Complete horn with $12^{\prime \prime}, 20$ watt speaker. Less met ming fixture. 24 lbs. ............... $\$ 27$
A 10576 , WXB, Fixture and base
for WX-8 horn. 12 lbs . NET. $\$ 3.53$ A10577. Wxc. Fixture and base


WATERPROOF HORN COVERS
Affords protection against rain, snow, dust. etc. Slips over bell opening. Made of water-resisting cloth. With draw string. Shpg. wt., 1 lb .
A10285. For 12 to $10^{\circ}$ bell. 95 c A 10288 . For 16 to $18^{\circ}$ bell. $\$ 1.00$


DE LUXE WALNUT BAFFLES
Recommended for all indoor sound system installatigns where baffle must harmonize in appearance with fine furnishings. Only the finest hardwood vencers have been used; band-rubbed to a high plano finish, Has attractive svoven gold-thread grille sound reprodyes bame iengh to allow natural sound reprodyction, Measures $161 / 2^{\circ}$ high by $141 / 2^{\circ}$ wide by $1 / 2$ deep at base, 3 at top. Reducers listed at right may be used for mounting amaller diameter apeakers. Complete with hardware for wall mounting. These are de luxe baffer in every respect; they acoustically correct in design. Shlppling A10930. For $11^{\prime \prime}$ or $12^{\prime \prime}$ S peakers. NET $\$ 90$
weight, 10 lbs. A 10930 . For $11^{\prime \prime}$ or $12^{\prime \prime}$ Speakers. NET
A 10931 . For $8^{\prime \prime}$ Speakers. $12^{\prime \prime} \times 1012^{\prime \prime} \times 52.35$
$5^{\prime \prime}$. Shpg. wt.. 6 lbs . NET................... 2.3


## KNIGHT HORN UNIT ONLY

Efficient $8^{\prime \prime}$ driving unit for horn type baffle. A ruggedly-built, high-fidelity unit suitable for use with any shape of horn projector. Completely dustapproximately two pounds. Excentionally high force factor assures high efficiency which produces maximum coverage with a minimum of driving power. Capable of handling 15 watts of power with peaks of 18 svatts. Accurately centered voice coil has an 8 ohm impedance and is $11 / 4^{*}$ in diameter. Afss matching transformer. Wt.., $61 / 4 \mathrm{lbs}$.

S7 35


## $31 / 2$ FOOT TRUMPET MODEL

Exponential $31 / 2$ foot all-aluminum bell projector of accurate design and high efficieacy. For use in projecting sound over large areas. Mechanically rigid
to prevent resonant effects. Brass couplinga are pro vided for attaching driver units having a are pro$13 / 8^{\circ}-18$ thread. Overall length, $42^{\prime}$. Bell opening, 32** A durably F =built trumpet that witi give opening, ally dependable service under any kind of operating conditions. Acoustically correct in design and offered at an unusually attractive price. Shpg. wt., 11 lbs .
A10942. NET


FINE VALUES IN FABRIKOID WALL BAFFLES

## STANDARD BAFFLES

An excellent value in an enclosed speaker baffle. Inclined face provides correct coverase over greatest area when mounted at usual helght above floor. Made of strong plywood covered with dark brown leatherreproduction of low frequencies in musical selections Rigid onant vibration Reducers prey be employed with smaller diameter speakers A10926. For $11^{\prime \prime}$ or $12^{\prime \prime}$ Speak ers. $17^{n} \mathrm{~h}$. $x 131 / 2^{\pi} \mathrm{w}$. $x 8^{n} \mathrm{~d}$. Shpg. A10927. For $8^{n}$ speakers. $11^{\prime \prime}$ h. $x 934^{\prime \prime}$ NET........... ${ }^{\text {w }}$.
$\$ 1.65$
10932. Reducer for $10^{\circ \prime}$ Speakers. NET........................

## TRUMPET \& UNIT

4 For all P.A. applications where full audio power must be projected directaudio power must be projected diretically dealgned horn and bell allows gradual expanston of sound wavegradual expansion of sound wavetortion due ta turbulent-air eddy currents. Ideal for "Election Campaign" sound truck s, athletic fields, etc. Horn is made of spun-steel, Will withstani 300 pounds pressure, yet is easily portable and light in welght, Bell dlameter $24^{*}$; length of horn, $36^{\prime \prime}$. Equipped with 15 watt unit described at left. Unit is of Permanent Magnet Dynamic type which does not require field excitation. Advanced design of unit assures highly efficient operation. Iron mount is welded directly to trumpet for greater strength. Mount is the. Sound truck bracket may be pipe. Sound truck bracket may be horn with $1 / 2^{2}$ pipe and connected to horn with $1 / 2$ nipple and fange, or Shpg. wt., ${ }^{17}$ lbs. with A10928. Horn With 15 Watt Unit. NET
A10929 Adjustable Crow-Foot
Bracket. NET............... 1.98

## ALL-ALUMINUM BELL TRUMPETS

Truc Exponential Bell Trumpets of non-resonant, heavy-gauge spun aluminum. Flat frequency characteristic is assured by scientifically ac curate design. Connecting sections are protected with heavy gaskets to prevent rattle, Finished in a durable aluıinum lacquer which provides absolute protection against weather.

## 6 FOOT MODEL

An exceptionally well-designed trum pet with an overall length of $72^{\circ}$. Bell section is of smoothly spun heavy gauge aluminum with a heavy bead ing around edge which strengthens construction. Bell opening. $23^{\circ}{ }^{\circ}$ Brass coupling same as in $31 / 2$ foot model. Ideal for powerful Public Address coverage Absolutely dependable and effective for A1OT.....
\$3234


## PERMANENT-MAGNET DYNAMIC UNIT

A superior unit capable of handling a full 20 watts of audio power"Alnico" magnet weighs 64 oz. High degree bf sensitivity. Volce coll gap alignment permanently fixed so that it cannot shift. With tempered Standard 1$\}^{n}-18$ threaded throat. Shpg, coil impedance, 15 ohms dependable dynamic units ever built. A1O944. NET


## CHANDELIER SPEAKER

 EQUIPPED WITH BAFFLEAn entirely new baffe design giving $360^{\circ}$ coverage; helps reduce feedback. Easily installed; elimnates the use of multiple speaker ciusters. Houses a $12^{\prime \prime}$ permanent magnet dynamic speaker with voice coil impedance of ohms. Heavy gauge steel spinnings are finished in a pear gray ename. Matching transformer with 500, 100, 1500 and 2000 ohm primary supplied. Overall dia., $31^{\prime \prime}$; height. $14^{\prime \prime}$. a cleverly designed highly efficient new speaker and baffie design that will give wonderful sound ence in installation. Shpg, wt 26 lbs
A10947. Speaker and Baffle.
\$240
At 0948. Baffieonly. Wt. 21 lbs . NET $\$ 16.17$

## 5-INCH MODEL

Similar in construction to the mordel listed above. Particularly suited for communication and paging systems. Has $5^{\prime \prime}$ permanent magnet dynamic apeaker with voice coil Impedance of 3.2 ohms. $17^{\prime \prime}$

$\$ 7.35$


An exceptlonally useful field supply unit, using a type 80 tube as a rectifier. Suitable for converting a D.C. speaker field to A.C. operation. Furnishes 15 watts of pure D.C. under normal use, Components mounted on metal chassis. Transformer placed above chassis to provide adequate ventilation. Special filter reduces hum to an inaudible
infimum. With 110 volt. 60 cycle transininimum. With 110 volt, 60 cycle transtormer. A dependable Field Exciter offered at a really attrartive low price. Less tube.
A9482. NET.
$\$ 2.94$


## STANDARD TYPES

Standard types are suitable for all moderate power requirements. Heavy pressed steel frame assures perfect volly enclosed magnet and voice coil ully enclosed magnet and potection against dust. Less transformer.
A 12485 . Knight $8^{\prime \prime}$ P. M. speaker. Normal rating, Sheg. wt., 4 lbs.
$\$ 2.25$
A12393. Line transformer. 55 C A 12486 Knight $12^{\prime \prime} \quad$ P. M. speaker. Norinal rating. Shps. wt., $71 / 2 \mathrm{lbs}$.
$\$ 3.95$
A 12396 . Line transformer. 75 c

## KNIGHT P. M.

 DYNAMICSPEAKERSThese powerfut, PermanentMagnet type dynamic speakere have been designed to provide faithful reproduction of voice or music at high volume levels. An entirely new type of magnet collstruction provides exceptiona fensitity response. Ideally suited fidelity response. Ideally suited for use wherever quality reproduction combined with powerhandling ability must be had a pedance, $6-8$ ohins. These speak ers are especially designed for brilliant reproduction of voice and music. either Indoors or outdoors.

## HEAVY-DUTY TYPES

These speakers are designed for use in high level systems. Special inagnetic core material produces a strong fied. Provision is made for mounting transiormer on speaker frame. Less transformer A 12487 . Knlght $\mathbf{1 2}^{*}$ P. M. Speaker. Normal rating. 12 watts. Shpg. "t., $91 / 2$ lbs. $\$ 6.67$ A12396. Line transformer. A12 397 EAC Output transtormer A12488. Knight $15^{\circ}$ P. M. Shpg. wt., 19 lbs. $\$ 17.38$ A12398. Line transformer. A12 395 . Output transformer.

## UTAH PERMO-

## DYNAMIC SPEAKERS

These P. M. speakers represent the last word in Permanent Magnet design and must be heard to be appreciated. Extremely high efficiency and sensitivity are achieved through the use of a newly deves oped thagnet. The entire voice coll assembly is conipe and lirt protertion agalnst asuand dirt. pachen the performance of the same pase of electro-dynanic speaker. Conservatively rated. Less output transformer. Select output transformer from list below.
A12470. Type G8P. $8^{\circ}$ Cone. 10 watt input. $6-8$ olims impedance. Shpy, wt., 41/2 1bs.
$\$ 4.70$
A12471. Type E12P. Norinal input, 13 watts; peak, 20 W . Cone Shpi, wt., $61 / 2 \mathrm{lbs}$. .... $\$ 7.35$

A12472. Type F12P. Normal Anput. 16 watts; peak, 24 watts. ance, 8 obms. Shpg. Wt., $\$ 8.23$
$81 / 4 \mathrm{lbs}$. NET............. 8.


A12473. Type G12P. Normal mput. 17 watts, peak, 26 watts Cone, $12^{*}$ dia. ance, 8 ohins. $\$ 10.88$
HET
A12474. Type GS12P. 64 oz magnet. Input, 20 watts; 30 watts peak. $12^{\circ}$ dia. cone. Voice coil impedance is 8 ohms. Shpg. type P.M. Dynamic. $\$ 14.70$

## TRANSFORMERS FOR ABOVE SPEAKERS <br> A12475. Line transformer for G8P and E12P. . Universal plate transformer for G8P Ei 2 . A12 $278^{\circ}$. Line transtormer for $F 12 \mathrm{P}$ and G12P......... $\mathrm{G} i 2 \mathrm{P}$ A12479. Line transformer for GS12P.  <br> 



FAMOUS CINAUDAGRAPH "MAGIC-MAGNET" SPEAKERS

## PERMANENT MAGNET SPEAKERS

MA 6-8
Ideal for public address installations where power capacity up to 8 watts is sumcient. 6 "cone. Yoice coil impedance, 6 ohms. Less transformer A10 410 . NET
$\$ 2.47$
EZ 8-7
An $8^{\prime \prime}$ reproducer kiving superior periormance. Frequency response up to 8000 cycles. $5-8$ watt input. Less transformer. Wt., $31 / \mathrm{lbs}$ A1OT11.
$\$ 4.41$

## EZ 8-10

Has a more powerful magnet than the EZ8-7 speaker. Minimum har monic distortion. Input. 6-8 watts.
$8^{\prime \prime}$ cone. Voice coil. 6 ohms. Less transformer. Wt.il ${ }^{41 / 4}$ lbs. $\$ 6.17$

## NZ $10-7$

Larger diaphragm extends the low requency response for good quality performance at low cost. Input, 7-9 watts. 6 ohm voice coil impedance. $10^{*}$ cone. less transiormer. Shps Wt. $43 / \mathrm{s}$ ibs. NET
A10
$\$ 5.29$
NZ $10-10$
Large, powerful nagnet produces greater power-handling ability. Ideal for highclass equipment where portability, light weight and excellent response are required. Input power, 8-10 watts. 6 ohm imped$51 / 2$ libs. 14 . NET ....... $\$ 7.20$

FZ 12-7
A low-cost speaker incorporating many of the advantages of a large cone. Input. 7-9 watts. $12^{\prime \prime}$ cone. Voice coil, 6 ohinsis liss trang former. Shipg. wt., $61 / 2$ lbs $\$ 7.35$
A 10418 . NET........ $\$ 7$

## FB 12-11

A $12^{*}$ speaker ideal for gubllc address installations where moderate power is necessary. Input, 12-18 watts. Voice coil impedance, 6 ohms. Less transformer. Shpg. wt. $85 / 81 \mathrm{lbs}$. NET.
A1O419.
$\$ 10.88$

## FY 12-12

Designed for outdoor and indoor P. A. installations. $71 / 4 \mathrm{lb}$. "Nipermag" magnet. Power input 15-18 watts. 6 ohin voice coil. $12^{\prime \prime}$ cone. Less transformer. Shpg. Wt., $101 / 2$ ${ }_{\text {Al }}^{1} 10$
A10415. NET.
$\$ 16.17$

## HW 13-13

A speaker of great power-hand ling ability. Uniform response from 30 to 9000 cycles. Input 20 to 30 watts. 8 ohm voice coil. $13^{\prime \prime}$ cone. Less transformer. Shpg.
421 lbs.
A104 16 . NET....... $\$ 35.87$

## SU 18-12

The ultimate in speaker development. Combines large powerhandling ability with uniform fre quency response. Flat from 30 to 10,000 cycles. Input power from 30 to 35 watts. Voice coil
impedance, 8 ohms. $18{ }^{\prime \prime}$ cone. Less transformer. 64 ibs. $\$ 58.80$

## AIR COLUMN UNITS

Designed to withstand the rigorous condtions imposed by weather in Designed to withstand the are of P. M. type. Supplied less transformer.

## FYA

Input from 15 to 20 watts. Flat response from 100 to 6000 from 10 to to $8^{*}$ cone. Voice coil, 6 ohms. 6 hpg. wr. 8 lbs .
A10420. S18.23

HWA
Power input, 25 to 30 watts. 10 cone. Flat response from 100 to 7000 cycles. 6 ohm voice coil. Shpg. wt.,

## 27 lbs.

A104 ${ }^{421}$. $\$ 32.93$

SUA

## EXPONENTIAL HORNS

Response to 8000 cycles. Size of cone, 10. input, 30 to 40 watts. ${ }^{6}$ ohm voice coil. Shpg. wt., 36
lbs.
A1O422. $\$ 53.80$

Designed for use with air column units above. Strongly built to withstand hard service in any type of outdoor instantationsle welght. Ideal spun aluminum or greatest strength Racetracks, etc. wherever longrat large sound systerns is desired for greatest area coverage. Less handles and range projectiackets listed below.

| UU | FX | SW |
| :---: | :---: | :---: |
| ns are | with | horn for use |
| ctions. Equi | mit listed | is necessary. Use |
| th | or any type speaker unit. $28^{\prime \prime}$ | HWA or SUA |
| r. 24 . For Hwa or | length. $24{ }^{\text {\% }}$ dia bell. | ove $30^{\prime \prime}$ length with |
| UÁ units. Wt., 5 lbs. | Shpg. wt., 7 lbs. |  |
| A10425. S14.41 | A10426. S18.81 | A104.....S31.16 |

## HANDLES \& SUPPORTING BRACKETS

A10430. Supportng bracket and hand le NET.
$\$ 2.06$
A10431. Supportmg bracket and handle NET
$\$ 2.65$
A10432. Supporting bracket and handle for SUA unit. NET.
$\$ 3.38$

## PORTABLE SPEAKER STAND

Ideal for use in temporary installations where conditions do not warrant permanent mounting of loud speakers. Black crackle finish. Stand car be adjusted from 5 to 8 feet. Sure-lock adjustinent prevents slipping. Brackets listed above threaded to Git stand. Correct deal $\$ 10.29$ perfect balance; wlll not tip.
A1O448. NET


Modcls KM and KV speaker and cabinet assemblies, containing 8, 10 , 12. 15. or 18 speakers, consist of specially designed Jensen Speakers hoth Peri-dynamic and Bass Reflex principles. In the Kincorporating both Peri-rynamic and Bass Reflex principles. In the KM Models, extra octaves of low frequency response are made available to an extent not possible even with an inflnite baffe. Middle and higli freguency acterissics are noicrably improven. Maximum performance characteristics are obtained at a minimum cost. Use the KM Reproducer ment is for general high nuality performance boom, and vibration are eliminated. Use tyme $V$ All cavity resonance. tion of voice or speech. Speakers supplied less transformers. See listing below at right for suitable impedance-matching transformers.

MODEL KM ASSEMBLY

| No. | Speaker | Size | Weight | NET |
| :---: | :---: | :---: | :---: | :---: |
| A963 | 咗 | 24" $\times 173 /{ }^{*} \times 1110^{\prime \prime}$ |  |  |
| A963 | 110 C | $28^{\prime \prime} \times 21 /{ }^{\prime \prime} \times 12 \mathrm{~K} \%^{\prime \prime}$ | 45 lbs . | \$17.82 |
| A963 | PM12C | $303 / 4 \times 231 /{ }^{\circ} \times 125 /{ }^{\circ}$ | 5.3 lbs . | 3 |
| A963 |  | $301 /{ }^{\circ} \times 233{ }^{\circ} \times 125 /{ }^{\text {c }}$ | 58 lbs . |  |
| A9635 | PM15B | $3{ }^{3}$ | -66 lbs. | 33.87 |
| A9636 | A15PM | $3.31 / 4 \times 25 \times 1 / 2 \times 1350$ | 89 liss. |  |
| A9629 | PMJ18 | $38 \% \%^{*} \times 275 \% 6^{*} \times 135 / 9^{\circ}$ | 173 llsg . | 1,08 |

## MODEL KV ASSEMBLY

These repronucers incorporate 8 , 10 , or 12 specially designed speakers a ince they are intended for the best possible quality of understandable pech. alling public speecheectialy recommended for such uses as paging and alling, pubic speeches, stage and floor show

| No. | For Speaker | Size | Weight | NET |
| :---: | :---: | :---: | :---: | :---: |
| A9637 | PM8C | $111 / 8{ }^{*} \times 93 /{ }^{\circ} \times 61 /$ |  |  |
| A9638 | PM10C | 141/"* $\times 11^{\prime \prime}{ }^{*} \times 71 / 2$ " | 17 lbs . | 11.11 |
| A9639 | $\mathrm{PM}^{\text {PM12C }}$ |  | 22 lbs . | 13.88 |
| A9640 | PM12B | $163 / 4{ }^{*} \times 131 / 4 * \times 95 / 3^{\prime \prime}$ | 25 lbs. | 20.79 |

## JENSEN KM ENCLOSURES ONLY

Particularly recoinmended for use with Jensen speakers but may be used materially speaker of the correct size. These KM enclosures wil speaker and can be used with cither dynamic or p perionnance of any hightruality properly designed enclosyres where M. types. Use these fidelity tonal results are demanded Rugerlly the very finest highcorrect. Enclosures are shipped knockel-down in a convonient pactialy All necessary assembly screws and hardware are includer tert package detailed instructions. Reruire only a screwdriver and a few mirutes time to assemble. Suitable metal hangers for vertical mounting are supplied with each enclosure. Less speaker.

| No. | Type | For Speaker | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A10484 | ER81 | M8 |  |  |
| A10485 | B R101 | PM10C | 38 lis. | . 11.64 |
| A10486 | B R121 | PM12C | 47 lbs. | 3.44 |
| A9642 | B R181 | PMJ18 | 8.5 Ibs . | 5.64 |

## JENSEN KV ENCLOSURES ONLY

Enclosures may be used with any type of dynamic or permanent magnet speaker but are particularly allapted to Jensen unit.


| Forspeaker | Wt. | NET |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { PM8C } \\ & \text { PM10C } \\ & \text { PM12C } \end{aligned}$ | $\begin{array}{r} 6 \mathrm{lbs} \\ 9 \mathrm{lbs} . \\ \mathbf{9} \text { l } \mathrm{lbs} . \end{array}$ | $\begin{array}{r} \$ 4.06 \\ 4.94 \\ 6.09 \end{array}$ |

## JENSEN

## "L"' PADS

Constant impedance suitable for units. Very on sprakers of the Jensen enclosure type. hey are desikned to il of theross the voice servently their use does or the speaker; conin "line" to primares of cause a misinatch Controls have an "of". or output transformer. loss at full "on" position. Gratual bie pad ontrol of speaker output volunie beth or anci "on" positlons. Shafte, are i" long or panels up to $1 /{ }^{\prime \prime}$ thick. With knob and indicator plate. Handle up to 5 watts. For 6 ohm A9010. Type ST276. NET.....73C

## PERMANENT MAGNET DYNAMICS

Scientifically designed and developed in the laboratories of the world's learling manufacturer of fine reproducers. Smaller units are ideal for replacement purposes, or for original installation in any type of radio receiver requiring the highest quality of reproduction. The larger $10^{\circ \prime}$ 12 and 18 units will adequately fill all requirements for full fidelity of eproluction in large radio receivers, l'ublic Address systems, Centralized radio and Sound installations, Call systems, etc. Sturdy frame under all types of climatic resist vibration and are rust proof for use under all types of climatic conditions. Correctly balanced and aligned range without rattles or annoying resonant peaks over-size permanent-magnet type field asscmblies of highly imased and alloy reguire no external field supply or D.C. exciting voltage eproducer units in the following listing mau be used with volage. The mpedance-matehing transformers listed below, for proper adjustable

| No. | Model | Size | $\begin{aligned} & \text { Voice } \\ & \text { Coil } \\ & \text { Imp. } \\ & \text { Ohms } \end{aligned}$ | Watts | Shpg. <br> Wt. <br> Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49600 | PM5FS |  |  |  |  |  |
| A9602 | PMGES | $6^{\prime \prime}$ | 4 | 3.5 | 2 | \$ 1.59 |
| A9605 | ${ }^{\text {PM }}$ P8DS | $8^{\prime \prime}$ | ${ }_{4}$ | 6. | 4 | 4.70 |
| A9610 | PM8C | $8^{\prime \prime}$ | 6 | 8. | 5 | 2.73 |
| A9612 | PM10C | $10^{\prime \prime}$ | 6 | 9. | $71 / 2$ | 6.1 |
| A9613 | PM10H | $10^{*}$ | 8 | 10. |  | 9.41 |
| A9614 | ${ }_{\text {PM12C }}$ | ${ }_{12}{ }^{\text {² }}$ | 8 | 10. | $7^{71 / 2}$ | 7.79 |
| A9616 | PM12B | 12** | 8 | 14. | 10 | 11.47 |
| A9617 | PMJ18 | $18^{\circ}$ | 8 | 2.5. | 88 | 140:50 |

## HIGH-FIDELITY P. M. SPEAKERS

Highest quality Jensen Permanent Magnet Dynamic Speakers. Designed correct than the standard models listed abovers have extended range, greater up to 7500 C . P. S. Have 8 ohm voice coils. Less output transformer.

| No. | Model | Size Dia. | $\begin{aligned} & \text { Voice } \\ & \text { Coil } \\ & \text { Imp. } \\ & \text { Ohms } \end{aligned}$ | Wats | Shpg Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { A } 9619 \\ & \text { A } 9621 \\ & \text { A } 9627 \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 12^{\prime \prime} \\ & 12^{\prime \prime} \\ & 15 \\ & 15^{\circ} \\ & \hline \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & 8 \\ & 8 \end{aligned}$ | 14 15 15 17 | 20 <br> $151 / 2$ $211 / 2$ | $\begin{array}{r} \$ 14.70 \\ 20.43 \\ 17.64 \\ 24.25 \end{array}$ |

## ADJUSTABLE IMPEDANCE

## MATCHING TRANSFORMERS

Permic accurate matching of one or more speakers to any output circult or line. Clip terminals with flexible lead for instant selection of proper impedance. Tube type is tapped at 4500. 7000, 10,000 and 14,000 ohms. Line type is tapped at $500,1000,1500$ and 2000 ohms.
For single or multiple speaker use.


| No. | Type | For Speakers | NET |
| :---: | :---: | :---: | :---: |
| A11390 | Tube | PMSFS, PM6ES.................. | \$0.50 |
| A11391 | Tube | PM6C, PM8C, PM10C, PM8DS, PM10H. |  |
| A11392 | Line |  | 1.32 |
| A11394 | Line | A12PM, PM12B, PM15B, PM12C, PM12H | 1.62 |
|  | Tube | A15PM................................. | 2.2 |
| A11396 | Line | A15P | 2.2 |
| A11397 | Line | PMJ18 | 5.88 |

 all high-level circuits al high-level circuits phonograph pickups. phonograph pickups, fiers, and similar equipment. Wirewound, rated at 1.5 watts. Mount in $3 / 16^{*}$ hole. $1 / 4^{\circ}$ shaft diameter; $7 /{ }^{\circ}{ }^{\prime \prime}$ long.

| No. | Type | Ohms | NET |
| :--- | :--- | ---: | ---: |
| A9011 | LA-8 | 8 | EACH |
| A6969 | LA-16 | 16 |  |
| A6970 | LA-50 | 50 |  |
| A6971 | LA-200 | 200 |  |
| A9012 | LA-500 | 500 |  |
| A6972 | LA-1000 | 1000 | $\$ 1.91$ |


P.M. SPEAKER CABLE

Round flexible weather-proo. cable. No. 18 covered 16 anded wire. 2 con cotton wrapping outer live rubber sheath. $\quad 21 / 20$ A2435, Per Foot

21/20
Inexpensive, two conductor rubber-covered cable. No. is stranded conductors. $11 / 2 \mathrm{C}$ A34 120 . Per Foot.

## Waidt DYNAUIC SPEAKIRS - UIATH:

## KNIGHT DYNAMIC SPEAKERS



Knight Speakers cost less, work better, and earn more for your. Universally accepted by discriminating servikemen Dynamics are equipped placements or as origlmal equipment. All Kingle or push-pull output tube.

## 5-INCH DYNAMIC

Developed especially for use in the new compact receivers. 6 volt model is ideal for use as a replacement speaker for autoradios. Voice coil is $3 / /^{\prime \prime}$ In diameter; inpedance is $31 / 2$ ohms at 400 cycles. Only 5 inches in diameter and $23 / 8$ inches deep. Provided with conWith universal transformer to match nll tubes̃ Shog. wt., 4 lbs. m9254. 6 Voot Field. A9984: 10000 hm Field. A9255: 3000 Ohm Field. NET $\qquad$ $\$ 1.29$

## 6-INCH DYNAMIC

Adequately fuifilis all requirements for fine reproduction in $3 / 4^{\text {" }}$ diameter: impedance is $31 / 2$ ohms at 400 cycles. With convenlently spaced mounting holes around rim of speaker. Universal transformer to match any output stage. Shpg. Wt., $41 / 2$ lbs.
A 925 6. 6 Volt Field.
A9955: 1000 hhm Field. 1800 hm Field tapped A 9259.2500 Ohm Field. NET
${ }^{\text {s }} 1.65$

## 81/2-INCH DYNAMIC

Ideal for all console receivers and snall P.A. Systems. Correctiy aligned voice-coil and coae ascoil, $1 / 2^{*}$ diameter; impedance is 3 ohms at 400 cycles. Diameter overall is $81 / 2^{\prime \prime}$; only $43 / 4^{\prime \prime}$ deep. With universal output transformer. Shpg. wt.. 7 lbs.
A9261: 1000 Ohm Field.
A9 262.18000 hm Field tapped at 300 Ohms.
A9263. 2500 Ohm Field.
NET
s2.25

## 12-INCH DYNAMIC

A well-built. heavy-duty speaker with excellent power-handing Will efficiently handle 8 watts at full volume without distorting or overloading. Ideal for use in console type receivers, indoor or outdoor Public Address systems, etc. Universal output transformer matches all tubes. Shpg. wt., 8 Abs for each type. A9267. 2500 Ohm Field
NET EACH.

## UTAH QUALITY DYNAMIC SPEAKERS

## MODEL " $Q$ " DYNAMICS

Each model of these new dynamic speakers incorporates every valuable feature of modern design, providing for excellent reproduction so important

WITH UNIVERSAL TRANSFORMERS
Their quality construction gives fine frequency Their quality constructionatively rated and has respple power-handling ability. Long efficient ample power-handing abics supplied less output transformer; have $21 / 2 \mathrm{ohm}$ voice coils.

| Cat. No. | Model No. | Sizein Inches | Fleld Ohms | Shipg. Wt. Ibs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A9322 | Q506* | 5 |  | 2 | \$1.32 |
| A9323 | Q530** | 5 | 3000 +1800 | $\frac{2}{2}$ | 1.32 |
| A9324 | Q518* | ${ }^{5}$ | +1800 | 3 | 2.00 |
| A9325 | Q610 | 6 | 1000 | 3 3 | 2.00 |
| A9327 | Q618 | 6 | +1800 | 3 3 | 2.00 |
| A9328 | 9625 | 8 | 2500 | $51 / 2$ | 2.70 |
| A9329 | 9810 | 8 | +1800 | $51 / 2$ | 2.70 |
| A9331 | 0885 | 8 | 2500 | $51 / 2$ | 2.70 |
| A9332 | 01010 | 10 | 1000 | $73 / 4$ | 3.82 |
| A9333 | Q1020 | 10 | 2000 | 73/4 | 3.82 |
| A9334 | Q1025 | 12 | 1000 | 9 | 4.41 |
| A9335 | 01212 | 12 | 1500 | 9 | 4.41 |
|  | Q1220 | 12 | 2000 | 9 | 4.41 |
| A9338 | Q1225 | 12 | 2500 | 9 | 4.41 |

${ }_{*} \uparrow$ Tapped at 300 ohms.
*Select output transformer from listing below

## SINGLE OUTPUT TRANSTFORMERS

For 5" speakers listed above and new Utah "Lightweight PM" speakers. May May atso be used or replacementse and splendld tone.
A9346. 2000 Ohnis impedance.
NET EACH A9 ${ }^{\circ}$. 400000 Ohm implmpedance A9349: 25,000 Ohms impedance.

# MAGNETIC \& DYNAMIC SPEAKERS 

## KNIGHT MAGNETIC SPEAKERS



## 5-INCH MAGNETIC

A well-designed nidget type speaker. Has rigid, pressed-steel irame and large-sized magnet Small size makes speaker idea Provides unusually fine tone. D.C resistance is 1000 ohms. Ideal for compact sets. Shpg. wt., 3 lbs . Aget
96.

## 6-INCH MAGNETIC

A sturcty and powerful magnetic speaker only $6^{\circ}$ in diameter. Has heavy pressed-steel frame and large magnet. Improved armature design. Handles up to 1 watt out put. D.C. resistance. 1000 ohms. or use in battery and A.C.-D.C AET ${ }^{\text {AT }} 5$
\$1.10


3-INCH MAGNETIC
One of the smallest speakers on the market only $3^{*}$ in diameter. For use in pucket-sized midget S.W. intercom systems, and small frame- fulvers. Rigid pressed-steel $23 \%^{\circ}$ mtg- centers. $11 / 2 \mathrm{lbs}$.
A9459. With 31/2" mtg. flange. NE T. 98. 458. Leas fange NET. 88 c

## 81/2-INCH MAGNETIC

A very efficient speaker which wil handle up to $11 / 2$ watts output duty magnet. D.C. resistance 1000 ohms. Ideal for battery sets, as extension speaker, and for multiple spcakerinstallations in A9253.
\$1.65


POWERFUL KNIGHT KINETIC SPEAKERS
Employ new "Alnico" magnet alloy. Adijusting screw permits compensation for plate current changes. Excellent bass responise. battery replacements in portable. battery, or auto rarlios. Alsn where units may be used elther as microphone or speaker. 5 " model is $21 \%^{\circ}$ deep; $6 \frac{1}{2} 2^{\circ}$ model is $28 / 8^{\circ}$ deep. Slipg. wit., 2 lbs. each.

5-INCH MODEL
A9525, 10,000 Ohms
A ${ }^{5} 526$ : 500 Ohm
EACH. $\qquad$ \$1.39
61/2-INCH MODEL
A9527. 10,000 Ohms
A9529: 500 Ohms. $\$ 1.59$ Handsome new walnut wood cabinet speaker, ideal for extenion use or for multiple speaker installations. The speaker is $81 / 2^{\circ}$ in diameter. pressed -steel frame, large magnet, pressed-8teel frame, large magnet,
and improved armature structure. 1000 ohms D. C. resistance. With A 940 cord. Shpg. wt., 8 ibs. ${ }^{2}$ A9485, With Volume Control NET NOA Swich s3.25

WALNUT CABINET ONLY Speaker cabinet, $91 / 4 \times 91 / 4 \times 51 /{ }^{\prime \prime}$. is also offered separately. Has grilles A9449 NET. \$1.40

## NEW OXFORD SPEAKERS



OTHER POPULAR SIZES IN P.M. DYNAMICS

| Cat. No. | Model No. | Size | $\begin{aligned} & \text { V.C. } \\ & \text { Imp. } \end{aligned}$ | Power <br> Watts | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { A9717 } \\ & \text { A9718 } \\ & \text { A9719 } \end{aligned}$ | $\begin{aligned} & 3 Z \mathrm{MP} \\ & 47 \mathrm{MP} \\ & 50 \mathrm{MP} \end{aligned}$ | $31 / 20$ $41 / 0^{\prime \prime}$ 5 | $3-4$ $3-4$ 5 | $11 / 2$ 2 $21 / 2$ |  | $\$ 1.09$ 1.15 1.47 |

TRANSFORMERS FOR ABOVE SPEAKERS
A9721 For $31 / 2^{\circ} 4^{4} 1_{8}{ }^{\circ}$, and $5^{\circ}$ A9 $722^{500}$ OHM LINE



ELECTRO-DYNAMIC SPEAKERS
Here is a line of high-quality Electro-dynamic speakers to meet al replacement or custom building response and long-life performance. Removable mounting brackets supplied only with the 5 " speaker. All models. except the $5^{\prime \prime}$ speaker. have universal output transformers. The model 6J has elongated holes in the mounting flange to fit either $6^{\circ}$ or $61 / 2^{\prime \prime}$ speaker opening. Voice coil impedance for all models, 3000 ohm field replacements can be used for 2500 or
 3000 ohm field replacements.
$\left.\begin{array}{c|c|c|c|c|c}\hline \begin{array}{c}\text { Cat. } \\ \text { No. }\end{array} & \begin{array}{c}\text { Model } \\ \text { No. }\end{array} & \text { Size } & \text { Field } \\ & \text { Ohms }\end{array}\right)$

JENSEN SERIES "S" DYNAMICS
A new series of high-grade speakers for general re
placement purposes. Outstanding for rugged con placement purposes. Outstanding for rugged conOrder A11 309 at 49 c output transformer is needed order A11399 at 49c net. *With transformer

MODEL H5S 5-INCH

## METAL SPEAKER CABINETS

These speaker cabinets are made of heavygauge sheet steel with a black rlpple finish that wletely chelip or peel off. The cabinet is completely enclosed. Louvres are punched in the beautifuver for relief of back pressure. A tive grille cloth protects speaker with attracand damage. This cabinet is ideal for extension speakers. call systems, and public extension speakers. call systems, and Public Address
installations. Makes an excellent instaliations. Makes an excellent speaker repair bench. Available in four standard sizes.

| Cat. | Size | For Speaker Size | Dia. of Grille | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $8^{\prime \prime}$ | $43 / 4$ " | 8 lbs. | \$2.20 |
| $\begin{aligned} & \text { A9711 } \\ & \text { A9712 } \end{aligned}$ | 11**11** ${ }^{1} \times 13^{\prime} \times 8{ }^{\prime}$ | ${ }^{8} 0^{\prime \prime}$ | $61 / 2^{\circ}$ |  | 2.20 2.70 |
| A9713 | $15^{*} \times 15{ }^{*} \times 8$ * | $12^{*}$ | $11^{\prime \prime}$ | 151 lbs . | 3.53 5.14 |


| Cat. No. | Field Coll | Input Imped. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| A9650 | 3000 ohms | 4500 ohms* | \$1.71 |
| $\begin{aligned} & \text { A9651 } \\ & \text { A9652 } \end{aligned}$ |  | $4 \mathrm{omm} \mathrm{V.C}$. |  |
| $\begin{aligned} & \text { A9652 } \\ & \text { A9653 } \end{aligned}$ | ${ }^{1000}$ ohims | 4 4 4 | \$1.35 |

## MODEL H6S 6-INCH

| Cat. No. | Field Ohms | Input I mped. | EAET |
| :---: | :---: | :---: | :---: |
| 4 | 2750 | 4 oh |  |
| A9655 | 1800 | 4 ohm V.C. |  |
| A9656 A9657 | 1000 6. | 4 ohm V.C. |  |


| MODEL F8RS 8-INCH |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | Input 1 mped. |  |
| A9658 | 2500 |  |  |
| 659 | 1800 |  |  |
| 661 |  |  |  |

## WRIGHT-DECOSTER HYFLUX MAGNETIC SPEAKERS

The Wright-Decoster Hyflux is a new, im proved type of speaker, rich and mellow in as initial equipment in custom-built Features include: voice coil with bakelite form. one-piece diaphragm; climate-proof constrm; tlon; specially designed magnet. Excellent frequency response and absence of distortion make this speaker the equal of many electrodynamic types. Compact assembly provides for ease of installation even where space is at a minimum as in battery and auto radios, or in multiple extension speake systems. Depth of speaker is less than 3" Bakelite strip with lugs is mounted on speaker frame for easy wiring

## G-INCH SPEAKER

 The depth of the $6^{\circ}$ model is For replacements of rame is $61 / 2$ For replacements and as extension speakers. Shpg. wt.. $13 / 4 \mathrm{lbs}$. A9316. 10,000ohms impedance NET EACH.

DEALERS AND SERVICEMEN

# REPLACEWENT PARTS FOR SPEAKERS 



## EXACT DUPLICATE HIGHGRADE FIELD COILS

Select coil from following listing or from Universal coils shown below. We can also supply coils other than those listed. Send sample with a deposit, or specify measurements and resistance, and we will supply or quote promptly.


## UNIVERSAL FIELD COILS

## FOR AC-DC FIELDS

 inside dia; $2^{* *}$ outside dia. $3 k^{*}$ higli.
Supplled with 3 gaskets for fitting Supplled with 3 gaskets for fitting
any pole plece.

A2699. ${ }^{450}$ Ohm. A2692. 2.000 Ohm. A2690 List si. ${ }^{\text {So }}$. H. 88.

## FOR GENERAL REPLACEMENT

With the following coils you can now service practically any type of speaker. Coils have 2 windings which may be connected in serics or Saralles: Type 1 inside dla. $11 / /^{\prime \prime}$, outside dia. $21 / 2^{\prime \prime}$, length $13 / \%^{\prime \prime}$. Type 2 -inside dia. $116^{\prime \prime}$ outside dia. $21 / 4$, length $1 \%$, ype 3 , inside dia. $19 / \sigma^{\prime \prime}$. outside dia. 21/2". length $17 /$ B" $^{\prime \prime}$ Type Winside dia. $11 / \epsilon^{\prime \prime}$, outside dia. $2^{\prime \prime}$, length $11 / 4^{\prime \prime}$.
With instructions. Average shpg. wt., $11 / 2$ lbs.

PARALLEL RESISTANCE RANGE

| Ohms | Type 1 No. | $\begin{aligned} & \text { Type } 2 \\ & \text { No. } \end{aligned}$ | Type ${ }^{3}$ No. | Type 4 No. |
| :---: | :---: | :---: | :---: | :---: |
| 375-460 | A 2670 | A2675 | A2680 | A2685 |
| 560-690 | A 2671 | A 2676 | A2681 | A2686 |
| 675-825 | A 2672 | A 2677 | A 2682 | A 2687 |
| 900-1100 | A2673 | A 2678 | A 2683 | A2688 |
| 1125-1375 | A2674 | A 2679 | A 2684 | A 2689 |

## SERIES RESISTANCE RANGE

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| $1500-1800$ | A2670 | A2675 | A2680 | A2685 |
| $22250-2750$ | A2671 | A2676 | A2681 | A2686 |
| $2700-3300$ | A2672 | A2677 | A2682 | A2687 |
| $3600-4400$ | A2673 | A2678 | A2683 | A2688 |
| $4500-5500$ | A2674 | A2679 | A2684 | A2689 |

List. $\$ 3.10$.


## CENTERING SHIMS

Celluloid spacers for centering speaker voice coils and armatures, Kit includes; 4 shims-
$005 ; 4$ hims $.0075 ; 4$ shims$005 ; 4$ hims-.0015; I shims-
$010 ; 4$ shims-. 0125 . In handy leather case. 35

## SWEDISH STEEL SHIMS

Includes four sizes, .004, .006. .008, and .010 inch. Extremely flexible, tough and accurate. In handy leather case PRICE

## CARRON EXACT DUPLICATE QUALITY SPEAKER CONES

Duplicate replacement cones accurately designed and carefully constructed to match the originals. One piece seamless materlal is used; noted for enduring, non-resonant quaity. An are precisely wound voice conl is attached to eaure excellent tonal quality and molded by patented process to secure expleates of the originals in long ine. speaker cones with these reliable exact dupllicates.

$$
\begin{aligned}
& \text { If the cone you require is not listed below, your cost can be } \\
& \text { generally determined by the following schedule: } 5^{\prime \prime} \text { to } 6^{\prime \prime} \\
& \text { cones }{ }^{\circ} .90 ; 7^{\circ} \text { to }{ }^{\prime \prime} \text { cones } \$ 1.50 ; 10^{\circ} \text { to } 12^{\circ} \text { cones- } \$ 1.95 \text {. } \\
& \text { Cones } 13^{\prime \prime} \text { and over will be duplicated at a cost not to exceed } \\
& \$ 2.75 \text {. Please send in your old cone with remittance. If the } \\
& \text { entire speakeris sent in for cone installation, add } 75 \text { to above } \\
& \text { prices to cover installing and eleaning. }
\end{aligned}
$$




## AUTOMOBILE SPEAKER CONES

No. For Model Dia., In. NET


A9467. Unit Mot.
A9440. W. G. 6-J.

## SPEAKER CONE CEMENT

Readily cements speaker cones, paper ings and felts to speaker frames. Comes in convenient metal tube containing ounces, enough for many jobs. This high permanently A necessary item in the
permanent's kit.
serviceman YRICE.
24 。

# The lateot in AUTO RADIO AERIALS <br> KNIGHT AERIALS <br> \section*{I.C.A. AUTO AERIALS} 

HINGE TYPE—RUSTPROOF
Rust-proof; triple chromium-plated over heavy brass and stainless steel. Easy to install: mount directly on hinge-pin of car door - no drilling Supplied complete with heavy-duty cable. An efficient low-cost aerial.
A10505. 1 Section. Non-tele NET......................... 2 lbs. A 10506.2 Sectlon Telescopic ead-in. Shipg. wt. 2 lbs.
79.

A $10507 \mathrm{~B}^{3}$ Sectlon Telescoplc: extends from $20^{\prime \prime}$ to $62^{*}$. With 36 NET.
1.15

## SIDE COWL TYPE

Triple chromium-plated fully rustproof. Mounts on side of auto cowl. Brass inserts assure more accurate fit. With spring-tensioned low-loss lead-in cables. Extremely efficient.
A10508. 2 Section Telescople. lead-in cable. Wt.. 2 lbs. $\$ 1.19$ A10509, 3 Section Telescopic. lead-in cable. Wit., 3 lbs. $\$$ With 19 A10510. 3 Section Telescoplc.
 A10466. 1 Sectlon. 60" total length. Lower end is black enameled. Shpg. wt., 2 Ibs 59.

## RCA AUTO AERIALS

## HOODTENNA'



Efficient new auto antennas Ceramic insulators throughout Childe-of-hood mounting A10530. Model 9898. Two insulators, four section. Extends to wi Fine Chrome finish. Shpg. wt. 2 lbs. $\$ 2,50$
NET.............. $\$ 20$ A10531. Model 9893. Two insulators, three section. Extents to $1 / 4$ when open. Anti-
static ball tip. 2 lbs. $\$ 7.76$
A10532. Model 9892. Two section, single insulator. Extends to $47^{*}$. Adjustable to lines Of car. Wt. $11 / 2$ lbs.
${ }^{s} 1.15$


ADJUSTABLE AUTOMATIC MODEL9895 This newly devel oped antenna can be automatically from inslde the car frominside the car. pneumatic plunger extentis the antenna to the desired height. Compact mounts under dash with only attractive handle showing. Extends to full $42^{\prime \prime}$; collapsed, only $3^{\prime \prime}$ protrudes above the hood. 'Simple to install. Chrome finish with $30^{\prime \prime}$ special low-capacity cable. $W \mathrm{Lt}, 3 \mathrm{lbs}$.
AIOT
${ }^{\$} 3.50$
DI-POLE ANTENNA

Unexcelled for efficient under-car installation. Has adjustment for road clearance and universal mounting brackets. Where signal level is under each rimning board. With $50^{*}$ learl-in Shpg. wit.. 4 lbs.
$\$ 1.53$

## RUSTPROOF

An extensive line of high-grade, low-priced ery requirement. Easily installed on any car and offering efficient signal pickup with minimum noise. Constructed of finest brass tube, triple chromium-plated, and
 stainless steel rod. Guaranteed rustproof for life of the car. No
rattling. Noted for long life and efficlency.

## UNIVERSAL COWL TYPE

For mounting on side of door at cowl. Requires only a screwdriver for quick installation. Telescoping feature assures high signal pickup; care rattling. Works efficiently with any auto radio. A10513. (6502) 3 Sectlon Telescopic. Extends from $231 / 2^{\prime \prime}$ to $72^{\prime \prime}$. Supplied complete tion. Wt.. 2 lbs.
NET
A 10514 . (6504) 3 section Telescople. Extends from $311 / 2^{\circ}$ to $96^{\circ}$. Ideal for Police, 2 way systems.
$\$ 2.94$

## RUSTPROOF HINGE TYPE

Sturdy, rustproof aerial for mounting on hinge-pin of car door. Triple chromium plated. Tapered ends prevent moisture drilling easily installed in a few minutes. Two section telescopic; extends from $25^{\circ}$ to $50^{\circ}$. With lead-in. We.. 1 b A $10517 .(4525)$. $\$ 1.15$
A 10520 . (4532) Three Section Telecopic. Extends from $311 / 2$ to $96^{\prime \prime}$. With heavy-duty lead-in.
WE. 2 lbs
s2.06

## SIDE COWL TYPE

A10524, (4557) Three Section Tel escoplc. Extends to $60^{\prime \prime}$. $30^{\prime \prime}$ lead-in
Shpg. wt., $11 / 2 \mathrm{lbs}$.
A10525, (4555) Three Co $72^{\circ} .2$ lbs. $\$ 1.91$ Al0526. (4553) Three NET............ \$2.35
A10527. (4558) Four Sec.

tion Telescoplc. Extends to $96^{\circ}$. For Police 2-way, and short-wave work. Extra heavy-duty
type. Shpg. wt., 3-lbs.

## MOTO-WHIP

An efficient adjustable. type auto antenna to fit any car, Maximum
length, $62^{\prime \prime}$. Full chrome plated throughout. Has easily operated snap-type adjustrnent. Extends over windshield and top to
match contour of your match contour of your car. With lead-in. ShipAing Wt. ${ }^{3} 1047$. NET
\$1.22
EXTRA DISCOUNTS ON I.C.A. AERIALS You may deduct an additional discount of $10 \%$ on any of the I.C.A. aerials listed above if ordered in lots of ten or more. Your order m
consist of any one type or an assortment.

## AUTO LEAD-IN CABLES

Ideal for use as replacement cable or for cus-tom-buile auto sets. Flexible cable, shielded loom protected, covered overall with iblack processed braid. Heavily lacnuered
No. Length Terminal Type NET A5930 2 Ft . Male Connector\& Gnd. Lead 32 c A5931 2 Ft . Male \& Female Connectors. . . . 32c A5933 3 Ft. Male Bayonet Lug End ........38c A5934 6 Ft . Male Connector \& Gnd. Lead FOR MOTOROLA SETS
A5937. Hinge lead with pin plug 38 c

## WARD AUTO AERIALS

## NEW CONCEALED HOOD

 COWL TYPE ANTENNAA new type of mounting which eliminates drilling holes through highly finished surfaces. Ceramic insulators used to obtain high gain. Easily installed with self-tapping raetal screws. Col ored "anti-static" ball tip.
A 10537 . Type 149L. Two section With $30^{\circ}$ cable. 1 lb . $\$ 1 / 2$ to 15
NET. A10538. Type 146L. Three section $30^{\prime}$ lead $11 / 2$ from $281 / 4^{\prime \prime}$ to $65^{\prime \prime}$. With NET.... $30^{7}$ lead. 11 bs.
${ }^{\mathrm{s}} 1.76$
A 10539 . Type 150 L . Three sec-
cion. Attarhes with two brackets. Ex ion. Attarhes with two brackets. Ex-
tends $38^{\prime \prime}$ to $94^{\prime \prime}$. $11 / 2$ lhs. 59


## 'NEW-MATIC'

 AUTOMATIC TYPE MODEL 112. The first ful ly automatic 2 section antenna. Operates independently of ignition or vactum system. Has "Anti-static" ball tip. Simple and static" ball tip. Simple and
efficient in operation. Usen efficient in operation. Uses pnemmatic systemfor exten-
sion. Rod cannot jiggle sion. Rod cannot jiggle
down. Exposed length: down. Exposed length:
closed. $3^{*}$. open $42^{\prime \prime}$. More efficient than ordinary cow type. Low-loss lead, $30^{\prime \prime}$ A1OTS40.


## MODEL 154 'MANUEL"

A10541. Manually-operated two section type. Ot herwise same as "NEWMATIC" listed above. Wt., $11 / 2$ lbs.
NET.
12.32

## NEW COWL ANTENNAS

Patented anti-rattle cowl antennas of static" ball tip. Ceramic insulators With shielded low-loss cable. For side cowl mounting on any car. Guaranteed rustproof; for noise-free operation A 10542 . Type $8 \times 1$ L. Three section Bakelite insulators. Extends $371 /{ }^{*}$ to $94^{\circ}$. Wt. . 11/2 1bs.
NET.
${ }^{5} 2.20$
A 10543 . Type $5 \times$ KL. Three sec tion. Bakelite insulators. Extends from $281 / 2$ to $661 / 4 * .11 / 2 \mathrm{lbs}$. $\$$. A 10544 . Type 151 L . Four section Two ceramic insulators. High "Q."
$\begin{aligned} & \text { Length. } 293 / 4 \text { " to } 100^{*} \text {. } \$ 2 \\ & 2 \text { lbs. NET........... }\end{aligned}$.


## BUMPER TYPE

Three sections, Ruaranteed rustproof. Extends from $371 / 2^{\prime \prime}$ to cadmium plated bumper brat and Easily attached bumper brackets. tion from motor noise permite beter signal pickup. Less lead but A10382. NET.... \$1.73


## NEW TELA-VISION MIRROR

 Arear-view mirror toclamponany covl or hinge erial. 3" dia. mirror mounterl in chrome shell. AlOTO75.

88


## LONG-RANGE TWINS

Dual section under-car antenna with $200^{\circ}$ ef fective length. $100 \%$ rubber sealer!; has 4 hall type rubber insulators to reduce noise. Abso-leat-in. Wt. 7 lbs. No dilling. $\$ 2.65$

# AUTO RADIO ACCESSORIES 

##  <br> 'REDHEAD" SENIOR AUTO ANTENNA

A scientifically designed, welded, vibrationproof running-board antenna of remarkable ef ficiency. Strong signal pickup with minimum of completely insulated with an overall rubber cover, waterproof and rust-resisting. Easy to install. No springs, wlre, etc., to rattle or loosen. Has set screw connection for antenna lead-in. Length. $46^{\prime \prime}$; width. $9^{\circ}$. A highly efficient auto aerial. Wt., 7 lbs. A10473. NET

95

## SHIELDED AERIAL LEAD-IN



For efficlent installation of auto antenna, Filler No. 18 conductor, with shielding overall. Finest quality lead-in wire at an exceptionally low A2 $444.1 / 4^{*}$ DIAM. Per Foot $\ldots . . .4 \frac{1}{2}$ c 100 Ft................................... $\$ 4.10$ A2443. $1 / 2^{\prime \prime}$ DIAM. 7. +00 Ft . $\$ 5.95$

\section*{|  |  | SHIELDED LOOM <br> For effective shielding. |  |
| :---: | :---: | :---: | :---: |
| Cat. | Inside | Per | Per |
| No. | Dla. | 50 ft. | Ft. |
| A3423 | $3 / 16$ in. | \$1.95 | $41 / 20$ |
| A3424 | 5/16 in. | 2.98 | 61/2C |

## COPPER SHIELDING

| Cat. | Diam. | Per | Per |
| :---: | :---: | ---: | ---: |
| No. | Open | 50 Ft. | Ft. |
| A3595 | $1 / 4 \mathrm{in}$ | 50.85 | 2 C |
| A3596 | $3 / \mathrm{in}$. | 1.95 | $21 / 2 \mathrm{C}$ |
| A3597 | $1 / 2 \mathrm{in}$. | 1.25 | 3 c |
| A3598 | $3 / 4 \mathrm{in}$. | 1.85 | 4 c |

O

## RUBBER TUBING

Fine quality replacement rubber tubing. For all auto aerials with
rubber-covered lead-in which has become frayed or cut. . 10c

## ANTENNA CONNECTOR

 For Auto Radio Sets, to ${ }^{806254}$ 4 。

## JUMBO FUSE HOLDER



## RUBEER SUCTION CUP

A6666. With 8-32 screw $1 / 4^{\text {a }}$
 A6667 Rubber Cement for
above.
NET............9C

PIN PLUGS AND JACKS


Fine quality pin plugs and jacks for making firm conwires leading to auto set chassis. Alsoadaptable tovarious other radio and electrical applications. Jack is of cadmium-plated metal; pled wath other auto sets than those listed below.

## FOR MOTOROLA

A5950. Pin Plug. NET
K. NET.

## FOR RCA


A5954. ${ }^{5}$ Prong Pin Plug. NET..... 12C 12 C

ADMIRAL TOUCH-O-MATIC TUNER


Here is a startling demonstration of never be repeated! This famous Admiral Touch-O-Matic Auto Radio Tuning Unit has been formerly sold at prices
as high as $\$ 6.00$ and is now offered - while our supply lasts-at only $\$ 1.95$ Offers you true automatic tuning with any make or model radio in any car. ${ }^{\prime \prime} \times 13 / 6^{*}$ ) of a compart bakelite housing (oustons. Five buttons are for station selection. each button controlling a separate station; the sixth button is for channel clearlng; it makes the change from manual to automatic tuning, or vice versa, as manual to automatired. Station buttons may easlly he adjusted to any of five stations in broadcast band. Provldes instant, accurate tuning of any desired broadcast. Easily mounted on steering wheel post or under dash. Only two connections required. Supplied with connecting cable, hard ware, accessories, and complete instructions. Wt., 6 lbs. A5949. SPECIALPRICE.

## MOTOR NOISE FILTER

A new Auto Radio noise and spark plug suppressor eliminator. Assures hoise-free reception. Consists of a combination high-frequency filter and adjustable balancing circuit. In terference is always balanced out regardless of frequency, by means of manual inductance control. with mounting bracket. $\$ 1$
A5489. NET........


SUPER DISTRIBUTOR FILTER
This one unit completely filters all ignition noises In any car and eliminates need for sepa rate suppressors or resistors. Bakelite housing contains separately wound pistance. Mounts in sistributor head of car motor. $\$ 2.32$
diser A5940. NET

## "A' LINE R.F. FILTER

Eliminates line nolses such as hum, hash, or ripple entering auto se hrough " $A$ " line or other leads. Especially required for auto sets without bullt-in filters and for sets which pick up noise with antenna ead disconnected. In sturdy metal case with mounting brackets
$73 c$

## 1600 VOLT VIBRATOR CONDENSERS



Designed for the severest replacement uses in auto
radio work. Oll-impregnated; in aluminum tubes.
No Mid No
 EACH. $\left.\begin{array}{l|lll}\text { A } 6976 & .007 & \text { A } 6979 & .015\end{array}\right]_{10 \text { FOR } \$ 1.55}$

## AEROV'OX "HASH" CONDENSER

 Completely suppresses all generator
nolses. Mounts directly on car genernolses. Mounts directly on car generator and is connected across terminals. Capacity .5 mfd ; D.C. working voltTerminal lug is located at ${ }^{\text {and }}$ grounds. Tcrminal lug is located at $11 / 2^{\prime \prime}$ thigh by Mea- $136^{\prime \prime}$ diameter. Easily installed on any car. Especially Easily installed on any car. Especially formance tnany car where gencrator noise has been interf
A5945.
24.



## KNIGHT AUTO RADIO SUPPRESSOR UNITS

Efficient carbon type suppressors for use on any automobile engine. Will cut out practically all ignition interference, and improve reception.


A6995. D. Special 50,000 ohm. Ford V8 Brush Type. For 1933-1935 models. A6999. D. Special small type, 50,000 ohm. For 1936, 1937 and 1938 Fords 10

## $4)=(z)=4$

## WIRE-WOUND SUPPRESSORS

Extremely effective in eliminating motor noise without impairing motor efficiency. Low re sistance- 30 ohms, Bakelite cases,
A5560. Plugtype. Fig. A. Fig.
A5562, Elbow type. Fig. C.
10 For $\$ 2.45$. EACH

## 

## MASTER DISTRIBUTOR

 SUPPRESSOR UNITA5942. Rated at 10,000 ohms. Ideal for use in new cars where only one supprese $29 c$
sor is needed. NET..................29c

## AUTO RADIO FILTERS



Metal-cased compact by-Dass condensers for bee on generators, ammeters, horns, etc., to eliminate noise.
A2942, 1/4 MFD. Round metal container $4 / 4^{42} 2^{2 \prime}$. Single lead with lug.
for horn. EACH.................... 5 c A2943. $1 / 2$ MFD. Round metal container 3or coil. EACH with lug
19.

A2944. ${ }^{1}$ MFD. Round metal container
For generator. EACH
A2945. 1 MFD. $11 / 4^{\prime \prime} \times 21 / z^{\prime \prime}$. Heavy duty
for use near motor.
For generator. EACH
32.

## DOME LIGHT FILTER

A $1 / 2$ mid. condenser and amp. choke in a round $1 / 8^{*}$. With 3 leads. ${ }^{1}$
A2941. NET. 31 c
A2938. Amineter and . condenser in in
sulated case with two flexble insulated 29c

## FORD V-8

 CONDENSERSEspecially designed to fit the Especialy designed to fit the
Ford V8 distribator-head. SpeFord V8 distribator-head. Special bracket assemblts. distributor head $1934-35$ V8's. A5922. For $1936-37-38$ V8's. A5993: For 1939 V8 Fords.
NETH


# AUTO RADIO ACCESSORIES 

STAR UNIVERSAL CONTROL


Includes all the necessary mechanism to provide clockwise or control, and all ratio gears to provide from to 1 to 16 to ratios. This mechanism iwith any Star panel lister! below (which is extra and must be chosen for and your old cables are all that is necessary for a good Remote Control assembly. Will fit all cars with provision for dash or under-dash mounting controls. Price shown is for drive mechanism only. Panel A5880. NET
$\$ 2.06$

## STAR CONTROL ACCESSORIES

 A5881. Type s-1. On-Off Switch A5882. Type T-1. Three stage tone contro Less on-off switch. NET......... \$1.18 A5883, Type T-2. Variable Tone Control A5884. Type ST-1. 3 stage Tone Control and on-off switch. NET. ............. $\$ 1.76$ A5885. Type ST-2. Variable Tone Control A5886, Type St2. 2 stage Local Distance 45887. Type G-6. $20: 1$ ratio gear....99c
## CROWE AUTO RADIO CONTROL

## Remote con

trol assemblles to match car panels. By seing control

control unit, and panel assembly (listed below) you may provide your own control assembly for new car installation or for transferring old your own another car. If you cannot select number of radio year ind name and model we will quote on proper assembly. Wt., 2 lbs.
 8 to 1 A 6736 708-T1 AG741 $708-T 2$ 10 to 1 A 6737 710-T1 AG742 710-T2
 NET

## VOLUME CONTROL UNITS

A6772. Type 700-V1. Volume control only. No switth or tone control. NET ........44c A6773, Type $700-\mathrm{V} 2$. Volume control with combination on-off switch. NET.......\$1.09 A6776. Type 700-V3. Volume control with independent on-off switch. NET.... \$1.26 46775. Type 700-V6. With on-off sivite and variable tone control. NET ..... $\$ 1.65$ A6777. Type $700 \mathrm{V33}$. Volume cantrol tor
Philco 818, 818K. 819. NET....... 1.65

## CROWE AND STAR DASH MOUNTING PANELS

These panels together with mechanisms isted above will make complete remote con trol dash mounting kits to match your dash. with CROWE accessories and STAR panel with STAR accessories. CROWE PANELS
Panels Come Complete With Knobs STAR
No. A5002

| Car Model and Year | $\begin{aligned} & \text { CROWE } \\ & \text { No. } \end{aligned}$ |
| :---: | :---: |
| Buick 40 and 60.37 |  |
| Buick 80 and $90 \cdot 37$ |  |
| Buick 1938 |  |
| Buick 1939 | A67 |
| Cadillac 1938 |  |
| Cadillac 1939 |  |
| Chevrolet 1935 |  |
| Chevrolet 1936 | A6 |
| Chevrolet |  |
| evrolet | A |
| Chevrolet $1939 . .$. is |  |
| Chrys. Roy and 1 mp . 37 | A |
| Chrys. Roy and Imp. 38 |  |
| Chrys. N.Y. Spec. 38 |  |
| Chrysler 1939 |  |
| De Soto 1937 | 1 |
| De Soto 1938 |  |
| De Soto 1939 |  |
| Dodge 1935 |  |
| Dodge 1936 |  |
| Dorige 1937 |  |
| Dodge 1938 |  |
| Dorge 1939 |  |
| Ford Std. \& Ear |  |
| Ford Std. \& Late 3 | A |
| Ford De Luxe Early '36 |  |
| Ford De Luxe Late '36 |  |
| Ford Std. ${ }^{\text {3 }} 3$ |  |
| Ford De Luxe 3 | A67 |
| Ford 1938 |  |
| Ford Std. 39 | A6716 |
| Ford De Luxe 3 |  |
| Hutson $112{ }^{\text {a }} 38$ |  |
| Hud 83, 84, 85, 86.87, 38 | - |
| Hud. Country Club 39 | A5 |
| Hudson 112 and 6.39 |  |
| Lincoln Zephyr '37 | 6 |
| Lincoln Zephyr |  |
| Lincoln Zeploy | 165 |
| M |  |
| Nash Laf. 40 |  |

ACCESSORIES FOR AUTO RADIO REMOTE CONTROL

## 

## $1 \times 0 \cdot \square$

CABLE AND HOUSING FITTINGS
Exact duplicates for most auto sets. We will
 35 c plus materlal cost. Send old cable as sample and specify fittings and lengths desired. Send cash with order
A18.
A182
A 1822
A 182
$A 182$

EACH
A1834. Type A. |A1837. Type D. EACH A1835. Type B. A 1838 . Type E. 6e A 1840 . Type H. For Motorola $130^{\circ}$ housing A1841, Type H. For Motorola. $150^{\circ}$ housing

## CABLE AND HOUSING

ALIIINIVANIILIMU

Exact cable and housing used by leading fac CABLE ONLY

| .130* | .150" | Leth. | NET |
| :---: | :---: | :---: | :---: |
| A 1850 | A18 | $18^{\prime \prime}$ | \$0. |
| A185 | A18 | $24^{\prime \prime}$ | 9 |
| A1852 | A1856 | $30^{\prime \prime}$ | 36 |
| A1853 | A1857 | $36^{\prime \prime}$ |  |
|  | HOUSING ONLY |  |  |
|  |  |  | \$0.18 |
| $\begin{aligned} & A 1861 \\ & \text { A1862 } \end{aligned}$ | A1865 | 24" | . 24 |
| A1862 | A1866 | $30^{\prime \prime}$ 3 |  |

## KNIGHT SPECIAL VALUE

 EXACT DUPLICATE VIBRATORSThese vibrators are exact duplicates of the vibrators they replace. Because of thelr popularity, the manuacturers were able to produce thes in production cost at a sav ings in production cose. These savings are in turn passed on to you. values Offere in the Excellent ular replacement bracke most pop ular replacement brackets, accord tions. You will get fine specificaefficient results from these ceality special value vibrator units.

FOR PHILCO SETS
For all Philco auto sets prior to 1936; 816 , RT14X, $816 \mathrm{~B}, \mathrm{~T} 2$, T3. T5. T6, NT15, ST15, PHXD, 37-S1431. Standard 4 prong base A4694. Six for 55.40.
$92 c$
For models 817, 818, 819, T12, 827, 826, 828. 1418, 1417, 1430. 1432, 1431, 1421, 1450, 1442 $1440,1436,1418, ~ B, ~ P$ DP. DVP. .
A4695. Six for $\$ 5.40$. EACH......

FOR MOTOROLA SETS
For models 34. 62, 79, 50, 60, 65, 35, 45 and 70.
A4698. Six for $\$ 5.40, ~ E A C H$.

## FOR DELCO SETS

For models 2035, 4036, etc., also for United Motors 980383. 980393, and 364441 set
 For Delco morlels $625,626.627 .628$ and 629.
$\mathbf{A 4 6 9 7}$. Six for $\$ 8.37$. EACH.... $\$ 1.55$

## FOR KNIGHT SETS

SP55 equivalent. For H9751. H9850, L.7, X6, 24,25 and BA41. Has five prong bas Measures $31 / 4^{*}$ long, $11 /{ }^{* \prime}$ diameter. $\$ 1.93$

## MALIORY <br> YAXLEY <br> REPLACEMENT VIBRATORS

## FAMOUS EXACT DUPLICATE VIBRATORS

The listing below shows the complete line of Mallory 6 volt vibrators. This list includes vibrators to replace de fective units in both automobile and regular houselold type tadio sets. Order order your vibrator from ALLIED type number if original vibrator is a Maliory. and vibrator. We also stock vibrators for 12 and 32 volt sets. giving model and

| $\begin{aligned} & \text { Mallory } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Cat. } \\ & \text { No. } \end{aligned}$ | ${ }_{\text {Price }}^{\text {List }}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{array}{c\|} \hline \text { Mallory } \\ \text { No. } \end{array}$ | Cat. No. | List Price | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { Mallory } \\ & \text { No. } \end{aligned}$ | Cat. <br> No. | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 201 | A4656 | \$6.50 | \$3.82 | 2531 | A4676 | \$3.95 | \$2.32 | 501 P | A4678 | \$2.95 | \$1.73 |
| 205 | A4630 | 6.50 | 3.82 | 253 Y | A4662 | 2.95 | 1.73 | 503 | A4646 | 3.95 | 2.32 |
| 210 | A4663 | 7.50 | 4.41 | 270 B | A4673 | 5.95 <br> 5 | 3.50 3.50 | 505 P | A4685 | 2.95 | 1.73 |
| 220 B | A4655 | 4.00 | 2.35 | 271 HD | A4634 | 5.95 5.95 | 3.50 3.50 | 506P | A4686 | 3.95 | 2.32 |
| 221 | A4664 | 3.95 5.50 | 2.32 3.23 | ${ }_{273}^{271}$ | A4661 | 5.95 5.50 | 3.23 3.23 | 507 P | A5132 | 2.95 | 1.73 |
| 222 | A4654 | 5.50 5.95 | 3.23 3.50 | 2735 | A4666 | 5.50 | 3.23 | 508 P | A5133 | 2.50 | 1.47 |
| 224 | A4631 | 7.00 | 4.12 | 275 | A4661 | 5.95 | 3.50 | 510 P | A5134 | 4.05 | 1.76 2.91 |
| 225 | A4658 | 5.95 | 3.50 | $275 \times \mathrm{S}$ | A4636 | 7.50 <br> 5 | 4.41 3.50 | 716 | A5135 | 4.95 | 2.91 |
| 226 | A4657 | 5.95 | 3.50 | 2775 | A4669 A4638 | 4.95 | 3.91 | 722 A | A4691 | 4.95 | 2.91 |
| 230 | A4672 | 7.50 | 4.41 | $285 \times$ SS | A4687 | 7.00 | 4.12 | 728 A | A4692 | 4.95 | 2.91 |
| 231 | A4674 | 5.95 | 4.26 3.50 | P285Y | A4684 | 4.95 | 2.91 | 850 | A5145 | 2.95 | 1.73 |
| 245 | A4632 | 4.95 | 2.91 | 2865 | A4641 | 5.50 | 3.23 2.91 | 853 | A5147 | 2.95 | 1.73 |
| 245 A | A4681 | 4.95 | 2.91 | 2892 | A4642 | 4.95 3.45 | 2.03 2.03 | 854 | A5148 | 2.95 | 1.73 |
| W245 | A4682 | 4.95 | 2.91 | 292 | A4652 | 3.45 2.95 | 2.73 1.73 | 860 | A5136 | 2.95 | 1.73 |
| W245A | A4640 | 4.4 .95 | 2.91 2.91 | 294 C | A4643 | 2.95 | 1.73 | 901 M | A5137 | 2.50 | 1.47 |
| 246 | A4688 | 4.95 | 2.91 | 2945 SW | A4644 | 2.95 | 1.73 | 902 M | A5138 | 2.50 2.50 | 1.47 |
| 246 P | A4680 | 4.95 | 2.91 | 296 | A4651 | 2.95 3.95 | 1.73 2.32 | 903M | A5140 | 2.25 | 3.09 |
| W246 | A4683 | 4.95 | 2.91 | 297 |  | 3.95 3.95 | 2.32 2.32 | 952 W | A5141 | 4.95 | 2.91 |
| 247 | A4668 | 4.95 4.95 | 2.91 | ${ }_{302}^{299}$ S | A4671 | 3.50 6.50 | 3.82 | 953 W | A5142 | 4.95 | 2.91 |
| 249 | A4679 | 4.95 | 2.91 | 311 S | A4645 | 7.50 295 | 4.41 | 954 | A5143 | 4.95 | 2.91 |
| 253 | A4650 | 3.95 | 2.32 | 500P | A4677 | 2.95 | 1.73 |  |  |  | pr |




KNIGHT UNIVERSAL VOLUME CONTROLS
 able for any purpose．Smooth contact action insures quitet operation．Efficient，moisture－ Case， $1 \mathrm{y} /^{*}$ diameter；shaft rated at one watt． $11 / \mathrm{s}^{\prime \prime}$ ．Code letter following resistance value indicates use．A－Antenna control．U－Come bined Antenna and C bias．W－C bias control． P－Linear Potentiometer．T－C Tone Control or audlo shunt．

| No． | Ohms | No． | Ohms |
| :---: | :---: | :---: | :---: |
| 60 | 1000A | A596 | 25000P |
| 5961 | 2000 A | A596 | 50000 T |
|  | ${ }_{5000}$ |  | 75000 W |
|  | 5000 U | A5968 | 100000 T |
| 595 | 10000 U 15000 P |  | 250000 T |
| A5964 | 120000 W |  | 500000 T |

LOTS OF 5，EACH 25C．
A5972，Standard AC switch for use with

 VOLUME CONTROLS

Improved carbon type volume con－
trol．Insulated con－ tact arm；dustproof case．Dissipates 2 watts．Universal milled shaft， $1 / 4^{\prime \prime}$ may be cut to de sired length．
Mounts insingle 3／8＂hole．Dia． $17 / 16^{\prime \prime}$ ． marked C；counter－clockwise－CC．Unmarked SPECIFYVAI

| Ohms | Ohms． | Ohms | Ohms |
| :---: | :---: | :---: | :---: |
| 600 | 6000 | 25000 | 2000 |
| 1000 | 10000 C | 50000 | 250000 C |
| $\begin{aligned} & 2000 \\ & 3000 \end{aligned}$ | 10000 | 750000CC | 500000 C |
| $\begin{aligned} & 3000 \\ & 5000 \\ & \hline \end{aligned}$ | ${ }_{20000 \mathrm{C}}^{15000}$ | 100000 C | 1 Meg ．C |

A6950．LESS SWITCH．
ATTACHABLE SWITCH

A6951．Switch for above．NET．．．．．I4c

## UTAH－CARTER MIDGETS

Extremely compact，pre－
cision－buift wire－wound units．Only $1716^{\circ}$ dia．and Open construction panel． Open construction pro－ diation．Dissipate 3 watts．Single hole mount－ ing type．Shaft $1 / 4^{\prime \prime}$ diam－ ing．Contact arm is grounded to bushing and

| POTENTIOMETERS |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 0 hms | ${ }^{\text {No．}}$ | Ohms |
| A9021 | 10 | A9025 | 400 |
| A9022 | 15 | A9027 | 1000 |
| A9023 | 20 | A9028 | 1500 |
| RHEOSTATS |  |  |  |
|  | Ohms | No． | Ohms |
| A9031 | 1／2 | A9037 | 20 |
| A9032 | 2 | A9038 | 25 |
| 49033 | 3 | A9939 | 30 |
| A9034 | 6 | A9040 | 40 |
| A9035 | 10 | A9042 | 50 75 |
| A9036 | 15 |  |  |
| List，40c． | T EA |  |  |

FAMOUS QUALITY
STANDARD TYPE CS assure silent operation Famous Metallized re－ sistance on bakelite base：silent pigtail con－ nector；multi－finger direct contact；steel spring as thrust washer有＂bushing：milled shasy
 resistance change；C－ALentiometer，uniform shunt；D－Grid bias and antenna；F－Antenna and low current blas；$H$－Andio； F－Antenna for bass compensation．

| No． | Use | Ohms | No． | Use | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A11900 | A | 500 | A11918 | C | 50000 |
| A11901 | A | 1000 | A11919 | C | 75000 |
| A 11903 | A | 2000 3000 | A11920 | D | 75000＊ |
| A 11904 | A | 4000 | A11921 | ${ }_{\text {A }}$ | 100000 |
| A11905 | A | 5000 | A $A 19$ | A | 1200000 |
| A 11906 | C | 5000 | A119 | D | $200000{ }^{*}$ |
| A11980 | ${ }_{\text {A }}^{\text {A }}$ | ${ }^{7500}$ | A 1 | C | 250000 |
| A11908 | ${ }^{\text {A }}$ | ${ }^{100 \% 0 *}$ | A 119 | D | 250000＊ |
| A11909 | D | 10000＊ | A 119 | C | 350000 |
| A11910 | C | 10000 | A1192 |  | 500000 |
| 1911 | D | 15000＊ | A11983 | D | 500000 |
| A11913 |  | ${ }_{2}^{15000 * *}$ | A 1 | C | 1 Meg． |
| A11914 | ${ }^{-}$ | 25000＊＊ | A 1 | C | ${ }_{3}^{2} \mathrm{Meg}$ ． |
| A11915 | A | 25000 | A119 | A | 5 |
| A11916 | ${ }^{5}$ | 25000 | A 1 | A | 7 Meg ． |
| A11917 | A | 50000 | A11936 | A 1 | 10 Meg ． |

＊These controls are supplied with a 300 ohm Used for reslacing without additional charge． reged for replacing grid bias controls in circuits Lequirigg fixed minimum resistance
EACH
TAPPED CONTROLS

## 《く《く＜＜＜

 198198
1198
1192
1193
1193 $\begin{array}{lll}4 & \text { A } & 250000 \mathrm{t} \\ 5 & \mathrm{H} & 250000 \mathrm{t} \\ 6 & \mathrm{H} & 350000 \mathrm{t} \\ 8 & \mathrm{H} & 500000 \mathrm{t}\end{array}$

Less Switch 500000 t NETH．．．88． $\begin{aligned} 11930 & \text { A } 1 \text { Meg．tx } \\ 2 & \text { Meg．}\end{aligned}$
$x$－Fapped for tone control circuit

## ATTACHABLE SWITCHES

A11988：S．P．S．T．Switch．NET．．．．299c


## TYPE D MIDGETS

IRC Midget Controls are sesigned for use where in－ Identical in internal innited structioa in internal con－ Type CS control．Detach－ able plug－in Type A shaft is packed with each control； shaft Type $B$ is for use where a slotted or tongued shaft is re－
quired；must be ordered qeparately．Switch marded be attached．Case diameter， $1 \%$ ．Case depth， length， $1 / 8^{8}$ ；diameter， $3 / /^{10}$ ．${ }^{2} / 32^{7}$ ．Bushing

＊These controls are supplied with 300 ohm $1 / 2$ LESS Sesistor for fixed minimum bias． NETEACH． $\qquad$
TAPPED CONTROLS A 14292 H 250000 t
Al4293 H 350000 t
A 14294 H 5000000 t Less Switch A14295 H 500000 Meg

## Al

299．Type B Funnel Shaft．NET． 21 C CHE

## ATTACHABLE SWITCHES

A14297：S．P．S．T．Switch．NET．．．． 29 c
$59 c$

## 1

 88VOLUME CONTROLS CONTROL GUIDE
The very latest edftion of this valuable booklet．Liats exact standard and replacement con－ trols for practically every radio recelver in use．Packed with technlcal information on con－
trol circuits and other data also trol circuits and other data；also
contains complete IRC Resistor Catalog
A11 1938 ．FREE ON REQUEST．

## NEW TYPE W WIRE－WOUND YOLUME CONTROLS



An improved wire－wound volume control that sets new standards of durability，accuracy and ruggedness．Has spiral spring connector be－ contact．Windings are ensineered to correct electrical specifications to provide to correct any given point．Compact size：case measures $11 /{ }^{*}$ dlam．$x$ 9／1＂deep． $3^{\prime \prime}$ shaft．Special

| No． | Type | Ohms | No． | Type | Olms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14200 | W6 | 6 | A14212 | W200 | 200 |
| $\begin{aligned} & \text { A14201 } \\ & \text { A14202 } \end{aligned}$ | W8 ${ }_{\text {W }}$ | 8 10 | A14213 | W300 | 300 |
| A14203 | W15 | 10 | A14214 | W400 | 400 |
| A14204 | W20 | 20 | A14216 | W500 | 500 750 |
| A14205 | W25 | 25 | A14217 | W 1000 | 750 1000 |
| A14206 | W30 | 30 | A14218 | W2000 | 2000 |
| A14207 | W40 | 40 | A14219 | W3000 | 3000 |
| A14208 | W50 W60 | 50 | A14220 | W4000 | 4000 |
| A14210 | W75 | 75 | A14221 | W5000 | 5000 |
| A14211． | W100 | 100 | A14222 | W7500 W10000 | 7500 10000 |
| $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |  |  |  |  |  |

## SWITCHES FOR ABOVE

Easily and quickly attached
A14224．S．P．S．T．Switch．NET．．．．．． 29 c

## OHMITE VITREOUS ENAMELED RHEOSTATS

High quality heavy－ duty wire－wound rhe－
ostate for radio and power control cir－ cuits．Ratings are conservative；air－
cooled． tact shoe of metal im － pregnated with car－ bon－graphite insures good contact with
minimum wear．In－
 mulated shaft；requir sulated slaft；requires $3 / 8^{\circ}$ mounting hole ， 3 terminals；may be used Model H－25 Watt Mos potentiometer Nodel H－25 Watf Model J－50 Watt No．Ohms Each $\begin{array}{ll}\text { A6601 } & 1 \\ \text { A6603 } & 2 \\ & \$ 2.65\end{array}$
$\left.\begin{array}{rr}\text { A6605 } & 10 \\ \text { A6606 } & 15 \\ \text { A6607 } & 25 \\ \text { A6609 } & \mathbf{5 0} \\ \text { A6611 } & 100\end{array}\right\}$

| A6609 | 50 |
| ---: | ---: |
| A6611  <br> A6612 170 <br> A6  | 2.35 |


| No． | hms | Each |
| :---: | :---: | :---: |
| A6622 | ． 5 |  |
| A6 623 A6624 | 2 | \＄2．94 |
| A6625 | 4 |  |
| A6626 | 8 |  |
| A6627 | 12 |  |
| A6628 | 22 |  |
| A6630 | 50 | 2.65 |
| A6631 | 80. |  |
| A6632 | 150 |  |
| A6633 | 225 |  |
| A6634 | 300 |  |
| A6635 | 500 |  |
| A6637 | 1000 | 2.79 |
| A．6639 | 2500 |  |
| A6641 | 5000 | 2 |

MODEL K_-100 WATTS


## MALIOR $V \cdot Y$ YNy V VOLUME CONTROLS

## UNIVERSAL VOLUME CONTROLS

## $\Rightarrow-\sqrt{-1}$



Listings on these pages constitute practically all of the Yaxley Volume Controls. With a comparatively small stock, reuuirements of $90 \%$ of all repair jobs. niversal controls, suppled wind knol adapter, washer and nuts. They have adjustable bias eature and $3^{\circ}$ shaft which can easily be shortened. All controls are isted SWITCHES. Where switch is required, init. NOTE: All unlts will be shipped less switch unless switch is specitied in your order and extra remittance made.

UNIVERSAL REPLACEMENT CONTROLS

| No. | Ohms | Type | Taper | No. | 0 hms | Type | Taper |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A8583 | 2 | $\ddagger 8$ | IV | A8618 | 15000 | ${ }^{\text {H }} 12$ |  |
| A8584 | 6 | \% | IV | A8619 | 15000 | t*H |  |
| A8585 | 10 | \$ | IV | A8620 | 15000 | **H7 7 | VII |
| A8586 | 30 | U | IV | A8621 | 20000 | ${ }_{*}^{*}{ }^{\text {Y }}$ 20MP |  |
| A8587 | 60 | 1v | 1 V | ${ }_{\text {A86 }}{ }^{\text {A8623 }}$ | 25000 | Y 25 MP | IV |
| A8589 | 100 | +W | IV | A8624 | 25000 |  | II |
| A8590 | 200 | 8 X | IV | A8625 | 50000 |  | IV |
| A8591 | 400 | t 4000 P | IV | A8626 | 50000 50000 | ${ }_{\text {K }}{ }^{\text {K }}$ | II |
| A8592 | 500 550 | ${ }_{\text {A A }}$ | IV | A88627 | 75000 | 212 |  |
| A8594 | 1000 | A AMP | IV | A8629 | 75000 | * | II |
| A8595 | 1000 | \% ${ }^{\text {P }}$ |  | A8630 | 100000 | Y 100 MP | IV |
| A8596 | 1000 | \%UC500 | IV | A8631 | 100000 | *UC510 | II |
| A8597 | 2000 2000 |  |  | A8633 | 150000 | UC502 |  |
| A85989 | 2000 | i*C | II | A8634 | 200000 | Y200MP | IV |
| A8600 | 3000 | +*A3MP | IV | A8635 | 250000 | Y250MP | IV |
| A8601 | 3000 | +*D12 | II | A8636 | 250000 |  |  |
| A8602 | 3000 3000 | +*D | II VI | A8637 A8638 | 250000 250000 | -UC509 | II |
| A8603 | 3000 5000 | +*D7 | IV | A8638 | 500000 | Y 500 MP | IV |
| A8604 A8605 | 5000 | $\ddagger$ Y5MP | IV | A8640 | 500000 |  |  |
| A8606 | 5000 | * E12 |  | A 8641 | 500000 | †UC512 |  |
| A8607 | 5000 | \$*E | II | A8642 | 500000 | †tUC515 | II |
| A8608 | 5000 | +*E7 ${ }_{\text {+ }}$ | VII | A8643 | 750000 | UC503 |  |
| A8609 | 7500 7500 |  | II | A8645 | 1 Meg . | Y 1000 MP | IV |
| A86611 | 7500 | +*F7 | VII | A8646 | 1 Meg. | 0 |  |
| A8612 | 10000 | +*A10MP | IV | A8647 | ${ }_{2} \mathrm{M}$ Meg. | $\dagger$ †UC514 |  |
| A8613 | 10000 | Y10MP | IV | A8648 | ${ }_{3} \mathbf{2} \mathrm{Meg}$. | UC504 | I |
| A8614 | 10000 |  |  | A8649 A9000 | ${ }^{3} \mathrm{Meg}$ Meg. | UC505 | I |
| $\begin{aligned} & \text { A8615 } \\ & \text { A8616 } \end{aligned}$ | 10000 10000 | **GC501 | II | A99001 | ${ }^{4} \mathrm{Meg}$. | UC506 |  |
| A8617 | 10000 | **G7 | VII | A9002 | 5 Meg . | UC507 |  |
|  |  | for auto se auto sets. Rest are $C$ | arc. | List. EACH | $1.00$ |  |  |

## ATTACHABLE VOLUME CONTROL SWITCHES

 Volume controls listed on this page do not have swA9004. Type 6-9. Standard S.P.S.T. Special thin design.
List. 50c. NET...........29c

A9005. Type 7. D.P.S.T. Similar to type 6-9.

35c

## EXPLANATION OF YAXLEY TAPERS:

TAPER I: TAPER II:

A modified log, left-hand taper in the carbon unit; semi-log in why log, taper in the carbon unit; semi-log In the W.W. unit. For series circuits, such as cathode TAPER IV: TAPER IV A: Modification of regular linear taper IV above. TAPER VII: A left hand taper found only in wire-wound controls. Useful in combined antenna and bias control circuits.

## UNIVERSAL "TRP" TAPPED CONTROLS

| Cat. No. | Mifi. No. | Res. Ohms | Tapped at Ohms | Cat. No. | Mfigr. No. | Res. <br> Ohms | Tapped at Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A9200 | TRP600 | 6M | 2500 | A9213 | TRP613 | 2 Meg . | 450 M |
| A9201. | TRP601 | 30 M | 6 M | A9214 | TRP614 | 350 M | 75 M |
| A9202 | TRP602 | 63 M | 3M | A9215 | TRP615 | 3 Meg . | . |
| A9203 | TRP603 | 250 M | 125 M | A9216 | TRP616 | 500 M |  |
| A9204 | TRP604 | 350 M | 25 M | A9217 | TRP617 | 60 M |  |
| A9205 | TRP605 | 350 M | 75 M | A9218 | TRP618 | 2 Meg . | - |
| A9206 | TRP606 | 500 M | 100 M | A9219 | TRP619 | 500 M | M |
| A9207 | TRP607 | 500 M | 250M | A9220 | TRP620 | 2 Me | Meg. |
| A9208 | TRP608 | 1 Meg . | 200 M | A9221 | *TRP621 | $1 / 2 \mathrm{Meg}$. | 500M |
| A9209 | TR P609 | 1 Meg. | 500 M | A9222 | TRP622 | 44M | 7-14M |
| A9210 | TRP610 | 1 Meg | 20M | A9223 | TRP623 | 25 | M |
| A9211 | TRP611 | 1 Meg . | 170 M | A9224 | TRP624 | 21/2 Meg | M |
| A. 2121 | TRP612 | 2 Meg. | 25M |  |  |  |  |

No provision for switch. Use TRP624
88

## HERE'S THE NEW 3RD EDITION

 MALLORY-YAXLEY ENCYCLOPEDIAYour volume control worries are over when you use the Mallory-Yaxley Encyclopedia. And this new Third Edition is packed full of information you need page--page-on one service problem. 200 pages of receiver listings cover thousands of models, include tube complements, volume control and condenser requirements, etc Rider's reference is given for every set. 256 pages. $81 / 2 \times 11^{\prime \prime}$. Shpg. wt. 2 It
A1 1869 . YUR NET PRE.

75


SPECIAL SINGLE "SRP" CONTROLS
These controls are especially made for, receivers whose volume control requirements are so special that they cannot be met by the universal type controls. These controls have special electrical or mechanicai reathe Mallory-Yaxley Encyclopedia for correct selections.

| $\begin{aligned} & \text { Mfgr's. } \\ & \text { Type } \end{aligned}$ | Resis. Ohms | Mfgr's. Type | Resis. Ohms | Mfgr's. Type | Resis. Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| *SRP133 | 2 M | *SRP249 | 20M | *SRP272 | 300 |
| *+SRP134 | 4500 | *SRP251 | 250M | *SRP274 | 10M |
| *SRP138 | 450 | *SRP252 | 500 M | *SRP275 | 500 M |
| - SRP139 | 550 | **SRP253 | 400 | \$ $\ddagger$ SRP276 | 3M |
| *SRP141 | 1200 | *SRP254 | 3500 | * SRP277 | 2 M |
| - SRP142 | 2900 | *SRP255 | 15 M | *SRP278 | 500 M |
| *SRP144 | 2 M | *SRP256 | 10M | *SRP279 | 50 M |
| *SRP145 | 2 M | *SRP257 | 3M | *SRP281 | 500 M |
| * SRP150 | 50 M | *SRP258 | 15 M | *SRP282 | 350 M |
| * 1 SRP152 | 60 | +tSRP259 | 50 M | *SRP283 | 2.500 |
| *SRP153 | 13 M | *SRP260 | 1 M | †SRP284 | 100 M |
| *SRP154 | 50 M | *SRP261 | 100 M | †SRP285 | 560 M |
| ** + SRP160 | 3200 | *SRP262 | 1500 | tSRP286 | 250 M |
| *SRP170 | 75 M | †SRP263 | 32 M | †SRP287 | 5 M |
| *SRP179 | 125 M | *SRP264 | 650 | +SRP288 | 100 M |
| *SRP185 | 1500 | **SRP265 | 200 | +SRP289 | 63 M |
| *SRP188 | 32 M | **SRP266 | 600 | *SRP900 | 20 M |
| * SRP213 | 250 M | t SRP267 | 8M | *SRP901 | 10 M |
| *SRP216 | 500 M | *SRP268 | 15 | *SRP960 | 800 |
| *SRP223 | 1 M | *SRP269 | 10 M | *SRP961 | 250 M |
| - SRP245 | 32 M | *SRP271 | 150 | *SRP962 | 250M |

A9230. Specify Type Number and Value when Ordering. \%e

$$
\text { A9226 SRP239. } 450 \text { Ohms. Yol. Strip }
$$

A9227 SRP241. 6000 Dhms, Vol. Strip EACH. NET 29 C A9228 SRP273. 500,000 Vol. Control with Switch. NET $\$ 1.18$
*Volume Control. ttPhono Control. *十Vol.-Sens. Control **Hum Control. tTone-Beam Control. *\&Phono-Vol. Control. † Volume-Tone. tiRegeneration Control. *t Equalizer Controi:

## SPECIAL DUAL "DRP" CONTROLS

Consist of two separate resistance elements ganged and controlled by one shaft. These dual units will service practically all sets employing this type of control. Consult your Mallory

| Type | Resistance |  | Type | Resistance |  | Type | Resistance |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Front | Re |  | Fron | R |  | Front | Rear |
|  | 250 | 5 M | DRP241 | 5 M | 150 M | DRP306 | 5 M | 10 |
| DRP115 | 3800 | 3800 | DRP242 | 10 M | 500 M | DRP307 | 3 M 50 M | 12M |
| DRP116 | 25700 | 10000 | DRP243 | 35M | 750 M | 08 | 50 | 50 M |
| DRP117 | 500 | 2500 | DRP244 | 25 M | 3 Meq |  | 12 M | 25M |
| DRP119 | 3 M | 10 M | DRP245 | 1 Meg . | 3 Meg 50 M | DRP310 | 150M | 250 |
| DRP122 | 645 | 10 M | DRP246 | 32 M 50 M | 50 M | DRP311 | 150 M | 250 |
| DRP169 | 7500 | 10 M | DRP250 | 50 M 5 | 2500 | DRP313 | 75 M 1 | 500 M |
| DRP221 | 10 M | 100 M | DRP301 | 100M | 250 M | DRP314 | 500 M | 5 2500 |
| DRP222 | 75 M | 32 M | DRP302 | 100 M 2500 | 250 M 100 M | DRP315 | 2 Meg | 2500 |
| DRP232 | 3 Meg. 25 M | 3 Meg 25 M | DRP303 | 1 Meg . | 100 M 3 Meg . | DRP315 | 200 Mg | 1M |
| DRP240 | 250 M | 10 M | DRP305 | 25 M | 25 M | DRP31 | 500 M | 1M |

A 2 . Speclfy. Type and Value When Ordering.
A9231. Speclfy Type a
Sist $\$ 2.50$ NET EACH

## MIDGET "MR" CONTROLS-FIXED SHAFTS

A new series of midget repiacement volume controls
for use where special shafts and couplings are un-
necessary. Efficiently built, compact. long-lived
Switch cover and cam accommodate attachable
witches wherever required. $1 / 6$ din 3 shaft.

| Ohms | Type | Taper\| | Ohms | Type | Taper | Ohms | Type | ap |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5000 | M R14 | IV-A | 50000 | M R33 | I | 250000 | MR44 | 1 |
| 10000 | M R18 |  | 50000 | M R34 | II | 250000 | M R45 |  |
| 10000 | MR19 | II | 50000 | MR35 | IV | 500000 | M R 48 M R 50 | IV |
| 10000 | M R20 | IV | 75000 | MR36 | I | 500000 750000 | MR50 MR51. | IV |
| 15000 | MR21 | II | 75000 | MR37 $M R 39$ | II | 750000 |  |  |
| 15000 | M R22 | II | 100000 | MR39 $M R 40$ | 1 | ${ }_{2} \mathbf{2}$ Meg. | M R55 |  |
| 20000 | $M R 24$ $M R 28$ | II | 100000 | MR40 | IV | 2 Meg . | M R57 | I |
| 25000 25000 | MR28 MR29 | IV | 100000 <br> 150000 | MR41 | IV | 3 Meg . | M R53 | 1 |

A9264, Specify Type Number and Value When Ordering.

## MIDGET SWITCHES FOR "MR" CONTROLS

A9240. Type M26. Single Pole Single Throw, NET,
A9241. Type M27. Double Pole Single Throw. NET
A9242. Type M28. Single Pole Double Throw. NET
SEE ADDITIONAL M-Y VOLUME CONTROLS ON NEXT PAGE

# Naciv VOLUME CONTROLS 

MALLORY-YAXLEY VOLUME CONTROLS

## TYPE UM UNIVERSAL MIDGETS



## These new midget

 controls, together with Plug-In Shafta below, offer a sreat advance in volume control servicing. Consult the M-Y Encyclopedia (see page 114) for proper Belection and taper. Sce page $1 / 1 / 1^{\prime \prime} \mathrm{W}$. attachable switches. NOTE: We can select most you proper controls and shatis for and tube lineup of receiver, and 88 c for each unit (less switch) ordered.| Ohms | Type | Taper | Ohms | Type |
| :--- | :--- | :--- | :--- | :--- |


| 5 M | UM 114 | IV-A |
| ---: | ---: | ---: |
| 10 M |  |  |



| 10 M | UM118 | I | 150 M | UM M144 | I |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 10 M | UM119 | II | 250 M | UM147 | I |

TYPE M RHEOSTATS
The wire-wound Malloryand Potentiometers listed below are designed for use
where a high wattage control muat be used in a control space. Conservatively rated at 4 watts. Contact arm insulated. Smooth acting; fully Case $15 /$ " diameter compact. Case $1 \%$. diameter, $1 / 16$ deep.
 Mounts in $7 / 16^{\circ}$, hole. Mounting ${ }^{3}$, nut included

| O hms | Type | Amps. | Ohms | Type | Amps. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1/2 | M05 | 2.75 | 20 | M20R |  |
| $\frac{1}{2}$ | M1R | 2.2 | 25 30 | M 25 R | 45 |
| 3 | M 3 R | 1.3 | 40 | M M 40 R | 35 |
| 4 | M4R | 1.1 | 50 | M ${ }^{\text {M }}$ (0R | 35 32 |
|  | M6R | . 9 | 60 | M60R | 29 |
| 10 | M10R | 7 | 75 | M 75 R | 25 |
| 15 | M15R | 6 |  |  |  |

A13947. Specify values when ordering= NET EACH
$44 c$
TYPE M POTENTIOMETERS

| Ohms | Type | No. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 15 | M15P | A13050 |  |
| 20 25 | $\text { M } 20 \mathrm{P}$ | A13051 |  |
| 30 | M25P | A13052 A13053 |  |
| 40 | M40P | A13054 |  |
| 60 | M60P | A13055 |  |
| 75 | M 75 P | A13056 | 9 |
| 100 | M100P | A13057 |  |
| 400 | M400P | A13058 |  |
| 500 | M 500 P | A13060 |  |
| 600 | M600P | A13061 |  |
| ${ }_{2} \mathrm{M}$ | M1MP | A13062 |  |
| ${ }_{3} \mathrm{M}^{\text {M }}$ | M ${ }^{\text {M } 3 \mathrm{MP}}$ | A13063 |  |
| 4 M | M4MP | $\left.\begin{array}{r}\text { A13064 } \\ \text { A13065 }\end{array}\right\}$ | 3 |
| 5M | M5MP | A13066 |  |
| 10 M | M10MP | A13067 |  |
| 150M | M15MP | A13068 |  |
| 25 M | ${ }_{\text {M } 25 M P}^{\text {MP }}$ | A13069 ${ }^{\text {A } 13070}$ ( | 88 |
| 50M | M50MP |  |  |
| 70 M | M70MP | $\left.\begin{array}{l} \text { A13071 } \\ \text { A13072 } \end{array}\right\}$ | 18 |

## TYPE C RHEOSTATS

The smallest wire-wound control manufactured. Dissipates 2 watts. Ideal for test instrument tninal grounded to case Dinmminal groanare case. Diam: eter of case, $11 / 2{ }^{\circ}{ }^{\circ}$ extends $7 / 16^{\circ}$ shank, 3 p long. Shaft 1 tending $3 / 8{ }^{\circ}$ b beyond shank. $284^{\circ}$ total rotation; $266^{\circ}$ effective

| Ohms | Type | Amps. | Ohms | Type | Amps. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | C6R | .58 | 30 | C30R | .25 |
| 10 | C10R | .45 | 40 | C40R | .22 |
| 15 | C15R | .36 | 50 | C50R | .2 |
| 20 | C20R | .3 | 100 | C100R | .14 |

A13075. Speclfy values when ordering. NET EACH


## TYPE C POTENTIOMETERS

An indispensable control for use where space is at a premium. Has same physical dimensions and electrical characteristic
Rheostats above. Less knob.

| Ohms | Type | No. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 6 | C6P | A13080] |  |
| 10 15 | ${ }_{\text {C10P }}{ }_{\text {c }}$ | A13081 |  |
| 20 | $\mathrm{C}_{20 \mathrm{P}}$ | A13083 |  |
| 30 | $\mathrm{C}^{\mathbf{C}} \mathbf{}$ | A13084 |  |
| 40 50 | C40P | A13085 ${ }^{\text {A } 13086}$, | 9 c |
| 100 | C100P | A13087 |  |
| 200 | C200P | A13088 |  |
| 400 | C400P | A13089) |  |
| ${ }_{3}^{1} \mathrm{M}$ | C1MP | A13090 |  |
|  | CSMP | A13091 |  |
| 6M | C6MP | A13092 ${ }_{\text {A } 13093}$ |  |
| 10 M 15 M | C10MP ${ }_{\text {C15 }}^{\text {C1 }}$ | A13094 | 88 |

CENTRALAB CONTROLS UNIVERSAL SPLIT-KNURL SHAFT CONTROLS

## Newly developed

 replacement vollate controls forrecelvers employing

brass knurled-shaft used with special push-on knob. These new replacements offer facilities for speedy but exact duplication of originals. Fixed shaft controls in three popular resistance values and two iengths, as indicated below will take care of practically all volume control servicing aeeds. Split shafts provide tenslon for pusioon kuob. Put in a supply of these new control control replacement requirements.

| Cat. No. | CRL No. | Res. Ohms | Curve No. | Shaft Size | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A2100 | NK136 | 250000 | 6 | 2\%16" |  |
| A2101 | NK137 | 500000 | 6 | 2915 " |  |
| A2102 | NK138 | 1 Meg. | 6 | 2\%/15 |  |
| A 2103 | NK139 | 250000 | 6 | $4{ }^{\prime \prime}$ | 31 |
| A2104 | NK140 | 500000 | 6 | 4 |  |
| A2105 | NK141 | 1 Meg. | 6 | 4* |  |


|  | KNURLED ADASHAFTS |  |  |
| :---: | :---: | :---: | ---: |
| No. | CRL No. | Size | EACH |
| A2107 | K174 | $21 / 6^{\circ}$ | 15 C |
| A2108 | K175 | $311 / 16^{\circ}$ | 15 C |

NEW UNIVERSAL AUTO REPLACEMENT CONTROLS


All unith curve No. 10. All have slip clutches and tone compensation tap. D.P.S. T. switch standard switen type. $1 / 4$ slotted shaft
easily cut to size. With guide funnel.

| Resis. | Type | "NA"Type No Sw. |  | "PA" Type With Sw. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No. | Net Each | No. | Net Each |
| 250000 | 123 | A 2043 |  | A2047 |  |
| 500000 | 105 | A2044 |  | A2048 |  |
| 1. Meg. | 124 | A 2045 | 83 c | A2049 |  |
| 2 Meg . | 125 | A2046 |  | A2050 |  |

## POWER RHEOSTATS

A rugged rheostat ideal for many commercial applications. Useful as motor speed control, charging rate regu-
lator, etc. Open type con=
struction provides max-
imum heat dissipation $f$ or
size. Frame and core insu
lated with treated asbestos,


| 50 WATT | 75 WATT |  |
| :---: | :---: | :---: |
| No. Ohms | No. | Ohms |
| A3010 25 | A3017 | 50 |
| A3011 60 | A3018 | 150 |
| A3012 150 | A3019 | 300 |
| A3013 500 | A3020 | 500 |
| A3014 1000 | A3021 | 1000 |
| A3015 5000 | YOUR |  |
| $\begin{aligned} & \text { NET } \\ & \text { EACH.. } \end{aligned} .$ | $\begin{aligned} & \text { PRICE } \\ & \text { EACH. } \end{aligned}$ |  |

\footnotetext{
CRL PHONOHMS
A new unit offerlng convenient control facillties portable control in light weight bakelite case with knob. Easily installed. Potentiometer typer use with single phones. "L" Pad types for group installations such as sehools, theaters churches, etc. Less cord.

| No. | Ohms | Type | EACH |
| :---: | :---: | :---: | :---: |
| A3922 |  | Potentiometer | - |
| A3923 | 10M | Potentiometer |  |
| A3924 | 100 M | Potentiometer |  |
| A 3925 | 5 M | "L'. Pad |  |
| A3926 | 10M1 | "L". Pad |  |
| A3927 | 100 M | -1L. Prad |  |

# Centralab VOLUME CONTROLS 

## VOLUME CONTROL GUIDE

CRL Master Guide. Feaures isting of 10,000 differbers tisted in numerical rder; new tone and waveband switch listing; new Midget Radiohm listing: Mew Economy P.A con rols: new Adashaft conA 30189 . Master Guide. A2717, New 80 page Control Supplement. Either one or both F EE
with CRL Control order


Allied Radio Specify on your order.


Bakelite case, $11 / 3^{\prime}$ dia. Aluminum shaft is $1 / 4^{\circ}$ dia. x $33 / 8^{\circ}$ long. For use with push-on or set-screw type knob. Knob ins
High-quality all-purpose controls.

| Less Switch No. | CRL No. | Max. Res. Ohms | Taper No. | With Swltch No. | CRL No. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3286 | NF106 | 5000 | 1 | A3298 | PF106 |
| A3255 | NF107 | 10000 | 1 | A2725 | PF107 |
| A3288 | NF100 | 10000 | 3 | A3293 | PF100 |
| A3256 | NF108 | 10000 | 4 | A2726 | PF108 |
| A3257 | N109 | 10000 | 6 | A2727 | P109 |
| A3287 | NF110 | 15000 | 3 | A3299 | PF110 |
| A3258 | NF111 | 15000 | 4 | A2728 | PFi11 |
| A3259 | NF112 | 20000 |  | A2729 | PF112 |
| A3265 | NF113 | 25000 | 1 | A2730 | PF113 |
| A3289 | NF101 | 25000 | 3 | A3294 | PF101 |
| A3266 | N114 | 50000 | 1 | A2731 | P114 |
| A3267 | N115 | 50000 | 6 | A2732 | P115 |
| A3268 | N116 | 100000 | 1 | A2733 | P116 |
| A3269 | N117 | 100000 | 6 | A2734 | P117 |
| A3290 | N102 | 250000 | 6 | A3295 | P102 |
| A 3253 | N118 | 500000 | 1 | A2735 | P118 |
| A3291 | N103 | 500000 | 6 | A3296 | P103 |
| A3292 | N104 | 1 Meg . | 6 | A3297 | P104 |

Katis sich 59, wit suith 88.
TAPPED MIDGET RADIOHMS

| A2031 | NT119 | 250000 | 10 | A2035 | PT119 |
| :--- | :--- | :--- | :--- | :--- | :--- | | A2032 | NT120 | 500000 | 10 | A2036 | PT120 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A2033 | NT121 | 10 Meg | 10 | A2037 | PT121 | | A2033 | NT121 | 1 Meg. | 10 | A2037 | PT121 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A2034 | NT122 | 2 Meg. | 10 | A2038 | PT122 |



## MIDGET SWITCH COVERS

Underwriters approved Bakelite midget switch over. *For use with battery radio circuits. Smap-on type for easy attachment

.
EXTENSION SHAFTS

g. A. Intended for use with Centralab Volme Controls or switches where onger shaft is needed. Have many uses; keep a stock of

| $\begin{gathered} \text { No. } \\ A 2722 . \\ A 2 \geq 23 . \end{gathered}$ | Size <br> $4 \times 1 / 4 \times 1 / 32$ flat <br> $4 \mathrm{x} / 4 \mathrm{x}^{3 / 32}$ flat |
| :---: | :---: |

$A 2>23$.
$A 2724$. $\qquad$ 18.

Fig. B. Shaft is $1 / 4^{\prime \prime} \times 3^{\prime \prime}$ long, slotted $1 / 3 z^{\prime \prime}$ wide full length. Hinged slot insert is pushed out of shait and cut co required length. funnel fits over shaft
A2721. No. K159. NET
32
Fig. C. Soft brass extension shaft $21 / 16^{*}$ long. For use on newer sets where original controls have split-knurled shafts, Easily cut
quired length.
A2720. No. K177. NET

# Contele riphacment Centriab VOLUME CONTROLS YALLOMY Y 

## CENTRALAB VOLUME CONTROLS



Allied Radia
Corp
Centralab Volume Controls are nationally known for theit quality construction, efficient design, and the Centralab operation. The listing below covers sets. If the control you tequire the most popular refer to the Centralab Vequire is not showne here, correct replacement, and order from AL Guide for CRL Master Guide includes listing of 1000 different models prior to 1939. The new 1939'80-page supplement lists controls for all newer models. Either or both of these guides will be sent FREE on request valuablers for CRL controls. Be sure to ask for these valuable Guides with your next order
A3099. CRL Master Guide.

A2717. New 80 -page Supplement.

| MANUFACTURER and MODEL | CENTRALAB |  | YAXLEY |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | NET | No. | NET |
| Allied Radlo (See Knight) Arvin (Noblitt Sparks) <br> 41, 417, 467, 518, 518A, 518DW, <br> $528 \mathrm{CS}, 568,568 \mathrm{~A}, 568 \mathrm{DWW}$. <br> $51,51 \mathrm{~B}, 608,8 \mathrm{~A}, 58,58 \mathrm{~A}, 68$. <br> $61,61 \mathrm{~B}, 61 \mathrm{M}, 62,62 \mathrm{~B}, 62 \mathrm{M}, 81$, <br> $81 \mathrm{M}, 578 \mathrm{~B}, 78,89,91,9 \mathrm{~L}$. <br> 508AC-DC. <br> $517,517 \mathrm{~B}, 527,527 \mathrm{~B}$. <br> 617, $617 \mathrm{~B}, 627,627 \mathrm{~B}, 618 \mathrm{~B}, 628 \mathrm{~B}$ <br> $618,618 \mathrm{~A}, 628,628 \mathrm{CS}, 638,638 \mathrm{CS}$ <br> 818, 828, 828A, 838CE, 848CS, <br> $1237,1247,1247 \mathrm{~A}$ <br> 927, 1127. |  |  |  |  |
|  |  |  |  |  |
|  | A3069 |  |  |  |
|  | A3087 | 50.88 | ${ }_{\text {A8575 }}$ | 50.59 .88 |
|  | A3052 | . 59 | A8640 | .59 |
|  | A3072 ${ }_{\text {A }}$ | .88 | A8624 | +59 |
|  | A3291 | . 59 | A8575 | .88 |
|  | A3055 | . 59 | MR53 | . 59 |
|  | A2032 | . 88 |  |  |
|  | A3057 | . 88 |  |  |
| Atwater Kent <br> $4690,558 \mathrm{Q}, 424,534,9780,956 \ldots$ <br> 37, $38,40,42,52,41,43,44,45$, <br> $53,47,56,57546$. <br> 55, 55 C , $55 \mathrm{~F}, 35 \mathrm{FC}, 60,60 \mathrm{C}$ <br> 55, 55C, 55 F , 55 FCC 60, 60 C (Early) 61 , 610 C. <br> $60,60 \mathrm{C}, 70$ (D \& L Chassis), 74 <br> (D \& L Chassis), 76 (D \& L <br> Chassis), 87D (DC Chassis). | A 3052 | . 59 | A8640 | . 59 |
|  | A3106* | . 88 | A9226 | .29+ |
|  |  |  |  |  |
|  | A3101* | 1.76 | DRP301 | 1.47 |
|  | A3102* | 1.76 | A9227 | .29 $\dagger$ |
|  | A3105* |  |  |  |
| 72 (11 Chassis)................. | ${ }^{\text {A } 3105^{*}}$ | 1.76 1.47 | DRP301 | 1.47 1.47 |
| 70 \& 76 (Q Chas | A 3108* | 1.47 | DRP303 | 1.47 |
| $165,217,246,275,310,667,448$, $555,708,82 \mathrm{D}, 188,228,260$$467 \mathrm{Q} .266,612,627,808,812$. | A3122* | 1.18 | A8607 | . 59 |
|  |  |  |  |  |
| 67. 67 C . $\ldots . .$. . . . . . . . . . . . . . . . . . . | A3087 | -88 | A8640 | . 59 |
|  | A3057 | . 88 | A9206 | . 88 |
| 567, 567 | A3075 | . 88 | A8607 | -59 |
|  | A3073 | . 88 | A8622 | . 59 |
| Balmont |  |  |  |  |
| 40 Series, 41,50 Series, 60 Series. - | A3069 | .88 |  | . 59 |
| $45,46,50 \mathrm{C}, \mathrm{G60} 200$ Midget D . $50 \mathrm{~F}, 420,425,430,440,575$, | A3068 | . 88 | A8614 | . 58 |
| 55B 600 Early, 110 Serles ........ | A3081 | . 88 | A8629 |  |
| $55 \mathrm{~B}, 71,110$ $70 \mathrm{~A}, 504,578$. | A3078 | . 88 | A8646 | . 59 |
| 274, $306,500,517,582,602,691$, R1125, 1128. | A3055 | . 59 | A8646 | . 59 |
|  | A3297 | . 88 | M R53 | . 59 |
| 401, $401-\mathrm{M}$ Seriea 8 | A3295 A3034 | . 88 |  |  |
| $522,523,587$ Series A, 588 Series A, <br> 589,601 Series A \& B, 686 Series <br> A \& B B, 740, 741, 746 Series A, <br> 786 Series A, 787 Series A, 840 , <br> 845 Series A, 848,849 | A3034 | . 59 | A8616 | . 59 |
|  |  |  |  |  |
|  |  |  |  |  |
|  | A3090 | . 88 | A8646 | . 59 |
| 525, 530 . $540,550,580,585$ Series $670,670 \mathrm{~A}, 675,775,890$ Series A. 1178. |  |  |  |  |
|  |  |  |  |  |
|  | A3087 | . 88 | A8640 | . 59 |
|  | A2047 | 1.18 |  |  |
| 489, 505, 506, 761, 860 . <br> 770. 778 'Series A, 850,878 Series | A3052 | . 59 | A8640 | . 59 |
|  | A3292 | . 59 |  |  |
|  |  | 1.18 |  |  |
| $881 .$. | A3093 | 1:18 |  |  |
| 788, 888, 889 |  |  |  |  |
| 1929 Models. | A3293 | . 89 | A8575 | . 88 |
| Bosch |  |  |  |  |
| 58, 62. | A3300** |  |  |  |
| 48, 49 (Late) | A3301* | 1.47 | A8566 | 1.47 |
| Brumswlck |  |  |  |  |
| 10 Midget. | A3112* |  |  |  |
| 14, 21, 31 Panatr | A3076 | 1.88 | ${ }^{\text {A }} 8604$ | . 59 |
| Crosley Radio |  |  |  |  |
|  | A3043 | . 59 | SRP188 | . 88 |
| 41A, 704,705 and $602608, \ldots 10.6$. |  |  |  |  |
|  | A3113* | . 88 | SRP185 | . 88 |
| AC7. Buddy Chum, 40 . 415 | A3025 | . 59 | A8591 |  |
| 40 ${ }^{\text {j }}$, 41 S , 42 S (Later Mod | A3114** | 1.47 | DRP305 | 1.47 |
|  | A3109* | 1.47 | SRP188 | . 88 |
| 555, 52555 , 666 | A3128* | 1.88 | SRP264 | . 888 |
|  | ${ }_{\text {A } 3046}$ | 1.76 .59 |  | $\begin{array}{r}1.47 \\ \hline .59\end{array}$ |

## MALLORY•YAXLEY VOLUME CONTROLS

The listing below covers the Mallory-Yaxley volume controls recommended as replacementy for most popular scts. These controls are widely used lasting performance. It the control you require is not listed below, refer to the Mallory-Yaxley Radio Service Encyclopedia for the replacernent specified for any set and order the control needed from ALLinD. The new third edition of the M-Y Encyclopedia lists the volume control requlrements for more than 17,000 radios and also includes data on condensers, filters, servicing hints, etc. Every Serviceman needs a copy of this new edition. It will pay for itself in no time at all, in the time and
trouble it will save you.
A11869. NET
75.

| MANUFACTURER and MODEL | CENTRALAB |  | YAXLEY |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | NET | No. | NET |
| Crosley Radlo (Cont'd.) |  |  |  |  |
| 27. 28, 30, 31, 33, 34, 315 | A 3115* | \$0.88 | SRP188 | 50.88 |
| ${ }_{53}^{126-1} 54,127,127-1$, | A 31051 | . 59 | SRP264 | . 88 |
| 400, 410,420 | A3039 A3026 | . 59 | ${ }_{\text {SRP263 }}$ | . 88 |
| 55, 91, 92 Aut | A3047 | . 59 | ${ }_{\text {A85931 }}$ | . 59 |
| $77-1$. | A3037 | . 59 | ARP263 | . 88 |
| 122 Sup | A3027 | . 59 | A8603 | . 59 |
| 124, 125 | ${ }_{\text {A3 }}{ }^{\text {A3270 }}$ | . 8.88 | A8614 | . 59 |
| 95. 96,98 , '99 A Auto | ${ }^{\text {A } 3215}{ }^{\text {a }}$ | 1.18 .88 | A8608 ${ }^{\text {A } 8649}$ | . 59 |
| 133... ${ }^{\text {a }}$, 1 | A3036 | . 58 | A8649 | . 59 |
| 141, 147, 155, 163, 166, 176, 148, |  | . 88 | A8608 | . 59 |
| 182. 676 | A3065 | .88 | A8608 | .59 .59 |
| 134. 1341, 175, 182 | A3052 | . 59 | A8649 | . 59 |
| 146, 157. 158, 164, 170, 171, 168-D | A3056 | . 59 | A8549 | . 59 |
| 166, 172, 174, | A3068 | . 88 | A8606 | . 59 |
| 566. | A3137* | . 88 | A8594 | . 59 |
| 143.1 | ${ }_{\text {A }}$ A3303* | 1.18 |  |  |
| 128. | A3304* | 1.18 | A8924 | . 59 |
|  |  |  |  |  |
|  |  |  |  |  |
| R1; C2, R1, R2, RRC3, Front | A3118** | . 88 | SRP276 | . 88 |
| R6, R7, ...., .......... | ${ }_{\text {A3119** }}$ | 1.47 | DRP306 | 1.47 |
| Emerson <br> DC4, LDC4, LAC4, LAC5 KS |  |  |  |  |
| Z133, Z135, Z141, X146 AL-149, A3069 . 88 A8615 . 58 |  |  |  |  |
|  |  |  |  |  |
| R156, R158, Z159, Z160, AH-162, AE-163, AL-164, AL-168 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| AR-180, AR-185, A Chassis, AD Chassis, AE Chassis, AH Chassis, AR Chassis AS Chassis |  |  |  |  |
|  |  |  |  |  |
| $J$ Chassis, R Chassis, X Chassis, <br> $Z$ Chassis, R-189, AU-190 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| AF-176, AF-179, AF-180, AF-185, <br> AJ Chassis, C Chassis, E Chassis, |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | A3052 | .59 | M R 48 | . 59 |
| $\begin{aligned} & \mathrm{M}-134, \quad \mathrm{M}-136, \\ & \mathrm{M}-140, \\ & \mathrm{M}-142, \\ & \mathrm{M}-148, \\ & \hline \end{aligned}$ |  |  |  |  |
| M Chassis. | A3269 | . 59 | M R 39 | . 59 |
| F=135, L-135-LW, L-135, F-14. A32 |  |  |  |  |
| 149, AC-168, AM-169, AP-171. |  |  |  |  |
| AP-173, AP-174, AP-176, AP-180, AP-185, AM-187, AA |  |  |  |  |
|  |  |  |  |  |
| Chassis, ACChassls, AM Chassis, |  |  |  |  |
| ${ }_{\text {G Chassis, L Chassis. ........... A3 Chas }}$ A Chas |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| D-140LW D-142. D-146, D: |  |  |  |  |
| S-147, S-151, S Cliasis. ............. | A3092 | 1.18 |  |  |
|  | A3291 | . 59 | MR48 | .59 |
|  |  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| LWW $409,410,411,0157$. BA199. | A3073 | . 88 |  |  |
|  | A3090 | . 88 | A8646 | . 59 |
| 698, $\mathrm{L}-755, \mathrm{M}-755, \mathrm{~S}-755, \mathrm{CS}, \mathrm{T}, \mathrm{T}$ S | A3081 | . 88 | A8628 | . 59 |
|  | A3068 | . 88 | A8617 | . 59 |
| A Chassls, K Chassis. | A3065 | .88 | Ads67 | . 59 |
|  | A3037 | . 59 |  |  |
| kS . | A3035 | . 59 | A8615 | . 59 |
| Eveready (National Carbon) |  |  |  |  |
| , 2,3, | A3116* | 88 | SRP179 |  |
| 50 Series. | A3159* | 1.47 | DRP117 | 1.47 |
| Fada (F.A.D. Andrea) |  |  |  |  |
| $122-\mathrm{KE}$ ¢14 46 | A3039 | . 59 |  |  |
|  | A3055 | . 59 | A8646 | . 59 |
| 51, 53-57 | A3087 | . 88 | A8646 | . 59 |
| 51, 53, 57 | A3067 | . 88 | A8602 | . 59 |

*Exact Duplicate Control. $\dagger$ Element only.

NOTE: All VAXLEY Volume Controls Histed at 59 are less switch. If control you are replacing requires switch,
select proper switch from your M-Y Encyclopedia and order from us.

## REPLACEMENT 



[^4]

# (1) KNIGHT Carbon Resistorn 

RESISTOR ASSORTMENT AND BASSWOOD CABINET


CONTAINS 100 POPULAR 1 WATT

RESISTORS

A handy Bass-
wood 6 drawer cabinet with a carefully sclected assortment of 100 Knight 1 watt insulated carbon resistors. indeal also for condensErs, washers, etc. 3 removable par titions. Bottom drawer for larger items. Varnished in natural wood finish. Size: $83 / 4$ " $\times 63 / 4$ " $\times 55 / 8$ ". Shpg. wt. $51 / 4 \mathrm{lbs}$.
CONTAINS THE FOLLOWING UNITS: Ohms Ohmt Ohms Ohms
$\begin{array}{llllll}300 & \text { (2) } & 2000 & \text { (4) } & 20000 & \text { (4) } \\ 400 & 100000 & \text { (8) } \\ 4 & 2500 & (2) & 25000 & \text { (8) } & 200000\end{array}$

| 400 | (4) | 2500 | $(2)$ | 25000 |
| :--- | :--- | :--- | :--- | :--- |
| 500 | (4) | 200000 | $3000(2)$ | 30000 |
| 2 | 25 | 250000 | $(8)$ |  |

600 (2) $\quad 5000$ (4) 40000 (2) 500000 (8)
1000 (4) 10000 (8) 50000 (8) 1 meg . (4) NOTE: Figure in bracket indicates quantity A8550. The attractive Basswood 6 drawer Knight 1 watt resistors and $\$ 510$ handy golor-code guide. NET. A8551. Cablnet only.
s 1.59
FREE! The above basswood cabinet will be Knight Carbon resistors you select.

## SAVE MONEY! BUY THESE

 KNIGHT RESISTOR KITS

24 POPULAR VALUES PER KIT Highest quality Knight Insulated Carbon Resis tors packed in handy kits nonly used values. Keep kit on your workbench and another in your tool bag-you'll have the resigtor you need when you
want it. RMA color-cod want it. RMA color-coriGuide. Increase your ef Giciency and profits by having available a substantial stock of these quality resistors.
OONTAIN THE FOLLOWING VALUES: Ohms Ohms Ohms Ohms Ohms Ohms $\begin{array}{rrrrrr}200 & 1000 & 6000 & 20000 & 50000 & 250000 \\ 400 & 2000 & 10000 & 25000 & 60000 & 500000\end{array}$ $750-12500 \quad 30000-75000 \quad 1 \mathrm{Meg}$ $750 \quad 4000 \quad 15000 \quad 40000 \quad 100000 \quad 2 \mathrm{Meg}$

## 1 WATT KIT

Consists of one each of the above Knight CarA8555.
${ }^{\text {s }} 1.17$
$1 / 2$ WATT KIT
Consists of one each of the above Knight Insuated Carbon Resistors in $1 / 2$ watt size A85T 5 ....

1/4 WATT KIT
Handy assortment consisting of one each of the above Knight Carbon Insulated Resistors in Á8557. NET
85.


## RMA COLOR-CODE GUIDE

A handy pocket-size guide with rotary discs. according to RMA color-code. Gives resistance yalue quickly,

FREE with order for 24 resistors

## KNIGHT INSULATED CARBON RESISTORS

## HIGHEST QUALITY ASSURED ACCURACY

- Solld Molded-Rugged-Rellable
- Average Tolerance Close to $5 \%$

Always Qulet in Operation

- Completely Molsturre-Proof Units
- 1000 Volt Overall Insulation

Malntain Thelr Permanent Value Non-Inductive一No Capacity Effect

The finest carbon insulated resistors you can buy. Use these highest quality units with utmost confidence in any R.F. or Audlo circuit. KNIGHT Carbon Insulated Resistors are of solid molded construction. perma nenty bonded. with solid cross-section. Impervious to molsture, mechancolly strong, non-inductive, quiet in operation. Each re sistor K NM MT Carton insulated Resistor every KNGH Carbon insulated Resistor The 1000 voit overall insulation permits re sistors to touch without shorting. Save and profit by using KNIGHT Carbon insulated Resistors. Note: The $1 / 4,1 / 2$, and 1 watt re sistors are the insulated type. The 2 watt resistor is the conventional uninsulated type.


| Resist. olimis | $\begin{aligned} & \text { WATT } \\ & \text { Wo. } \end{aligned}$ | $\begin{aligned} & \text { WATT } \\ & \text { WO. } \end{aligned}$ | $\begin{aligned} & \text { WATT } \\ & \text { No, } \end{aligned}$ | $\begin{aligned} & \text { wATT } \\ & \text { No. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 50 | A8100 | A8200 | A8300 | A8500 |
| 100 | A8101 | A8201 | A8301 | A8501 |
| 150 | A8102 | A8202 | A8302 | A8502 |
| 200 | A8103 | A8203 | A8303 | A8503 |
| 250 | A8104 | A8204 | A8304 | A8504 |
| 300 | A8105 | A8205 | A8305 | A8505 |
| 400 | A8106 | A8206 | A8306 | A8506 |
| 500 | A8107 | A8207 | A8307 | A8507 |
| 600 | A8108 | A8208 | A8308 | A8508 |
| 750 | A8109 | A8209 | A8309 | A8509 |
| 1000 | A8110 | A8210 | A8310 | A8510 |
| 1250 | A8111 | A8211 | A8311 | A8511 |
| 1500 | A8112 | A8212 | A8312 | A8512 |
| 1750 | A8113 | A8213 | A8313 | A8513 |
| 2000 | A8114 | A8214 | A8314 | A8514 |
| 2500 | A8115 | A8215 | A8315 | A8515 |
| 3000 | A8116 | A8216 | A8316 |  |
| 4000 | A8117 | A8217 | A8317 | A8517 |
| 5000 | A8118 | A8218 | A8318 | A8518 |
| 6000 | A8119 | A8219 | A8319 | A8519 |
| 00 | A8120 | A8220 | A8320 | A8520 |
| 10000 | A8121 | A8221 | A8321 | A8521 |
| 12500 | A8122 | A8222 | A8322 | A8522 |


| Reslst. ohms | $\begin{gathered} \text { WA } / 4 \\ \text { No. } \end{gathered}$ | $\begin{aligned} & 1 / 2 \\ & \text { WATT } \\ & \text { NO, } \end{aligned}$ | WATT | $\begin{aligned} & \text { WATTT } \\ & \text { No. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 15000 | A8123 | A8223 | A8323 | A8523 |
| 20000 | A8124 | A8224 | A8324 | A8524 |
| 25000 | A8125 | A8225 | A8325 | A8525 |
| 30000 | A8126 | A8226. | A8326 | A8526 |
| 35000 | A8127 | A8227 | A8327 | 7 |
| 40000 | A8128 | A8228 | A8328 |  |
| 50000 | A8129 | A8229 | A8329 | A8529 |
| 60000 | A8130 | A8230 | A8330 | A8530 |
| 75000 | A8131 | A8231 | A8331 | A8531 |
| 100000 | A8132 | A8232 | A8332 | A8532 |
| 125000 | A8133 | A8233 | A8333 | A8533 |
| 150000 | A8134 | A8234 | A8334 | A8534 |
| 200000 | A8 | A823 | A83 | 8535 |
| 250000 | A8136 | A8236 | A8336 | A8536 |
| 300000 | A8137 | A8237 | A8337 | A8537 |
| 400000 | A8138 | A8238 | A8338 | A8538 |
| 500000 |  |  | A8339 |  |
| 1 meg . | A8140 | A8240 | A8340 | A8540 |
| 2 meg. | A8141 | A8241 | A8341 | A8541 |
| 3 meg. | A8142 | A8242 | A8342 | A8542 |
|  |  | A8243 |  |  |
| 5 meg . | A8144 | A8244 | A8344 | A8544 |
| 10 meg . | A8145 | A8245 | A8345 | A8545 |



Per Doz

## of maximp

## WIRE-WOUND RESISTORS

Wire-wound on a bakelite strip with solder lugs at eachend. $1 / 2$ watt rating. ${ }^{*}$ Insert in series with cathorles of 2525 and B + to prevent condenser breakdown due to surges.

| No. | Ohms | No. | Oh | No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 075 |  | $\overline{\text { A9082 }}$ | 15 | A9089 | 200 |
| 9076 | 2 | A9083 | 20 | A9090 |  |
| 9077 | 3 | A9084 |  | A9091 | 500 |
| 9078 | 4 | A9085 | 30 | A9092 | 00 |
| 079 |  | A9086 | 40 | A9093 | 00 |
| 9080 |  | A9087* |  | A9094 |  |
| 9081 | 10 | A9088 | 10 |  |  |

10FORG3c.
NETEACH.
7.


CENTER-TAPPED RESISTORS
May be used in any filament or hum balancing flexible fibre strip.

| No. | Ohms | No. | Ohms | No. | Ohins |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A9096 }}$ | 6 | A9099 | 20 | A9102 | 100 |
| A9097 | 10 | A9100 | 40 | A9103 | 200 |
| A9098 | 15 | A9101 | 60 | A9104 | 400 |

## HANDY KNIGHT RESISTOR KITS

An asset in shop or on service calls. Each kit is an assortment of the 12 most popular values of KNIGHT RMA color-coded Mounted venient sturdy strip. Free RMA Color-Code chart with each kit valuable and handy group of kits Keen them on hand for all repair emergencies.

| STANDARD |  |  |  |
| :---: | :---: | :---: | :---: |
| Ohms | Ohms | Ohms | Ohms |
| 200 | 3000 | 20000 | 75000 |
| 400 | 4000 | 25000 | 100000 |
| 500 | 6000 | 30000 | 250000 |
| 750 | 10000 | 40000 | 500000 |
| 1000 | 12500 | 50000 | ${ }_{2} \mathrm{Meg}$, |
| 2000 | 15000 | 60000 | 2 Meg . |

## $1 / 2$ WATT KITS



A8560. Consists of one each of the above from 200 to 15,000 ohms.
A8561. Consists of one each of the above from 20.000 ohms to 2 meg.
45.

## 1 WATT KITS

A8562. Conglats of one each of the above from 200 to $\mathbf{1 5 , 0 0 0}$ ohms.
A8563, Consists of one each of the above from 20,000 ohms to 2 meg.
from 20,000 oh


Finest quality wire-wound "resistors for all Tolerance. Moisture-proof, triple-ins and lues Sizes: 5 watt- $13 / 4^{\circ} \times 3 / 16^{*} ; 10$ watt- $11 / 4^{"} \times 1 / 8^{3}$.

| Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 200 | 1100 | 4000 | 15000 |
| 10 | 250 | 1250 | 5000 | 17500 |
| 15 | 400 | 1500 | 6000 | 20000 |
| 20 | 500 | 1750 | 7000 | 22500 |
| 25 | 600 | 2000 | 8000 | 25000 |
| 50 | 750 | 2250 | 9000 | 30000** |
| 75 | 800 | 2500 | 10000 | 40000** |
| 100 | 900 | 2750 | 12500 | 50000* |
| 150 | 1000 | 3000 | 1250 | 5000* |

5 WATT SIZE
A4340. In all values except
10 FOR $\$ 1.50$.
NETEACH.
16.

10 WATT SIZE
A4341. Available in all values listed. Spec10 FOR 1
NET EACH.
20.

## CANDOHMETER RESISTANCE INDICATOR



Accurately calibrated dual-range resistance indicator. Quickly and accurately determines out or defective resistor. Sliding test prod moves freely in exposed slot. With leads, A65999. 0 a-10,000; 0-100,000 Ohms. Shpg. NET., 1 lb
s1. 18

## MUTER CANDOHM RESISTORS



Exact duplicates of the original resistors listed below. To order any unit not listed, send also make, model, and tube line-inal part;

| No, | Fact. No. | Ohms | NET |
| :---: | :---: | :---: | :---: |
|  | American Bosch |  |  |
| A6535 | Clarlon (Trans. Corp.) |  | \$0.29 |
| A6537 |  |  | 71 |
| A6553 | 4269 | 19200 | . 68 |
| A6546 | 4512 | 19085 | . 59 |
| A6529 | Crosley |  |  |
| A6530 | 20909 | 10000 | . 68 |
| A6531 | 21955 | 6500 | . 49 |
| A6532 | 21956 | 3160 | .29 |
| A6536 | 28471 | 33500 | . 39 |
| A6533 | Majestic 50 |  |  |
|  |  |  |  |
| $\begin{aligned} & \text { A6543 } \\ & \text { A6544 } \end{aligned}$ | $\begin{aligned} & 10145 \\ & 10252 \end{aligned}$ | 21702 10000 | .68 .29 |
|  | Simplex |  |  |
| A6534 |  |  |  |
| A6538 | U. S. Radio \& Tel. |  |  |
| A 6550 | 1959 | 23800 | 1.56 |
| A6552 | 2303 | 3640 | . 39 |
| A6548 | 3360 | 24300 | . 88 |
| A6549 | 3622 | 4300 | -49 |
| A6539 | 4145 | 20900 | - 59 |
| A6540 | 5905 | 4390 | . 29 |
| A6541 | 27416 | 32272 | . 71 |
| A6542 | 27992 |  | . 21 |
| A6545 | Wells-Gardner .21 |  |  |
|  |  |  |  |
| A6547 | 63.351 | 17035 | . 59 |

If you are not able to identify model of set or Candohm number, send us the original part
with deposit. Shipment will be made promptly since we are in close touch with the factory here in Chicago

KNIGHT VITREOUS ENAMELED RESISTORS


Double-coated vitreous enamel resistors perfectly protected against corrasion. Finest alloy wire wound on rugged porcelain core. fiave secure lug and terminal contacts. Dissipate heat quickly; maintain constant values even when hot. Mechanically and electrically
among the finest units made.

| SPECIFY VALUE DESIRED |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Ohms | Ohms | Ohms | Ohms | Ohms |
| $1^{*}$ | $40^{*}$ | 400 | 2500 | 20000 |
| $2^{*}$ | 50 | 500 | 3000 | 25000 |
| 5 | 75 | 750 | 4000 | 30000 |
| 10 | 100 | 1000 | 5000 | 40000 |
| $15 *$ | $150^{*}$ | 1250 | 7500 | 50000 |
| $20^{*}$ | 175 | 1500 | 10000 | $75000 \dagger$ |
| 25 | 200 | 2000 | 15000 | $100000 \dagger$ |
| $30^{*}$ | 250 |  |  |  |

10 WATT SIZE. $13 / 4 \times 3 / \mathbf{B}^{\prime \prime}$. A4342. In all values except those marked $\dagger$. Specify values when ordering.
IOFOR S 1.50.
20 WATT SIZE. $2 \times 9 / 16^{\prime \prime}$.
Available in all values except those marked * A4343. Values 5 to 40,000 olams. Specify Values desired.
IOFOR 52.85.
$32 c$
A4344. Values 50.000 to 100,000 ohms. Specify values desired.
10FOR 53.30 .
NET EACH
37.

50 WATT SIZE
Similar in construction details to resistors above. Size: $41 / 2^{*} \times 13 / 6^{\circ}$. Supplied with mounting brackets, $53 / 6^{\circ}$ mounting centers. Have
soldering lug terminals. soldering lug terminals.

| Ohms | No. | NET | Ohms | No. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 50 100 | A4460 |  | 5000 | A4469 | 50.54 |
| 250 | ${ }^{\text {A44462 }}$ | Each | 17500 | A4470 | . 61 |
| 500 | A4463 |  | 15000 | A 44772 | . 61 |
| 750 | A4464 |  | 20000 | A44773 | . 61 |
| 1000 | A4465 |  | 25000 | A4474 | . 61 |
| 1500 | A4466 |  | 50000 | A 4475 | . 70 |
| 2500 | A4467 |  | 75000 | A4476 | . 70 |
| 4000 | A4468 |  | 100000 | A4477 | . 70 |

## MUTER 5 WATT

WIRE-WOUND "ZIPOHMS"


Flat, wire-wound resistors to replace overloaded carbon units. Impregnated with protective high-temperature cement; non-porous. within $5 \%$. Each unit is marked with value SPECIFY VALUES DESIRED

| Ohms | Ohms | Ohims | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 100 | 600 | 1500 | 4500 | 12500 |
| 125 | 700 | 1750 | 5000 | 15000 |
| 150 | 750 | 2000 | 6000 | 16000 |
| 200 | 800 | 2250 | 7000 | 17500 |
| 250 | .900 | 2500 | 7500 | 18000 |
| 300 | 1000 | 3000 | 8000 | 20000 |
| 350 | 1100 | 3500 | 9000 | 22500 |
| 400 500 | 1200 1250 | 4000 | 10000 | 25000 |

A6748. 5 WATT, Size, $11 / 2 \times 1 / 2$ except 2x $1 / 2=$ With $11 / 2$ timned leads.
NE . EACH

## EAGLE PLUNGER LEAK

 r) EAGLEAdjustahle grid leak with a range from 0 to justed to all requiremen mounting. Easily adAusted to all requirements.

25

## RESIST-O-CABINET



## FREE - WITH PURCHASE OF

 POPULAR ASSORTMENTSA new, sturdily-buit. ati-metal cabinet conven- ient for storing reststors or other small parts, Has our large dravers with separate compart$51 / 2^{\circ}$ high, $51 / 2^{\prime \prime}$ deep. Silver and blue finish. FREE with order for any of balanced resistor assortments listed below.

## RESISTOR ASSORTMENT No. 1

 A balanced resistor assortment for efficient servicing of all types of sets. Contains resistors $5000,10000,25000$, and 50000 ohms. 1.25 . 25 and 5 megs.; BT $-1,1$ Watt, 1 each: 40000 and 75000 ohms. 15 and 2 meg.; 2 each: 1000 . $1500,2000.2500,5000,15000$ and 25000 ohms.
1.0 and 2.0 mes. 3 each; 10000 and 50000 1.0 and 2.0 mes.; 3 each; 10000 and 50000 $1000,1500,2500$, and 5000 ohms; 2 each: adjustable, 1 each; $1000,2500,5000$, and adjustable, 1000 each: 10 ibs.
10000 A5718. Complete with A5718,
\$8.91
RESISTOR ASSORTMENT No. 2
Contains 100 Type BT-1/2. $1 / 2$ Watt Insulated Metallized Resistorsia the most popular ranges. Ideal for $1 / 4.1 / 3$, or $1 / 2$ watt midget set replacements, for meter work, precision equipment, televislon, etc. Units range from 50 ohms to 2.0 meg., in an assortment based on most frequent servicing needs. This assortment is a real buy at the price-le's an outstanding A5716. complete with $\$ 9.80$ above cabinet. NET

## RESISTOR ASSORTMENT No. 3

 Contalns 83 Type BT-1, 1 Watt Insulated Metallized Resistors in a balanced assortment ranging from 50 ohms to 2.0 mes. ments in radio setsialso widely used as meter multipliers, in precision laboratory equipment, etc. Anyone doing radio work has frequent need for all the units in thls assortment. A5717, complete with $\$ 9.76$
## IRC WIRE-WOUND PRECISION RESISTORS


meter multipliers and shunts. Accuracy within $1 \%$. Values to 500,000 ohms have lug terminals; size: 1 diathers have $x^{7 / 2} 2^{\circ}$ dia. Available in $x^{7} / 夕^{2}$ dia. Available in
odd slzes on special order at cost of next higher value.

| No. | Ohms | NET | No. | Ohms. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A4805 |  |  | A | 40000 | \$0.79 |
| A 8807 | 10 |  | A4826 |  | 79 |
| A4808 | 25 |  | A4827 | 60000 | 94 |
| A4809 | 50 | 0 | A4828 ${ }^{\text {A } 4829}$ | 75000 100000 | 1.09 |
| A4810 |  | c | A4829 | 100000 125000 | 1.09 1.23 |
| 4812 | 50 |  | A4833 | 150000 | 1.38 |
| 813 | 500 |  | A4832 | 175000 | 1.38 |
| A4814 | 1000 |  | A4833 | 200000 | 1.38 |
| A4845 | 1500 |  | A4834 A4835 | 2550000 | 1.53 |
| 8846 | 2000 2500 |  | A4836 | 300000 | 1.68 |
|  | 4000 |  | A4837 | 400000 | 1.76 |
| A4816 | 5000 |  | A4838 | 500000 | 2.00 2.50 |
| A 4817 | 7500 |  | A4844 | 750000 |  |
| A4818 |  |  | A4840 | 1 Meg. | 3.09 |
| A4820 | 15000 |  | A4841 | 1.5 Me | 4.41 |
| A482 | 20000 |  | A4842 | 25 Me . | 5.88 |
| 4822 | 25 | 79 | A4843 | 2.5 Meg. | 7.35 |

TYPE 'BT" INSULATED METALLIZED RESISTORS

- Crack-proof, Trouble-free
- Completely Moisture-Spaled
- High Voltage Insulation

Improved new design makes these reslstors
outstanding in every way. High voltage inoutstanding in every way. High voltage insulating materlal eliminates danger of grounding. Quiet berformance facilitates use in AVC circuits, high-gain amplifiers, etc. Each unce is color-coded and marked with resistance right are actual size of resistor units.)


STANDARD STOCK RANGES

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 350 | 2000 | 8000 | 25000 | 125000 | 1.5 meg. |
| $1{ }^{0,5}$ | 40 | 400 | 2250 | 9000 | 30000 35000 | 150000 200000 | $2{ }^{2}$ meg. |
| 2 | 50 | 450 | 2500 | 10000 11000 | 35000 40000 | 250000 | 4 meg. |
| 3 | 75 | 500 | 3000 3500 | 11000 12000 | 40000 50000 | 300000 | 5 meg. |
| 5. | 100 | 600 750 | 3500 4000 | 12500 | 60000 | 400000 | 6 meg. |
| $10^{7.5}$ | 120 150 | 750 800 | 4000 5000 | 15000 | 65000 | 500000 | 7 mes. |
| 15 | 200 | 1000 | 6000 | 17500 | 70000 | 600000 | 10 meg . |
| 20 | 250 | 1250 | 7000 | 20000 | r 7500000 | 1 meg . |  |
| 25 | 300 | 1500 | 7500 | 22500 |  | , |  |

TYPE BT. $1 / 2-1 / 2$ WATT A5705. Avalable in all ranges from 50 ohms to 20
mesohms (Below 50 ohms megonms use (Below below.) $\mathrm{s} / \mathrm{s}^{3}$ long, $3 / 16^{\circ}$ dia. Specify values when ordering. List Each, 17 C
NET
10 .
TYPE "BW" INSULATED WIRE-WOUND RESISTORS
New type insulated, wire-wound resistors. Ideal for use with meters, as cathode bias reststors; for air-cell batteries; or as center-tapped resistors
TYPE BW- $1 / 2-1 / 2$ WATT A5708. Available in all ranges from 0.5 to 750 ohms, in standard stock ranges


TYPE BT-1 - 1 WATT
A5706. Available in all ranges from 150 ohms to 20 megohms. (Below 150 ohms use BW-1 units below, Size, $11 / 4$ " $x 1 / 4^{\prime}$. Specify values when ordering.
List, Each. 20c. NET EACH.

TYPE BW-1 - 1 WATT A5709, Available In all ranges from 1 to 4000 ohms. In standard stock ranges
above. Size, $11 / /^{4} x^{1 / 4} 4^{*}$. above. Size,
List, 20c. $12^{\circ}$
 above. Size, $13 / 4$ "x5/4s List. ${ }^{30 \mathrm{c} .} \mathbf{C H}$
NET E

TYPE BT-2 - 2 WATT A5707. Available in all ranges from 200 ohms to 20 megohnils. (Below 200 ohms low.) Size, $11 / 4^{\circ} \times x^{5} \nmid 6^{\circ}$. Specify low.) Size, $11 / 4^{\circ} \times 78^{\circ}$.
values when ordering, List. Each, 30 c .
List, Each, 30c. NET.

18 .

TYPE BW-2 - 2 WATT A5710. Available in all tanges from 1 to 7000 ohms, in standard stock ranges shown

## TYPE "F" METALLIZED RESISTORS

Quiet, metallized type resistors for use in crílical circuits. Absolutely dependable famous IRC quatity. Standard with leading manulacturers, order resistors desired roistance of standard stock ranges above, speciry ach type.
and glving stock number shown under eat

TYPE F. $1 / 2-1 / 2$ WATT A5700. $\mathrm{F}-1 / 2.1 / 2$ Watt. $11 / 3$ long, In all ranges from 50 ohnis to 10 meg .
List 17 c .
NET EACH.........

TYPE F-1 - 1 WATT A 5701 F-1. 1 Watt. 100 ohms to 10 meg. List. ${ }_{\text {NET }}^{20 \mathrm{c}}$.


TYPE F-2-2 WATT A5702. ${ }^{\mathrm{F}-2,}{ }^{2}$ Watt. 50 ohms to 10 meg . $\underset{\text { List. }}{\text { NET }}$ EACH

## POWER WIRE-WOUND RESISTORS

Fineat resistance wire is evenly spaced on non-hygroscopic ceramic core. Durable cement conting provides protection against extreme beat and humidty. Actual tests prove thest load capacity, etc. Conform to N.E.M.A. standards and are accurate to within $5 \%$.




TYPE AB - 10 WATTS
A5750. Available In all ranges up to 50,000 ohms. Extremely popular among Servicemen and Expermenters for making up voltage divider networks. $13 / 4^{\circ}$ long; \%6" diam.
Heavy tinned leads for casy connection. ThorHeavy tinned leads for casy conn
oughy dependable resistor units.

## List, Each. 40 NET EACH. <br> 24.

TYPE DG - 20 WATTS Avallable in all ranges except 2, 3, 7.5, types of installations.
A5925, 1-15,000 hm Units.
NETEACH
38.

A5926. 20,000 to $50,000 \mathrm{hm}$
Units.
$44 c$
BE SURE TO SPECIFY CORRECT VALUES WHEN ORDERING ABOVE RESISTORS

## IRC VOLUME CONTROL ANALYZER

## AND RESISTANCE INDICATOR

A new calibrated continuously variable Resstance Indicator. Fuscd A protect against overloads. Direct-reading etched scale covers entire to prge from zero to 1 Megohm. Four flexible leads facilitate use as a voltage divider: for determining circult values by substitution; for checking resistor units, potentlometers, etc. In stur case, complete with our co
A5712 NET
A6232. Extra $1 / 1 \mathrm{~s}$ amp. fuse. NET


#  

OHMITE＂BROWN DEVIL＂ WIRE－WOUND RESISTORS


A high quality line of wire－wound resistors urall radio and industrial requirements．Ac－ treous enamel coating assures complete pro－ tection even where abnormal moisture is pres－ ent．Size， $11 / 4^{*} \times x^{3 / 8}$ ；with tinned wire leads．

STANDARD STOCK RANGES

| Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 1＊ | 125＊ | 1000 | 6000 | 25000 |
| 2＊ | 150 | 1100＊ | 7000 | 30000 |
| 3＊ | 200 | 1200 | 7500 | 35000 |
| 4＊ | 225＊ | 1250 | 8000 | 40000 |
| 5 | 250 | 1500 | 8500＊＊ | 45000 |
| 7．5＊ | 300 | 1750 | 10000 | 50000 |
| 10 | 350 | 18504 | 11000＊ | $55000 \dagger$ |
| 12＊ | 400 | 2000 | 12000＊ | $60000+$ |
| 15＊ | 450＊ | 2250 | 12500 | $65000 t$ |
| 20＊ | 500 | $2400 \dagger$ | 13500＊ | $70000+$ |
| 25 | 600＊ | 2500 | 14300＊ | 75000 |
| 30＊ | 6504 | $2750 \dagger$ | 15000 | $80000+$ |
| 35＊ | 700 | 3000 | 16000＊ | $85000+$ |
| 40＊ | 750 | 3500 | 17500＊ | $90000+$ |
| 50 | 800 | 4000 | 18000＊ | $95000 \dagger$ |
| 75 | $850+$ | 4500 | 20000 | $100000 \dagger$ |
| 100 | $900 *$ | 5000 | 22500 ＊ | $100000+$ |

## 10 WATT RESISTORS

A8292．Avaliable in all values from 1 to 50000 ohms，except those marked $t$ ．Spec NET EACH

20 WATT RESISTORS
Available in all values listed above，except those marked＊
A8293．Values， 5 to 15000 ohms．Size．2x NET EACH values desired．
A8294．Values， 20000 to 50000 NET $2 x / 2^{\circ}$ ．Specify values desired． A8295．Values， 55000 to 100000 NET EACH
$38 c$
$44 c$

SPRAGUE＇KOOLOHM RESISTORS

New resistors with Rubencote insulation which disslpates heat quickly and is moisture－pr of Red dot at end of shell acts as overload in－ dicator．Accuracy guaranteed $5 \%$ or better． STOCK RANGES AVAILABLE

| Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 100＊ | 800 | 4000＊＊ | 15000 |
| 10＊ | 150 | 900 | 5000＊ | 17500 |
| 15 | 200 | 1000＊ | 6000 | 20000 |
| 20＊ | 250＊ | 1250＊ | 7500＊ | 25000 |
| 25 | 300 | 1500＊ | 8000 | 30000 |
| 30＊ | 400＊ | 1750 | 9000 | 40000 |
| 40＊ | 500＊ | 2000＊ | 10000＊ | 50000 |
| 50＊ | 600 | 2500＊ | 12500 | 60000 |
| 75 | $700$ |  |  | 70000 |
| Order by Stock No．and price helow SPECIFY VALUES DESIRED |  |  |  |  |
| 5 WATT－ $11 / 8 x^{3 / 8}$ |  |  |  |  |
| No． |  | Ohm |  | EACH |
| A44 |  | 5 to |  |  |
| A449 |  | 6000 to | 0000 | 2 lc |
| A449 |  | 12500 to | 5000 | $24 c$ |
| A449 |  | 2000 |  | 26 c |
| A44 |  | 2500 |  | 29 c |
| A44 |  | 3000 |  | 35 c |
| A449 |  | 4000 |  | $44 c$ |
| 10 WATT－ $13 / 4 \times 3 / 8{ }^{\text {c }}$ |  |  |  |  |
| A449 |  | 5 to | 5000 | $24 c$ |
| A449 |  | 17500 to | 000 | 29 c |
| A449 |  | 3000 |  | 35 c |
| A450 |  | 4000 |  | 44 c |
| A450 |  | 5000 |  | 53 c |
| A450 |  | 60000 to | 0000 | $65 c$ |

NON－INDUCTIVE SUPER KOOLOHMS For use wherever a power resistor with small phase angle is needed at audio or radio fre－ tharked with＊above． 10 watt slze．

| No． | Ohms | EACH |
| :---: | :---: | :---: |
| A4430 | 10 to 1000 | 29 c |
| A4431 | 1250 to 2000 | 32 c |
| A4432 | 2500 to 4000 | 35 c |
| A4433 | 5000 to 7500 | 41 c |
| A4434 | 10000 | 59 c |

## CONTINENTAL TYPE＂M＂BAKELITE INSULATED CARBON RESISTORS

A neve carbon type resistor fully insulated in
solid molded bakelite．Exclusive design features extremely low contact terminal resistance，low dis－ tributed capacity，and minimum impedance con－ stant over wide frequency range．Axial leads and streamlined design add to space－saving qualities．

IDEAL FOR TELEVISION USE
Especially suited for use in high－gain video fre－ quency television amplifiers where quietness．of op－ eration is most important．Will meet most exacting
 AVAILABLE IN THE FOLLOWING RANGES：

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | hms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 500 | 2000 | 7500 | 25000 | 60000 | 200000 |  |
| 100 150 | 600 750 | 2500 3000 | 10000 | 30000 35000 | 70000 | 250000 | $\begin{array}{r} 1.5 \mathrm{~m} \\ 2 \mathrm{~m} \end{array}$ |
| 200 | 1000 | 3000 3500 | 12500 15000 | 35000 40000 | 75000 100000 | 300000 | meg |
| 250 | 1250 | 4000 | 17500 | 50000 | ${ }_{125000}^{1000}$ | 500000 | eg |
| 300 400 | 1500 1750 | 5000 6000 | 20000 | 55000 | 150000 | 1 meg． | ${ }_{10}^{5 \mathrm{meg}}$ |
| $1 / 2$ WATT |  |  |  |  |  |  |  |
|  |  |  | 1 WATT． |  |  | 3 WATT |  |
| A8285．Type m1／2．5／8＂ long． $7 / 2^{\circ}$ dia．Available in all |  |  |  |  |  |  |  |
|  |  |  |  |  |  | values above． |  |
| values above．Avallable in all |  |  | above． |  |  |  |  |
| NE才 EA |  |  | List，20c． <br> NET EACH．．．．．．．． |  |  | List，30c． |  | be sure to specify values desired when ordering．

## LINE CORDS AND VOLTAGE REGULATORS



AC－DC SET LINE CORDS

Line cord with which supplies proper filament voltage for 3 amp．metal and glass tubes when connected in series．Shpg．wt．， 1 lb

| ${ }^{\mathrm{No}}{ }^{\text {－}}$ | Ohms | ms | NET |
| :---: | :---: | :---: | :---: |
| A 7207 | 360 350 | A7203 220 | EACH |
| A | 350 330 | Aフ211200 |  |
| A | 310 | Aフ201 160 |  |
| A | 290 | Aフ212 150 | 0 |
| $A>210$ | $\begin{aligned} & 280 \\ & 250 \end{aligned}$ | Aフ200 135 | \＄2． |
| 5 | 280 |  |  |

## 220－110 VOLT

AC－DC LINE CORD


A special cord with built－in resistor which permits the operation of any 3 ampere 110 Volt olug and receptaer from a 220 A9145．List，$\$ 1.50$ ．NET．

59c

## REPLACEMENT LINE BALLASTS

Exact duplicate line ballasts to re－
place oripinal units in sets designed for their use．Made of quality parts to exact specifications of originals， Maintain normal and electrically． Maintain normal voitage in spite of olts．Shpg．wt．， 1 lb ．We can supply replace－ ment ballasts for practically any ly replace－ send in orikinal with deposit，stating make， model and tube line－up of set．
A3274．For Brunswick receivers
A3275，or Majestic 10 series．
A3279．For Majestic 90 series．
A3283．For Stewart－Warner 900 series A3285：For Stewart－Warner R100 serie List．\＄1．50． $\qquad$
RICE EACH．
$85 c$

## $\frac{10 y}{c}$

MAKE ALAIED YOMK RABIO SUPPLY HMHOOUAKMERS

# SPRRAGUE CONDENSERS <br> SPRAGUE CONDENSERS 

450 VOLT ELECTROLYTICS


## CARDBOARD

 TYPE LDExceptionally high quality dry electrolytic condens moisture-proof, Working Volts, 450; peak


## PINHEAD "TINY-MIKES'



## ALUMINUM CAN

 DRY UNITS—TYPE LSExcellent for alt fitter uses. Extremely low power factor assures best results. Hermeticall by heat. Supplied moist insulated washers, solder lug, terminal nut and lock washer. Wkg. V. 450 . Max. surge voltage 525 volts. High quality compact units.

| No. | Mff. | Size in inches | NET |
| :---: | :---: | :---: | :---: |
| A11438 | 2 | $1 \times 31 / 2$ | \$0.4 |
| A11439 | 8 |  |  |
| A11441 | 12 | $13 / 9 \times 436$ |  |
| A11442 | 16 | $13 / 9 \times 4$ |  |
| A11443 | 8-8 |  |  |

SILVERED MICA CONDENSERS
An inexpensive sub-
stltute for air constitute for air con1500. Highly stable: capacity not affected by temperature or
humidity. Wkg, voltag

| No. | Mfd | NET |
| :---: | :---: | :---: |
| A13260 | . 0005 |  |
| A13261 | . 0006 |  |
| A13262 | . 0007 | 18 c |
| A13263 | . 0008 |  |
| A13264 | . 0009 |  |
| A13265 | . 001 | 1 c |
| A13266 | . 002 | $24 c$ |
| A13267 | . 003 | 29 c |
| A13268 | . 004 | 32 c |
| A13269 | 1.005 | 35 c |

## PAPER REPLACEMENTS FOR



## DRY TYPE

ELECTROLYTICS
Paper condensers of the
same slzes and shapes as dry electrolytics. Low leakage and power factor. No polarity to observ
TYPE DR-METAL CAN

| No. | Mfd. | Wkg. V. | Size In Inches | NET |
| :---: | :---: | :---: | :---: | :---: |
| 3275 |  |  | $43 / 8 \times 1$ | 0.79 |
| 13276 | 8 | 600 | 4 , $\times 1$ |  |
| 13277 | 4-4 | 600 | $43 / 9 \times 13 / 8$ |  |
| 13278 | 8-8 | 600 | $43 \times 1 \times 11 / 2$ |  |

TYPE RP-CARDBOARD



## SPRAGUE ATOMS MIDGET ELECTROLYTICS

New "mite-size" dry ciectrolytics. perfect for replacements. Sized to fit the smallest spaces yet built for low leakage, high voltage, and and protected against "blow-ups,

| No. | Mfd. | Wkg. V | Slize | NET |
| :---: | :---: | :---: | :---: | :---: |
| 13316 | 4 | 450 | 146x13 | 32 c |
| A13317 | 8 | 450 | 136 1615 | 35 c |
| A13318 | 12 | 450 |  | 44 c |
| A13319 | 16 | 450 450 | $\begin{aligned} & 1516 \times 20^{6} \\ & 16 / 6 \times 28^{\prime \prime} \end{aligned}$ | 5 |
| A13320 |  |  |  |  |
| $\begin{aligned} & \text { A13313 } \\ & \text { A1 } 314 \end{aligned}$ | 8 | 350 350 350 | $\begin{aligned} & 5 / x^{15 / 0 "} \\ & 3 / 4 \times 15 /{ }^{\prime \prime} \end{aligned}$ | 29 c 32 c |
| A13315 | 12 | 350 | $7 / 8 \times 15 / 8{ }^{\prime \prime}$ | 41 c |
| A13309 | 4 | 250 |  | 26 c |
| A13310 | 8 | 250 | 5/3x1 |  |
| A13311 | 12 16 | 250 <br> 250 | 3/4815/9 ${ }^{\text {a }}$ | 38 c 44 c |
|  |  | 150 | $5 / 8 \times 1$ |  |
| A 13304 | 8 | 150 | 598159" | 26 c |
| A13305 | 12 | 150 | 5/9 15 15." | 29c |
| A13306 | 16 | 150 |  | 32 c |
| $\begin{array}{r}\text { A13307 } \\ \hline\end{array}$ | 40 | 150 | $11 / 46 \times 15{ }^{1 / 8}$ | 38 c 3 |
|  | 5 | 50 | \% $6_{6} \times 1{ }^{5 / 8}$ |  |
| A 13356 | 10 | 50 | ${ }^{11} 0^{6 \times 1}{ }^{6 \prime \prime}$ | 6 c |
| A 13302 | 25 | 50 | 16x15" | 32 c |
| A13300 | 10 | 25 | $8 \times 1$ | 24 c |
| A1330 | 25 | 25 | \% $\times 1$ 1/8 | 29 c |

DUAL CARDBOARD TUBULARS

| No. | Mfd. | Wkg. V. | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13328 | 8.8 | 450 | $15 / 16 \times 23 / 8^{\prime \prime}$ | 62c |
| A13354 | $8-16$ | 450 | $1 \times 25$ " ${ }^{\prime \prime}$ | 79 c |
| A13321 | 8.8 | 350 | $11 / 8 \times 3$ \% ${ }^{\text {/ }}$ | 56 c |
| 1353 | 8-16 | 250 250 | 3/4x $\times 2^{7 / 3}{ }^{1 / 4}$ | $62 c$ 73 |
| 13327 | 8-16 | 200 | $1316 \times 23{ }^{1 / 8}$ | 56 |
| A 13326 | 12-12 | 200 | 3/16x23\%" | 56 c |
| A13329 | 16-16 | 200 | /8x23\%\% | 62 c |
| 3350 | $8-8$ $20-20$ | 150 150 |  |  |
| A13352 | 10-10 | 50 | 5/8x23/8 | 47 |



TUBULAR BY-PASS UNITS
Neat and compact tubular condensers. Noninductlvely wound. Oil-impregnated. Type TC-Test Volis $\mathbf{1 2 0 0}$-Wkg. Volts 600

| No. | Mfd. | Size Inches |  |
| :---: | :---: | :---: | :---: |
| A11360 | . 0001 | $7 / 6 x^{3 / 3}$ |  |
| A11361 | . 000025 | $7 /{ }^{\times 1} x^{3 / 8}$ | EACH |
| A 11363 | . 0005 | $76 \times 3 / 8$ | NET |
| A11364 | 001 | $11 / 4 \times 1 / 16$ |  |
| A11365 | ${ }^{0} 002$ | $11 / 4 \times 1 / 6$ | 9 |
| Al1366 | . 004 | 13983/8 |  |
| A11368 | 005 | $13 / 8 \pi / 16$ |  |
| A11369 | 006 | $13,7{ }^{1 / 2}$ |  |
| A11370 | 01 | $13 / 8 \times 1 / 2$ |  |
| A11371 | . 02 | $13 / 8 \times 1 / 2$ |  |
| A11378 | 03 | $15 / 9 \times 1 / 2$ | 12 c |
| A11379 | 04 | $15 / 8 x^{1 / 2}$ | 12 c |
| A11372 | . 05 | ${ }_{15}^{13 / 8 x / 2}$ | 12 c |
| A11374 | 1 | 15 , ${ }^{5 / 6}$ | 15 c |
| A11375 | . 25 | $210 \pi^{\text {i }}$, 16 | 21 c |
| A11376 | . 5 | $21 / 8 \pi^{10156}$ | 29 c |


" 600 " ELECTROLYTICS


ALUMINUM CAN TYPE
Extremely long-1ife fleer condensers. Low power actor and low leakage. 600 vols Peah 475 Volts Working lmpervious to heat and
moisture. A and $B$ have mounting brackets.
UPRIGHT TYPE AC-FIG. A

| No. | Mid. | Size | NET |
| :---: | :---: | :---: | :---: |
| A11330 | 2 | $1 \times 31 / z^{\prime \prime}$ | \$0.65 |
| A11331 | 8 12 |  | $1.81$ |
| A11333 | 16 | $11 / 2 \times 4316^{\prime \prime}$ | 1.35 |
| MULTIPLE UNITS-FIG. B |  |  |  |
| A11334 | ${ }_{8}^{8-8}$ | $11 / 2 \pi{ }^{4} 1 / 2^{\prime \prime}$ | 1.41 |
| A11335 | ¢ $\begin{gathered}8-8-8 \\ 5-15\end{gathered}$ | 3 ${ }^{3} 1 / 2 \times 41 / 2^{\prime \prime}$ | 2.35 1.96 |
| INVERTED TYPE SC-FIG. C |  |  |  |
| Dry electrolytics in aluminum cans. |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| A11346 12 13/6x4/6" 1.2 |  |  |  |
| A11343 | 8-8 | $11 / 2 \times 47 / 16^{*}$ |  |
| A11344 | $8-8$ | (4 Leads) |  |

" 500 " WET ELECTROLYTICS
Heavy-duty self-healing condensers. Leakproof. 500 Volts Peak. 500 Volts Peak

| No. | Mfd. | Size | NET |
| :---: | :---: | :---: | :---: |
| A11350 | 4 | $1 \mathrm{x} 315 / 11^{\prime \prime}$ | \$0.47 |
| A11351 | 8 |  | .5 |
| A11352 | 10 | $13.8 \times 31 / 16^{*}$ | . 6 |
| A11353 | 12 | $13 / 8 \pm 313 / 18{ }^{\prime \prime}$ | . 68 |
| A11354 | 16 | $13 / 8 \times 315 / 16^{\prime \prime}$ | . 79 |
| A11356 | 25 | $11 / 8 \times 476{ }^{\prime \prime}$ |  |
| A11357 | 30 | $11 / 2 \times 4316^{\prime \prime}$ | 1.00 |



600 V. CARDBOARD CASED 600 Volts Peak, 475 Volts Working. Long pushback leads and mounting flanges.

| No. | Mid. | Size in inches | NET |
| :---: | :---: | :---: | :---: |
| A11300 | 2 | $21 / 2 \times 7 / 8 \times 7 / 8$ | \$0.56 |
| A11301 | 4 | $41 / 4 \times 1 / 6 \times 7 / 8$ | 6 |
| A11302 | 8 | $41 / 8 \times 1 / 0 \times 15 / 16$ $410 \times 180$ | 7 |
| A11304 | 4-4 | $41 / 8 \times 13$ \% ${ }^{\text {a }}$ | 1.06 |
| A1. 1305 | 4-8 | $418 \times 13 \times 18$ | 1. |
| A11306 | $8-8$ | $4 / 9 \times 1 / 16 \times 11 / 2$ | 29 |
| A11307 | 8-8 | (4 Leads) | . 29 |

TUBULAR ELECTROLYTICS

| No. | Mfd. | Wkg.V. | Size $\mathrm{In}^{\prime \prime}$. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 1480 | 1 | 450 | 3/4 $\times 25$ | \$0.3 |
| A11481 | 8 | 450 | 15/16x25 |  |
| 11483 | 8 | 450 | $11 / 16 \times 25$ |  |
| 11484 | 8-8 | 450 | ${ }_{1}^{151 / 6 \times 2 \times 21 / 8}$ |  |
| 1485 1489 | $\stackrel{2}{16}$ | 200 200 | $1^{1 / 16 \times 2} \times 2 / 2$ |  |
| 1498 | 25 | 200 | $1 \times 21 / 2$ |  |
| 149 | 8-8 | 200 | $1 \times 23 / 4$ | 7 |
| 1492 | 8-12 | 200 | $1 \times 3$ |  |
| A11493 | 8-16 | 200 | $1 \times 31 / 4$ |  |
| A 1149 | 8 | 100 100 | $\begin{aligned} & 11 / 16 \times 21 / 2 \\ & 3 / 4 \times 21 / 2 \end{aligned}$ |  |
| 4 | 25 | 100 | $11 / 8 \times 21 / 2$ | 5 |
| 1430 | 10 | 50 | 13/6x ${ }^{1 / 2}$ | 38 |
| 1432 | 50 | 50 | $1 \times 31 / 4$ | - |
| 143 | 5 | 25 | 1,1/10x ${ }^{1}$ |  |
|  | 50 | 25 | $1516 \times 21 / 2$ | 56 |
| 143 | 10-10 | 25 | " 1 \%6 $\times 21 / 2$ | .44 |

#  

## FINEST ELECTROLYTIC UNITS YOU CAN BUY!

Quality materials, quality construction, and
quality safeguards have gained for KNiGHT quality safeguards have gained for KNIGHT Condensers a national reputation for outstanding efficiency, long life, and trouble-free service. Thousands of Servicemen. Amateurs, Radio Builders and Experimenters use KNiGHT Condensers exclusively because they have found these units to be absolutely the equivalent of the finest standard makes famous quality trade-mark the KNIGHT features include: aturdy cardboard container: etcled aluminum foil; superior grade cellulose separator; terminal lead securely riveted: push-back leads-quality built throughout.

## CARDBOARD CASED DRY ELECTROLYTICS

These KNIGHT single and multiple section electrolytic condensers are adaptable to practically tion. Flanges may be removed without injury to condenser. The
$6{ }^{n}$ color-coded insulated leads al$6^{\prime \prime}$ color-coded insulated leads allow the greatest flexibility in
mounting. Conservatively rated at $525 \mathrm{D} . \mathrm{C}$. surge volts; 450 D . C. working volts. Multiple units have separate sections. KNIGHT
condensers will do the condensery will do the job effi-
ciently and inexpensively SURE
525 VOLTS SURGE- 450 VOLTS WKG. SINGLE SECTION

| No. | Mfd. | Size, Inches | NET |
| :---: | :---: | :---: | :---: |
| A3823 | 2 | $41 / 4 \times 15 / 16 \times 5 / 8$ | 23 c |
| A3824 | 4 | 41/413/16x $5 / 8$ | 27 c |
| A3825 | 8 | 41/4x15/6x $7 /$ | 32c |
| A3826 | 8 | $41 / 911116 x$ | 34 c |
| $\begin{aligned} & A 3827 \\ & 43828 \end{aligned}$ | 12 | $43 / 0 \times 13 / 8 \times 11 / 4$ | 41 c |
| A3811 | 16 |  |  |
|  |  |  |  |
|  | MULTIPLE SECTION |  |  |
| A3829 | 4-4 | $43 / 1813 / 8 \times 11 / 8$ | 43 c |
| A3830 |  | $41 / 0 \times 11 / 8 \times 1 / 4$ | 49 c |
| $\begin{array}{r} A 3832 \\ A 3833 \end{array}$ | 8-8-4 | $43,011 / 2 \times 13 / 16$ | 54 c |
| A3B3 | 4-4-4 | $\begin{aligned} & 43 \times 81 / \times 17 / 6 \\ & 4 \% \times 21 / \% \times 1 / 16 \end{aligned}$ | 65 c |
| A3834 | 8-8-8 | $43 / 8 \times 21 / 8 \times 17 / 16$ | 80 c |



## BANTAM SIZE

## DRY ELECTROLYTICS

The latest perfected development in small electrolytics. Same as stand foil has been treated to increase surface area consequently increasing capacity and decreaslng overall size. Six inch leads. With tabs for easy mount525 VOLTS SURGE 450 VOL.
525 VOLTS SURGE- 450 VOLTS WKG.

| No. | Mid. | Stie, Inches | NET |
| :---: | :---: | :---: | :---: |
| A3813 | 2 | 23/16x1 $\times 5 / 8$ | c |
| 3814 | 4 | $23 / 6 \times 1 \times 5$ |  |
| 3815 | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | $27 / 6 \times 11 / 5 \times 3 / 4$ | 32 c |
| 3817 | 12 |  | 34 c |
| 3818 |  | $2 \chi_{16 \times 1116 \times 11 / 8}$ | 43 c |
| A3819 | 8.8 | 27/16x ${ }^{13 / 16 \times 11 / 8}$ | 54 c |



## CARTRIDGE TYPE

 DRY ELECTROLYTICSCardboard encased electrolytics with $2^{\prime \prime}$ bare wire leads. Completely wax-filled. They vary pendable units for all filter applications.

| No. | Mid. | D. C. Wkg. | Surge V. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A3776 | 1 | 450 | 525 | 20 c |
| A3777 A 3799 | 8 | 450 450 | 525 | 24 c |
| A3784 | 8 | 200 | 250 | 33 c |
| A3798 | 16 | 150 | 200 | 38c |
| A3787 | 5 | 50 | 75 | 20 c |
| A 3788 | 10 | 50 | 75 | 22 c |
| A ${ }^{\text {A }}$ | 5 | 25 | 40 | 16 c |
| A3791 | 10 | 25 | 40 | 16 c |
| A ${ }^{\text {A }} 793$ | 55 | 25 | 40 | 288 |
| A3794 | 10-10 | 25 | 40 | 28 c |

Deduct $10 \%$ on Orders for 10 or More
Cartridge Type Dry Electrolytics.

"TINY-KNIGHT" MIDGET DRY ELECTROLYTICS


Newly developed dry electrolytics designed to fit the smallest spaces. Full capacity provided by special etched foil. Built for low leakage and co withstand high surges. Hermetically sealed.
(Deduct 5 \% on Orders for 10 or More

| No. | Mid. | Wkg. V. | Slue | NET |
| :---: | :---: | :---: | :---: | :---: |
| A4400 | 4 | 450 | 15/8 ${ }^{5} / 8^{\prime \prime}$ | $24 c$ |
| A4401 | 8 | 450 | $15 / 8{ }^{\prime \prime} x^{3 / 4}{ }^{\circ}$ | $26 c$ |
| A4402 | 12 | 450 | $15 /{ }^{\prime \prime} x^{7} / 0^{*}$ | 33 c |
| A4403 | 16 | 450 | $21 /{ }^{\prime \prime} \mathrm{x}^{13} 11^{\prime \prime}$ | 39 c |
| A4404 | 20 | 450 | $21 / 8^{7} \times 7 / 8^{\circ}$ | 44 c |
| A4405 | 4 | 350 | 15/8" $x^{3 / 9^{\prime \prime}}$ | 21 c |
| A4406 |  | 350 | $15 / 8{ }^{\prime \prime} \mathrm{x}^{11 / 46}$ | 24 c |
| A4407 | 12 | 350 | $15 / 8^{\circ} \times 1 / 4^{\prime \prime}$ | 30 c |
| A4408 | 4 | 250 | $15 / 0^{\circ} \times 9 / 16^{\prime \prime}$ |  |
| A4409 | 8 | 250 | $159 \times 5 / 8$ | $22 c$ |
| A4410 | 12 | 250 | $15 / 8 \times 11 / 16$ | 29 c |
| A4411 | 16 | 250 | $13 / 4{ }^{\prime \prime} \times 1 / 4^{\prime \prime}$ | 33 c |
|  | 4 | 150 | 15/3 $\mathrm{x}^{5 / 8{ }^{4}}$ | 18 c |
| A4413 | 8 | 150 | 15/8"x ${ }^{\circ \prime \prime}$ | 20 c |
| A4414 | 12 | 150 | 13/8"x ${ }^{\prime \prime} 0^{\prime \prime}$ | 21 c |
| A4415 | 16 | 150 |  | $24 c$ |
| A4416 | 20 | 150 | 159"x3/4 | 26 c |
| A4417 | 40 | 150 | 15/8"x ${ }^{1 / 8}{ }^{\prime \prime}$ | 29 c |
| A4426 | 5 | 50 | $13 / 8{ }^{76} / 16^{7 \prime}$ | 20c |
| A4427 | 10 | 50 | $15 / 1{ }^{\prime \prime} x^{1 / 16}$ | 22 c |
| A4418 | 25 | 50 | $15 / 1{ }^{\prime \prime} x^{5 / 8}$ | $24 c$ |
| A4419 | 10 | 25 | $15 /{ }^{\circ} \mathrm{x}$ \% $16{ }^{\prime \prime}$ | 18 c |
| 44420 | 25 | 25 | $15 / 8{ }^{\circ} x^{2 / 16 "}$ | 22c |

DUAL CARDBOARD TUBULARS



## UNIVERSAL REPLACEMENT DRY ELECTROLYTICS

Excellent for general replacement use. Average


| No. | Mid. | Wkg. V. | Fig. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A4770 | 8-8 | 450 | A | 54 c |
| 44771 | 8-8 | 450 | B | $54 c$ |
| 44772 | 8 8-16 | 450 | A | 66 c |
| 44773 | $8-16$ | 450 | B | 66 c |
| A4774 | 16-16* | 450 | A | 80 c |
| A4775 | 16-16* | 450 | B | 80 c |
| A4778 | 8-8 | 200 | B | $44 c$ |
| A4779 | 8-16 | 200 | B | 42 c |
| 44780 | 12-16 | 200 | A | 57 c |
| A4776 | 16-16 | 200 | A | 58 c |
| $A 4777$ | 20-20 | 200 | C | 48 c |
| 44781 44782 | 20-20 | 150 | C | 42 c |
| 44782 | 10-10, | 250 | B | 68c |
| 44783 |  | 2003 |  |  |
|  | 10-10 | 25 | A | 68 c |
| A4784 | $12-161$ $10-10$ | $\left.\begin{array}{r}200 \\ 35\end{array}\right\}$ | A | 75 c |

## FULLY GUARANTEED FOR ONE WHOLE YEAR!

Electrically and mechanically, KNIGHT Condensers are the best that can be made and are guaranteed unconditionally for a year. We
will gladly replace any KNIGHT Condenser What glady repace any kil yrar of condenser
thatisfactory performance when operated at correct rated does not live up to this guarantee, and we will promptly send you a new one without charge. Don't be misled by the very low prices of these condensers. Only the highest quality materials ployed throust production methods are em-

## NEW BASE PRONG

 DRY ELECTROLYTICSA new type of dry electrolytic which fit chassis slots for mounting. Twisting base tabs provide a quick, convenient, sealed for high stability Molded rubber base with selfhealing vent. Metal can is negative lead. Standard diam-
eters, 1 and $13 / 8$.


## ALUMINUM CAN TYPE DRY ELECTROLYTICS

\section*{Popular, low-priced dry electro- <br> lytic condensers mounted in alu- $\longrightarrow$ standard stud and nut mounting and insulated leads. <br> | No. | MId. | Slze ${ }^{\text {c }}$ | NET |
| :---: | :---: | :---: | :---: |
| A3851 | ${ }_{8}$ | $31 / 8 \times 13 / 8$ | 31 c |
| A3853 | 8 | $43 / 81813 / 8$ | 38 c |
| A3859 | 16 | $4{ }^{43 / 8 \times 13 / 8}$ | 50 c |
| A ${ }^{\text {A }}$ | ${ }_{4-4}^{16}$ | 43/8x13/8 | 56 c 47 c |
| A 3858 | 8-8 | $43 / 10 \times 11 / 8$ | 58 c |
| A3867 | 4 | $21 / 3 \times 1$ | 3 lc |
| A3868 | 16 | 21/2x1 | $38 c$ $56 c$ |

## MULTIPLE UPRIGHTS

Negative terminals grounded to aluminum Can. Positive leads brought out to lugs at top. In moisture-proof aluminum containers witl each section separately wrapped and insulated.

| No. | Mfd. | Slxe | NET |
| :---: | :---: | :---: | :---: |
| A3860 | $8-8$ | $4 \times 21 / 2$ | SO. |
| A35 |  |  |  |
| A361 | $4-4-4$ | $4 \times 21 / 2$ | .77 |
| A3862 | $5-15$ | $4 \times 21 / 2$ | 65 |
| A3864 | $8-8-8$ | $4 \times 3$ | .85 |
| A3865 | $8-8-8-8$ | $4 \times 3$ | .98 |
| A3866 | $9-9-18$ | $4 \times 3$ | 1.35 |

## WET ELECTROLYTICS

For heavy-duty filter work. Self-healing properties and ability to withstand voltage overloads make these
units dependable. $11 / 2^{\prime \prime}$ dia., $43 / 8^{*}$ high.

| No. | Mid. | Peak Volts | NET |
| :---: | :---: | :---: | :---: |
| A2712 | 8 | 600 | 53 c |
| A2713 | 4 | 500 | 35 c |
| A2 714 | 8 | 500 | 38 c |
| A2715 | 10 | 500 | 42 c |

#  

##  <br> KNIGHT MOLDED BAKELITE MICA CONDENSERS

Genuine bakelite molded units with bare leads $11 /{ }^{\prime \prime}$ long. Test voltage: 1000 V . D.C. to 002 mid; 750 . D.C. above 002 mid. Size: $3 / 4$ square. Selected and treated foil-mica stacks assure high $Q$ and low power factor.
Deduct $10 \%$ on orders for 10 or more of these units. Buy in quantitles and save.

| No. | Mfd. | NET | No. | Mid. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A7827 | . 000025 | EACH | A7822 | 0006 | EACH |
| A7828 | . 00004 |  | A7823 | 0007 |  |
| A7829 | . 000005 |  | A7836 | .0009 |  |
| A7830 | .0001 | $\sigma_{6}$ | A7837 | . 001 |  |
| A7831 | . 00015 |  | A7838 | . 0015 |  |
| A7832 | . 0002 |  | A7839 |  |  |
| A7833 | .00025 |  | A7840 | . 0025 |  |
| A7821 | . 0003 |  |  | . 003 |  |
| A7834 | . 0004 |  | $\left\lvert\, \begin{aligned} & A 7842 \\ & A 7825 \end{aligned}\right.$ | . 004 | 15 c |



SILVER MICA CONDENSERS
Especially recommended for circuits where highest stablity is required. Designed to resist drift; all types have high o and are unusually stable. Moided in specha bare leads, have thoroughly anchored $11 /{ }^{\prime \prime}$ bare leads. Test voltage: 1000 Sie. D.C.; operating voltDeduct $10 \%$ on orders for 10 or more.

| No. | Mid. | NET | No. | Mid. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A7843 }}$ | . 0001 |  | A7852 |  |  |
| A7844 | . 00015 |  | A7853 | . 0009 |  |
| A7845 | . 00002 |  | A7854 | . 0015 |  |
| A7846 | $\begin{aligned} & .00025 \\ & .0003 \end{aligned}$ |  | A7855 | . 002 |  |
| A7847 A7848 | . 0003 |  | A7856 A7857 | . 00225 |  |
| A7849 | . 0005 |  | A7858 | . 003 |  |
| A7850 | . 0006 |  | A7859 | . 004 |  |
| A7851 | . 0007 |  | A786 | . 005 | 24c |

KNIGHT UNCASED SECTIONS
Wax-dipped for use in filter block repairing Compact; high dielectric factor. $6^{\prime \prime}$ leads.


Deduct $10 \%$ on orders for 10 or more of above sections. Buy them inquantities and save.

## EXACT DUPLICATE BLOCKS



The units below have the same physical dimensions supply condenser blocks not shown. Send in old block with deposit and informa tion and we will duplicate.
A7105 37
A7106. Splkr filter (A.K. 14902). 40, 42, 46, 52, 37, 38, 39 A7128. 40,52. Condensers only. 1.57

| A7109. SG8. ${ }^{\text {1 }}$ (2)............... $\$ 3.40$ |  |
| :---: | :---: |
| A $7110 . \mathrm{SG8}$ |  |
| A7111. SG8 (213) |  |
| A7112. SG8 (214) .................. . $\quad .73$ |  |
|  |  |
| MAJESTIC |  |
| A7115. 70, 7P6, 7BP6.......... \$ 1.70 |  |
| A7118.90,9P6,9BP6 (wlth res.)... 1.85 |  |
|  |  |
| $\begin{aligned} & A>120 . \\ & A 7120 . \\ & \text { A0.................................... } 2.90 \\ & 2.20 \end{aligned}$ |  |
|  |  |
| RCA-VICTOR |  |
|  |  |



KNIGHT CONDENSER KITS WITH FREE METAL CABINETS
Order the condenser kits listed below, and receive absolutely free the handy metal cabinets, They measure $91 / 4 \times 41 / 2 \times 21 / 2^{\prime}$. Finished in dark of these cabinets. Ideal for housing small parts KIT OF "TINY KNIGHTS"
A new popular assortment. Values are suggested by "Radio Retalling" article on re$444018 \mathrm{mfd}, 450$ volt: 3 - 44004 mfd .450 volt; $3-\mathrm{A} 44098 \mathrm{mfd} .250$ volt; 2 -A4411 16 mfd .250 volt; $2-\mathrm{A} 44808-8 \mathrm{mfd}, 450$ volt; and $14418 \quad 25 \mathrm{mfd}$. 50 volt condensers. A7765
inet.
${ }^{\mathbf{s}} 4.72$

## STANDARD DRY ELECTROLYTICS

Kit of KNIGHT Cardboard and Can Type Electrolytics. Consists of: $3-$ A3853 8 mfd . A 38244 mfd. 450 volt condensers. $S_{4}, 4$ A7766. With Cabinet

PERM-A-SEALD TUBULARS Consists of: 2-, 001. 2-.002, 4-.005, 7-. 01 . $5-.02,8-1$ at $600 \mathrm{~V}, 4-.05,8-1,2-25$, KNIGHT Perm-a-Scalds.
${ }^{8} 4.11$ A7767. With Cablnet.

FREE: Select any assortment of KNIGHT Electrolytic Condensers (Perm-a-Seald and new TINY-KNIGHTS may be included) which totals $\$ 5.00$ net or over, and 1 metal cabinet will be included FREE. A7762. Single Metal Cablnet unit when bought separately. NET.................95c
KNIGHT BATHTUB CONDENSERS


Non-inductive, molsture-proof bathtub condensers. Type A: $113 / 16 \times 1 \times 3 / 4^{n}$. Type 8: Single, $113 / 6 \times 2 \times 3 / 4^{\prime \prime}$; muitiple, $2 \times 21 / 4 \mathrm{~K}^{3 / 4}$. Deduct 10 or 10 or more of these unlts.
on orders for 10 on orders for 10 (TYPS (TYPE A)

| No. | Mifd. | Volts | EACH |
| :---: | :---: | :---: | :---: |
|  | . 1 | 200 | 13 c |
| A 7774 | . 25 | 200 | 17 c |
| A 7775 | . 5 | 200 | 22c |
| A 7777 | . 1 | 300 | 14 c |
| A 7778 | 25 | 300 | 18 c |
| A 7779 | . 5 | 300 | 32 c |
| A7781 | . 05 | 400 | 12 c |
| A7782 | . 1 | 400 | 15 c |
| $A \subset 783$ | .25 | 400 | 19 c |
| A 7784 | .1-. 1 | 400 | 26 e |


| No. | Mfd. | Volts | EACH |
| :---: | :---: | :---: | :---: |
| A7786 | 1.0 | 200 | $30 C$ |
| A7787 | 2.0 | 200 | $49 C$ |
| A7789 | 1.0 | 300 | 31 C |
| A7791 | 1.0 | 400 | 32 C |
| A7792 | .25 | 400 | 19 C |
| A7793 | .5 | 400 | 22 C |

MULTIPLE SECTION (TYPE B)

| No. | Mid. | Volts | EACH |
| :---: | :---: | :---: | :---: |
| A7794 | $.1-.1-.1-.1$ | 200 | 52 C |
| A7795 | $.25-.25$ | 300 | 30 C |
| A7796 | $.5-.5$ | 300 | 38 C |
| A7797 | $1-.1-.1$ | 400 | 36 C |
| A7798 | $.25-.25$ | 400 | 31 C |
| A 7799 | $.5-.5$ | 400 | 37 C |



## KNIGHT PERM-A-SEALD

 TUBULAR CONDENSERSSpecially-treated tubulars with spun ends. Non-inductive wound with highest standards. Deduct $10 \%$ on orders for 10 or more.

| Mfd. | 400 V OLTS | 600 voLTs |  |
| :---: | :---: | :---: | :---: |
|  | No. 1 NET | No. | NET |
| 001 | A7915 | $\bar{A}$ |  |
| . 002 | A7916 | A7932 |  |
| . 0003 | $A 7917$ | A 7933 |  |
| $.004$ | $\begin{gathered} A 79181 \\ A 7919 \end{gathered}$ | A 4935 |  |
| . 006 | A 7920 | A 7936 |  |
| . 01 | A7921 | A 7937 |  |
| . 02 | A ${ }^{\text {A }} 9722$ | A7938 |  |
| .03 | A7923 | A7940 |  |
| . 05 | Aフ925 | A 7941 |  |
| . 06 | A 7926 | A7942 |  |
|  | A 79278 c | A 7943 |  |
| . 55 | $\begin{array}{ll}\text { A7928 } & 10 \mathrm{c} \\ \text { A } 7929 & 14 \mathrm{c}\end{array}$ | A7945 | c |
|  | A7929 10c | A7945 |  |


| No. | VOL | TSET | No. | $\begin{aligned} & \text { DUAL } \\ & \text { Mfd. } \end{aligned}$ | $\begin{gathered} \mathrm{N}_{1} \mathrm{~T} \\ \mathbf{V}_{\mathrm{t}} \\ \hline \end{gathered}$ | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A7910 }}$ | ${ }^{1}$ |  | A7946 | .1-.1 | 200 | 14c |
| A7911 | . 2 ? | 7 c | A7947 | . $25-.25$ | 200 | 16 c |
| A7912 | . 5 5 | 13 c | A7948 | .1-. 1 | 400 | 14c |
| A7914 | 1.0 | 20 c | A7949 | 1-. 1 | 1600 | 24 c |

KNIGHT CONDENSER KITS
Kits of 12 popular Knight tubular condensers on handy strips.
A7760. Conslsts of:

| Mid. | Volts | Mfd. | Volts |
| :---: | :---: | :---: | :---: |
| .001 | 400 | .004 | 600 |
| .003 | 400 | .005 | 600 |
| .005 | 400 | .01 | 600 |
| .006 | 400 | .03 | 600 |
| .001 | 600 | .05 | 600 |
| .002 | 600 | .1 | 600 |

YOUR
A7761. Consists of:

| A776 | Consi | ts of. |  | $\cdots$ |
| :---: | :---: | :---: | :---: | :---: |
| Mfd. | Volts | Mfd. | Volts |  |
| . 1 | 200 | . 05 | 400 |  |
| . 25 | 200 | . 06 | 400 |  |
| . 5 | 200 | 1 | 400 |  |
| 1.0 | 200 | . 25 | 400 | (bass mimy |
| . 01 | 400 | 5 | 400 |  |
| . 03 | 400 | 1.0 | 400 |  |
| $\begin{aligned} & \text { YOUR } \\ & \text { PRICE } \end{aligned}$ |  |  | 3T-2 | nux enot |

## VIBRATOR CONDENSERS

Oil-impregnated condensers
capable of withstanding
 heavy voltages in vibrators. Suitable as replacements in hundreds of units. Housed V 1600 D C. Unlts marked * have one lead.

No. Fig. Mifd. Slz


| A7860 | A | 01 | 1 1 | Each |
| :---: | :---: | :---: | :---: | :---: |
| A7861 | ${ }^{\text {A }}$ | . 027 | $11 / 6 x^{7} / x^{9 / 27}$ |  |
| A7862 | ${ }^{\text {A* }}$ | .007 | $116 x^{7} / 8 x^{9} 93^{\prime \prime}$ |  |
| A7863 | ${ }^{\text {A }}$ | . 02 | 11/6x $6 / 8 \times 93 z^{\prime \prime}$ |  |
| A7865 | B | . 01 | Tubular |  |
| A7866 | B | . 02 | Tubular | \$1.9 |

"600" DRY ELECTROLYTICS


600 Volt Peak- 475 V.D.C. Wkg.
Developed especially for P. A. use in amplifiers and for use in equipment where condenser fallure must not occur. Will stand heavy surges

| No. | Mfd. | Size | NET |
| :---: | :---: | :---: | :---: |
| A3801 | ${ }_{8}^{4}$ | $41 / 8 \times 11 / 8 x$ | 8 c |
| A3802 | 8-4 | $41 / 8 \times 13 / 8 \times 1$ | 72 c |
| A3804 | 4-8 | $41 / 8 \times 13 / 8 \times 13 \%^{\prime \prime}$ | O |
| A3805 | 8-8 | $41 / 8 \times 19 / 16 \times 11 / 3^{\prime \prime}$ | , |

# CARDBOARD TUBULAR ORY ELECTROLYTICS 



TYPES ST, TN, 2N, 2P, 2S, 3N, 3S, $4 \mathrm{~N}, 45$ A. complete line of single and multiple units for replacement and set-building
 efficient, and com pact in size. Low power factor. High leakage Copatings and excellen are shown weparated by comma; hyphen sepa fation indicates chance in voltage ST - SINGLE UNITS

| No. | Mfd. | Wkg. V. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14850 | 8 | 450 | 595 | 7/8 $\times 23 / 4$. | \$0.35 |
| A14851 | 12 | 450 | 596 | $1 \times 23 /{ }^{\text {a }}$ | . 44 |
| A14852 | 16 | 450 | 597 | 11/4x21/4. | . 53 |
| A14853 | 8 | 350 | 590 | $1516 \times 21 / 2^{\circ}$ | . 32 |
| A14854 | 12 | 350 | 591 | ${ }^{15 / 6} \times 1 / 23 / 4$. | . 41 |
| A14855 | 8 | 250 | 585 | $7 / 8 \times 21 / 2^{\prime \prime}$ | . 29 |
| A14856 | 16 | 250 | 587 | $1 \times 21 / 2$. | . 44 |


| 2N - DUAL COMMON-NEGATIVE |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14857 | 8-8 | 450 | 518 |  | 2 |
| A14858 | 8 88 | 350 | 517 | 15/6x ${ }^{1 / 1 / 2}{ }^{\prime \prime}$ | 6 |
| A14859 | 8-8 | 250 | 516 | $1 \times 23$. | . 50 |
| A14860 | 8-8 | 150 | 502 | $31 / 4 \times 23$. | . 47 |
| A14861 | 16.8 | 150 | 504 | 33/16 $\times 23 / 8$ | . 50 |
| A14862 | 16-16 | 150 | 506 | $7 / 8 \mathrm{x}$ | . 56 |
| A14863 | 20-10 | 150 | 507 | $7 / 8 \times 23 / 0^{\circ}$ | . 56 |
| A14864 | 20-20 | 150 | 509 | $13 / 6 \times 2$ | . 62 |
| A14865 | 10-10 | 50 | 113 $\dagger$ | 3/4x | 47 |
| A14866 | 10-10 | 25 | $111+$ | 5/8 $\times 13 / 4$ | 41 |

$2 P$ - DUAL COMMON.POSITIVE

| A14867 | 8-8 | 150 | 542 | ${ }^{13 / 16 \times 21}$ | \$0.59 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14868 | $12-4$ $16-8$ | 150 150 | 543 <br> 544 | 13,6x ${ }^{1 / 621 / 2}$ | 59 65 |
| A14870 | 16-16 | 150 | 546 | -1/16x $1 \times 21 / 2$. | 65 73 |
| A14871 | 20-20 | 150 | 549 | 15/16x27/6. | 79 |


| A14872 | 8-8 | 450 | 567 | 13/8 ${ }^{3}{ }^{\circ}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14873 | 8-16 | 450 | 563 | $13 / 6 \times 31 / 4{ }^{\prime}$ |  |
| A14874 | 8-8 | 350 | 564 | $13 / 83$ |  |
| A14875 | $8-8$ | 250 | 560 | $13 / 8 \times 2$ |  |

3N - TRIPLE COMMON-NEGATIVE

 A14882 16, 16-20 $150-25526$ | A14883 | $8-8-8$ | 150 | $120+$ |
| :---: | :---: | :---: | :---: |
| A14884 | $16-8-4$ | 150 | $122+$ |

## 35 - TRIPLE SEPARATE-SECTION*



## 4N - QUAD COMMON-NEGATIVE

A14891|S,8-10,10|150-25| $701\left|1 \times 23 / 4^{2}\right| \mathbf{S 0 . 8 5}$
4S - PUAD SEPARATE-SECTION*
A14892|8,8-10.10|450-25| 718 | $13 / 8 \times 33 / 4 \mid$ | 51.18 *First section separate, others have common

HEAVY-DUTY CAPACITORS


Type HD and HS condensers are ideal for all heavy-duty
applications. De signed primarily for signed primariny for theater applica tions, they may be safety factor is desirable. In cardboard container. Has mounting flanges and coded wire built-in to bandle heavy-duty requirements. You can depend on them for long service.

| No. | Mid. | Wkg. V. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14895 | 8 | 500 | 682 | $1116 \times 1 \times 27 / 10^{\circ}$ | $\frac{50.88}{}$ |
| A14896 | 8 | 600 | 692 | $11 / 4 \times 1 / 2 \times 3^{\circ}$ | 1.44 |
| A14897 | 4 | 600 | 690 | $7 / 1 \times 11 / 4 \times 3^{4}$ | 1.03 |

## NEW MALLORY-YAXLEY RADIO ENCYCLOPEDIA

A completely revised new edition. The most valuable book published for radio servicemen. Analyzes over 17,000 receivers with data on volume controls, resistors. condensers, vibrators, and bound. $81 / 2$ "x11. A11869.


## ALLIED STOCKS ALL THE MALLORY UNITS

Any item not listed here may be ordered from ALLIED at $40 / 2 \%$ discounts from list prices supply all Mallory products promptly, A $11868,1940 \mathrm{Mallory}$ Condenser Catalog sent FREE. Request a CODY of your order


CS - SINGLE SECTION

| No. | Mfd. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| A11700 | 2 | 130 | 1/2x ${ }^{3 / 4 \times 27 / 16^{7}}$ | 50.38 |
| A11701 | 8 | 131 | $5 / 8 x 76 \times 27 / 16^{6}$ | . 44 |
| A11703 | 8 | 133 | 5/8x1x27/16 ${ }^{\circ}$ | . 56 |
| A11705 | 12 | 135 | $\left\|1 / 16 \times 11 / 8 x 77 / 6^{0}\right\|$ | . 76 |
| A11706 | 16 | 136 | $1 \times 11 / 4 \times 2{ }^{7 / 16^{*}}$ | . 85 |

300 V. Peak. 250 V. D.C. Working

| A11708 | 8 | 123 | $5 / 9 \times 7 / 8 \times 27 / 16^{\circ}$ | 50.47 |
| :--- | :--- | :--- | :--- | :--- | | A11710 | 12 | 125 | $5 / 8 \times 1 \times 27 / 66^{\circ}$ | .59 |
| :--- | :--- | :--- | :--- | :--- |
| A11711 | 16 | 126 | $11 / 6 \times 1 \times 27 / 66^{\prime \prime}$ | .65 |


| CN - COMMON-NEGATIVE <br> 525 V. Peak. 450 V. D.C. Working |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| A11716 | 8-8 | 152 | $17 / 8 \times 11 / 4 \times 25 / 0^{\circ} 1$ | \$0.88 |
| 300 V. Peak. 250 V. D.C. Working |  |  |  |  |
| A11720 | 8-8 | 142 | $13 / 4 \times 11 / 8 \times 25 / 8^{\circ}$ | \$0.76 |
| CM - SEPARATE SECTIONS 525 V. Peak. 450 V. D.C. Working |  |  |  |  |
| A11724 | 4 | 170 | $3 / 4 \times 11 / 9 \times 25 / 8{ }^{\circ}$ | 50.71 |
| A11725 | 8 | 171 | 7/1811/4 $\times 25 / 8{ }^{\circ}$ | . 79 |
| A11726 | 8 888 | 172 | 13/6x1x2 ${ }^{1 / 8}$ | . 88 |
| A11727 A11728 | 4-4-4 $8-8-8$ | 173 175 | $13 / 8 \times 1 \times 3$ $11 / 2 \times 1 / 4 \times 3$ | 1.06 1.29 |


| A11729 | 4-4 | 160 | $3 / 4 \times 11 / 8 \times 25 / 8$ | \$0.53 |
| :---: | :---: | :---: | :---: | :---: |
| A11730 | 4-8 | 161 | $3 / 4 \times 11 / 8 \times 25 / 8$ | . 68 |
| A11731 | 8-8 | 162 | 7/8=11/4×25/8 | . 76 |
| A11732 | 16-16 | 164 | 13/8x $\times 25 / 8^{8}$ | 1.06 |
| A11733 | 8-8-8 | 165 | $13 / 8 \times 1 \times 36$ | 1.15 |

## ROUND METAL CAN UNITS

Sealed against humidity and temperature.
W1th 8 leads. nut, and washer.


| No. | Mid. | Wkg. V. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A11779 }}$ | 8 | 450 | 213 | $23 / 4 x^{\prime \prime}$ | \$0.62 |
| A11780 | 12 | 450 | 215 | 23/7 $\times 1$ " | . 82 |
| A11781 | 16 | 450 | 216 | 31/2x1。 | . 91 |
| A11783 | 8 | 250 | 203 | 23/4x1. | . 56 |
| A11784 | 12 | 250 | 205 | 23/4x10 | . 65 |
| A11785 | 30 | 250 | 207 | 31/2x10 | . 88 |
| A11795 | 50 | 250 | 208 | $33 / 4 \times 13 / 0^{\circ}$ | 1.62 |
| A11796 | 50 | 25 | 200 | $23 / 4 \times 1{ }^{1}$ | 62 |

RN - COMMON-NEGATIVE | A14900 | 8.8 | 250 | 232 | $3 \times 1^{\prime}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A14901 | $4-8$ | 450 | 241 | $3 \times 1^{\prime}$, | A14901 - SEPARATE-SECTION

| A14902 | 4-8 | 450 | 261 | $3 \times 13 /{ }^{\text {c }}$ | 50.85 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14903 | $8-8$ | 450 | 262 | 3×13: | 94 |
| A14904 | 8-8-8 | 450 | 265 | 4x13* | 1.35 |
| A14905 | 8-8 | 250 | 252 | 3×13/8. | . 85 |
| A14906 | 8-8-8 | 250 | 255 | $31 / 2 \times 13 / 4$ | 1.23 |
| A14907 | 8-8-16 | 250 | 257 | $31 / 2 \times 136{ }^{\circ}$ | 1.38 |
| A14908 | 8-16-16 | 250 | 259 | $31 / 2 \times 13 / 8{ }^{4}$ | 1.53 |

## FABRICATED PLATE TYPE BB TUBULAR ELECTROLYTICS

## A single unit con-

 denser housed in a hermetically sealed metaltube. Each unit
leads bare wire
cover isfurnished
cover isfurnished Compact size, without sacrifice of quality or varied applications. cases where a section of a multiple unit becomes defective. Excellent for set-building.

IN METAL CONTAINERS

| No. | Mfd. | $w^{\text {kgg. }} \mathrm{V}$. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14910 | 4 | 450 | 60 | $17 / 8 x^{11 / 166^{\prime \prime}}$ | \$0.32 |
| A14911 |  | 450 | 61 | $17 / 0 \times^{131 / 16}{ }^{\circ}$ | . 35 |
| A14912 | 10 | 450 | 62 | $17 / 6 x^{13 / 166^{\prime \prime}}$ | . 41 |
| A14913 | 12 | 450 | 63 | 17/8x ${ }^{1 / 9 / 66^{\prime \prime}}$ | 44 |
| A14914 | 16 | 450 | 64 | 17/8×15/16" | . 53 |
| A14915 | 8 | 350 | 41 | 17/4x ${ }^{1 / 176}{ }^{\prime \prime}$ | . 32 |
| A14916 | 12 | 350 | 42 | 17/6x 1/16 $^{\prime}$ | . 41 |
| A14917 | 16 | 350 | 44 | $17 / 5 x^{15176 .}$ | . 47 |
| A14918 | 8 | 250 | 31 | $17 / 8 \times 116{ }^{\circ}$ | . 29 |
| A14919 | 12 | 250 | 33 | $11 / 6 x^{1316} 5^{\circ}$ | . 38 |
| A14920 | 16 | 250 | 34 | $17 / 6 \times 1316^{\circ}$ | . 44 |
| A14921 | 8 | 150 | 21 | 17/8x ${ }^{1 / 19}{ }^{\circ}$ | . 26 |
| A14922 | 12 | 150 | 22 | 178x ${ }^{11160^{\prime \prime}}$ | 29 |
| A14923 | 16 | 150 | 24 | 170x $x^{1 / 1 / 16^{\circ}}$ | . 32 |
| A14924 | 20 | 150 | 25 | 17/6x $x^{13 / 16^{\circ}}$ | . 35 |
| A14925 | 40 | 150 | 27 | 17/0x 1 $^{1 / 16^{\circ}}$ | . 41 |
| A14926 | 10 | 50 | 13 | $11 / 8{ }^{111 / 16}$ | . 26 |
| A14927 | 10 | 25 | 12 | 17/5x $\times^{1 / 1 / 66^{\circ}}$ | . 24 |
| A14928 | 25 | 25 | 15 | $17 / 8 x^{1 / 1 / 16} 0^{\circ}$ | . 29 |

## STANDARD FABRICATED

 PLATE CAPACITORSImproved in every respect as to size. power factor, life, and mechanical congtruction. Stable characteristics withstand extreme licat and humidity. These condensers are very popular in the original equipment field and are now carried in stock in a wide variety of plify installation. Note: Capacities at same voltage are shown separated by comma; hyphen indicates change in voltare.

> FPS - SINGLE UNITS

| No. | Mfd. | Wkg. V. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14930 | 10 | 450 | 142 | $2 x^{3 / 4}$ | 50 c |
| A14931 | 15 | 450 | 143 | $2 \times 1$ | 62c |
| A14932 | 20 | 450 | 144 | 2x1* | 73 c |
| A14933 | 15 | 300 | 127 | $2 \times 3 /{ }^{\prime}$ | 56 c |
| A14934 | 20 | 250 | 120 | $2 x^{3 /}$. | 59c |
| A14935 | 30 | 150 | 113 | $2 \pi^{3 / 4}$ " | 44 c |
| FPD - DUAL UNITS |  |  |  |  |  |
| A14937 | 10-10 | 450 | 231 | $2 \times 1$ " | 50.76 |
| A14938 | 20-20 | 450 | 234 | $3 \times 1$ " | 1.29 |
| A14939 | $20-20$ | 250 | 217 | 2x1. | 1.00 |
| A14940 | 30-30 | 150 | 211 | 2x1* | . 79 |
| A149 | 20-20 | 150 | 208 | 2x1. | 71 |

FPT - DUAL PLUS BY-PASS

| A14942 | $10-10$ | $450-350$ |  |  |  |
| :--- | :---: | :---: | :---: | :---: | ---: |
| A14943 | 15,15 | -25 | 332 | $2 \times 1 *$ | $\$ 1.12$ |
| A14944 | 30,20 | $250-25$ | 316 | $2 \times 1 *$ | 1.18 |
|  | -20 | $150-25$ | 306 | $2 \times 1^{*}$ | .97 |

FPT - TRIPLE UNITS


FPQ - TRIPLE PLUS BY-PASS | A14947 | $10-10$. | 10.20 .0 |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A14948 | $20-15$ | $450-25$ | 424 | $2 \times 13 / 0^{\circ}$ | 51.53 |

 FPQ - QUAD UNITS


## MOUNTING ACCESSORIES

| $\begin{aligned} & \text { Can } \\ & \text { Size } \end{aligned}$ | Washers |  | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
|  | Bakelite | Metal |  |
| $\begin{aligned} & 1^{3 / 4^{\prime \prime}} \\ & 13 / 9^{\prime \prime} \end{aligned}$ | A14952 A14953 A14954 | A14955 A14956 A14957 | 36 |
| MOUNTING CLIPS |  |  |  |
| $\begin{aligned} & \hline A 149 \\ & A 149 \\ & \text { A149 } \end{aligned}$ | For $3 / 3$ For $1^{13}$ For 13 | $\left.\begin{array}{c} \mathrm{FP} \\ \mathrm{FP} \\ \mathrm{FP} \end{array}\right\}$ |  |

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# eavextris CONDENSERS MALLORY 

TUBULAR BY-PASS UNITS
TYPE TP


Small in size for easy installation. Have
moisture-proof seal for longlife. Non-inductive - provide low RF Rm pedance regardless of rating. The $200,400,600$, and 1000 Volt condensers are wax-impregnated and wax-sealed at the ends, the accepted standard construction for maximum protection from atmospheric conditions. The 1600 Volt condensers are oil-impregnated and wax-sealed, providing extra safety factor for voltage applications higher than isedaly rec


1

## WE-WET ELECTROLYTICS

Low power factor and efficient self-healing characteristics make these units ideal Rated conservatively at 450 Volts D.C working voltage, 500 Volts D.C. peak Built for efficient. long-life service. Sup plied with nut for mounting upright.

| NQ. | Mfd. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13480 | 4 | 450 | x $31 / 2^{\prime \prime}$ | \$0.47 |
| A13481 | 8 | 850 | $1{ }^{1} \times 1 / 2^{\prime \prime}$ |  |
| A13482 |  | 851 | $13 / 8 \times 315 / 16^{\prime \prime}$ |  |
| A13483 | 12 | 1250 | $13 / 8 \times 4{ }^{1 / 2}{ }^{\prime \prime}$ |  |
| A13484 | 16 | 1650 | 11/8x41/2" |  |
| 48 | 20 | 2050 | 11/2x41/2" | 88 |
| A13486 | 30 | 3050 | $11 / 2 \times 41 / 2^{\prime \prime}$ | 0 |
| A13487 | 40 | 4050 | $11 / 2 \times 41 / 2^{\prime \prime}$ | .12 |

## MOUNTING HARDWARE

 A13490. TypeA-016. Terminal connector NET
3. A13491. Type104-1. Special mounting threaded-neck round can units on chassis. 6 Illustrated at right. NET

## MOUNTING CLAMPS

A13492. Ring clamp for $1^{\prime \prime}$ round unit. 4 C A13493. Ring clamp for $13 / 8$ round unit5C
A13494. Ring clamp for $11 / 2$ round unit 6 C
A13495. Washer for clamp mtg. 14 can. 3C

## UNIVERSAL REPLACEMENT CONDENSERS

## TYPES UR AND SR

ALLIED carries a complete selection of Mallory replacement condensers. Each unit is compact in size and mechanically strong,
From the listing below a replacement can be selected for pracFrom the listing below a replacement can be selected for prac
tically every set requirement or as original equiperent in set-building tically every set requirement or as original equipenent in set-building.
All units are moisture-proof and rated conservatively for efficient long-life service. Have low power factor and high leakage resistance pedia for condenser recommendations and order from listing below.


| No. | Mfd. | Wkg. V. | Type | Contalner | Slz* | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A13410 | 8-8 | 250-300 | 180 | Carton | $11 / 8 \times 11 / x^{21 / 4}{ }^{\prime \prime}$ | \$0.76 |
| A13411 | 3-2-1-1 | 450 | 181 | Can | $13 / 8 \times 23 / 4$ | 1.23 |
| A13412 | 5-25-10 | 150 | 182 | Carton | $13 / 16 \times 13 / 8 \times 23 / 8$ | . 94 |
| A13413 | 4-4-4 | 150 | 183 | Carton | $5 / 6 \times 11 / 4 \times 21 / 4$ | . 79 |
| A13414 | 8-8-8, 5-5 | 200, 25 | 188 | Tube | $11 / 4 \times 31 / 4$ | 1.47 |
| A13415 | 8-8-8, 5-5 | 200, 25 | 189 | Carton | $11 / 4 \times 11 / 2 \times 3^{\prime \prime}$ | 1.47 |
| A13416 | 8-8-8-8 | 250 | 190 | Carton | $11 / 4 \times 11 / 2 \times 3^{\circ}$ | $1.53$ |
| A13417 | 8-8-8-8 | 450 | 191 | Carton | $15 / 8 \times 13 / 4 \times 3^{\prime \prime}$ | $1.73$ |
| A13418 | 20-20 | 150 | 192 | Carton | $13 / 15 \times 13 / 8 \times 23 / 8{ }^{\prime \prime}$ | .97 |
| A13419 | 5-8-16 | 150 | 193 | Carton | $1 \times 11 / 4 \times 21 / 2$ | 1.06 |
| A13420 | $8-12$ $3-5-6$ | 300 $300-300-12$ | 601 604 | Carton | $11 / 4 \times 1 / 8 \times 23 / 8$ $11 / 8 \times 11 / 6 \times 2$ | . 818 |
| A13421 | 3-5-6 | 300-300-12 |  | Carton | 1/88 $1716 \times 2$ | . 88 |
| A13422 | 8-8 | 350 | 605 | Can | $13 / 8 \times 31 / 8$ | 9 |
| A13423 | $8-8-25$ | 400-400-2.5 | 609 | Can | $13 / 8 \times 23 / 4$ | .23 |
| A13424 | 8-8-25 | 400-400-25 | 610 | Carton | $19 / 15 \times 19 / 18 \times 23 /{ }^{\prime \prime}$ | 1.12 |
| A13425 | 6-6 | 250 | 633 | Tube | $11 / 4 \times 31 / 4{ }^{\prime \prime}$ | . 68 |
| A13409 | 12-8 | 400 | 634 | Tube | $13 / 8 \times 4^{\prime \prime}$ | 1.03 |
| A13900 | 16-12 | 200 | 194 | Tube | $13 / 6 \times 31 / 4$ | . 91 |
| A13901 | 6-4-6 | 300-300-25 | 602 | Can | $13 / 8725 /{ }^{\prime \prime}$ | 1.00 |
| A13902 | 8-30 | 300-30 | 603 | Tube | 11/4x43/8 | . 79 |
| A13903 | 6-6 | 350 | 606 | Carton | $116 \times 19 / 16^{27} \%^{\circ}$ | - 79 |
| A13904 | 6-4-6 | 300-300-12 | 607 | Carton | $1116 \times 1916 \times 27 / 8$ | . 91 |
| A13905 | 65 | 30 | 608 | Tube | $11 / 4 \times 21 / 4{ }^{\prime \prime}$ | .65 |
| A13906 | 8-8-25 | 350-300-25 | 611 | Carton | $2 \times 2 \times 21 /{ }^{\prime \prime}$ | . 09 |
| A13907 | 8-8.16-16 | 350, 100 | 612 | Can | $13 / 8 \times 43 / 4$ | 1.71 |
| A13908 | 16-30-16 | 200 | 613 | Carton | $13 / 4 \times 115 / 16 \times 4^{\prime \prime}$ | 1.62 |
| A13909 | $8,8-8,12-12$ | 450-250-25 | 614 | Carton | $17 / 6 \times 23 / 9 \times^{213} 46^{\prime \prime}$ | 1.71 |
| A13910 | 8-8-8 | 450-450-350 | 615 | Can | $13 / 8 \times 23 / 4$ " | .32 |
| A13911 | 8-8-8 | 450-450-350 | 616 | Can | $13 / 8 \times 43 / 4{ }^{\prime \prime}$ | 32 |
| A13912 | 16-16-10 | 150-150-25 | 617 | Can | $13 / 8 \times 23 / 4{ }^{2}$ | . 15 |
|  | 5-20-10-5 | 150-150-150-25 | 618 | Carton | 111/6x $1^{15 / 16 \times 27 / 16}$ | 1.32 |
| A13914 | 5-5 | 35 - | 619 | Carton | 3/6x $3 / 4 \times 11 / 2^{\prime \prime}$ | .44 |
| A13915 | $30-10$ | 150 | 620 | Carton | 1/4x13/4x31/2" | 91 |
| A13916 | 8-16-5-5 | 200-200-50-50 | 621 | Tube | $13 / 8 \times 21 / 4^{\prime \prime}$ | . 26 |
| A13917 | 8-8-12 | 350-350-25 | 622 | Carton | $15 / 6 \times 15 / 8 \times 25 / 3{ }^{\prime \prime}$ | . 03 |
| A13918 | 16-2-2-25 | 450-450-450-25 | 623 | Tube | $11 / 2 \times 31 / 2^{\circ}$ | 1.53 |
|  |  | 300-300-150-25 | 624 | Carton | $13 / 16 \times 1916 \times 313 / 1{ }^{\prime \prime}$ | 1.21 |
| A13920 | 8-8-5-5 | 450-450-50-50 | 625 | Carton | $17 / 6 \times 111 / 16 \times 41 \%^{\prime \prime}$ | 1.29 |
| A13921 | 8-4-4-12 | 450-300-150-25 | 626 | Carton | $1916 \times 15 / 8 \times 37 / 8$ | 1.21 |
| A13922 | 4-4 | 450-150 | 627 | Carton | $1 \times 19 / 16 \times 33 / 4{ }^{*}$ | . 62 |
| A13923 | 8-8-10 | 300-300-25 | 628 | Can | $11 / 2 \times 23 /{ }^{\prime \prime}$ | . 09 |
| A13924 | 6-4-10 | 350-300-25 | 629 | Carton | $11 / 4 \times 13 / 8 x+1 / 2^{\prime \prime}$ |  |
|  | 16-8-10 | 150-150-25 | 630 | Carton | $11 / 2 \times 11 / 2 \times 4^{\prime \prime}$ | 1.03 |
| A13926 | 4-12-16 | 150 | 631 | Carton | $11 / 4 \times 1 / / 4 \times 23 / 4{ }^{\prime \prime}$ | 1.09 |
| A13927 | 6-4-16 | 350-350-25 | 632 | Tube | $1 \times 33 / 4^{\prime \prime}$. | 94 |
| A13928 | 12 | 150 | 635 | Can | $1 \times 219 / 3{ }^{\prime \prime}$ | 56 |
| A13929 | $12-4$ | 150 | 636 | Can | $1{ }^{13}{ }^{219} 3^{\prime \prime}$ | 5 |
| A13930 | 8-8-20 | 350-350-25 | 637 | Tube | $13 / 8 \times 21 /{ }^{\prime \prime}$ | 1.09 |
|  | 4-8 | 450 | 638 | Can | 13/8x31/4* | 85 |
| A13932 | $4-8$ | 450 | 639 | Can | $13 / 8 \times 33 / 4{ }^{\text {e }}$ | . 85 |
| A13933 | 16-8-10-10 | 450-450-25-25 | 640 | Tube | $11 / 2 \times 4^{*}$ | 1.71 |
| A13934 | 12-8-8-10 | 450-450-350-25 | 641 | Tube | $13 / 8 \times 5^{\prime \prime}$ | 1.50 |

METAL-CASED OIL.IMPREGNATED CONDENSERS I mpregnated in oll and housed in hermetically sealed leak-proof metal tubes. Ideal for vibrator buffers and
high-voltage coupling applications. All units applications. externally insulatare externally with cardboard tubes and supplied with a mounting strap which may be removed if not required.
1600 VOLTS DC WORKING

| No. | Mfd. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| A14965 | 002 | 370 | $11 / 4 \times 3 / 8$ | 26 c |
| A14966 | . 003 | 377 | 11/4x5/8 | 26 c |
| A14967 | . 005 | 371 | $11 / 4 x^{5 / 9}$ | $26 c$ |
| A14968 | . 008 | 372 | $11 / 85^{5 / 8}{ }^{\prime \prime}$ | 29 c |
| A14969 | . 01 | 373 | $11 / 7{ }^{5 / 8}$ | 32 c |
| A 14970 | . 0125 | 374 | $13 / 4{ }^{3 / 8}$ | 35 c |
| A14971 | . 015 | 375 | $13 / 4 x^{5 / 6}$ | 35 c |
| A14972 | . 02 | 376 | $11 / 4 \times 5 / 8$ | 35 c |

## 2000 VOLTS DC WORKING

| A14973 | . 0025 | 458 | $1 \% \times 16$ | 35 c |
| :---: | :---: | :---: | :---: | :---: |
| A14974 | . 005 | 459 | $111 / 6 x^{11 / 16^{\prime \prime}}$ | 38 c |
| A14975 | . 0075 | 460 | 17/8 ${ }^{1} 1 / 15{ }^{\text {a }}$ | 41 c |
| A14976 | . 01 | 461 | 17/0x114 | $44 c$ |
| A14977 | . 0125 | 462 | $21 / 4 x^{11}$ | 44 c |
| A14978 | . 015 | 463 | $21 / 4 x^{11 / 6}$ | 44 c |
| A14979 | . 02 | 464 | $23 / 8 x^{13} 6^{\prime \prime}$ | 47 c |
| A14980 | . 03 | 465 | $23 / 8 x^{13 / 46^{\prime \prime}}$ | 50 c |
| A14981 | . 04 | 466 | $25 / 9 x^{13 / 46^{\prime \prime}}$ | 50 c |
| A14982 | . 05 | 467 | 25/83 $\times^{13 / 16}$ | 3c |

AUTO RADIO CONDENSERS
The condensers
listed below have
been designed for various auto radio applicatlons.
Types AG443. AG444, AG450, AG451, AG452. and AG453 are for noise suppression at the generator, oil and gas gauges, etc. Type AM454 is for suppression at the am and FM442 are especially designed for Ford and FMM42 are especial is a dome-light intergenerators. Tence suppressor and includes an RF choke Types RF481 and RF482 are for general vibrator hash and noise suppression and have a very low RF impedance.

| No. | Mfd. | Type | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| A14985 | 05 | AG443 | 7/16x $1^{3 / 166^{\prime \prime}}$ | 29 c |
| A14986 | . 25 | AG444 | $5 / 8 \times 113 / 16^{\prime \prime}$ | 29 c |
| A14987 | . 5 -. 5 | AG450 | 7/8x20 | $44 c$ |
| A14988 | . 5 | AG451 | $3 / 4 \times 2$ | 29 c |
| A14989 | 1.0 | AG452 | $1 \times 23 / 16^{\prime \prime}$ | 41 c |
| A14990 | .5* | AG453 | $3 / 4 \times 13 / 4{ }^{\text {a }}$ | $44 c$ |
| A14991 | . 5 | AM454 | $5 / 8 \times 2^{\prime \prime}$ | $26 c$ |
| A14992 | . 5 | FM441 | $11 / 8 \times 17 / 8^{\prime \prime}$ | 29 c |
| A14993 | . 5 | FM442 | $11 / 16 \times 2$ | 29 c |
| A14994 | . 5 | DL445 | $1 \times 23 / 8{ }^{\prime \prime}$ | 50 c |
| A14995 | . 5 | RF480 | $13 / 16 \times 15 / 4{ }^{\prime \prime}$ | 24 c |
| A14996 | . 5 | RF481 | $3 / 4 \times 13 / 8{ }^{\prime \prime}$ | 35 c |
| A14997 | 1.0 | RF482 | $15 / 15 \times 15 / 8^{\circ}$ | $44 c$ |



ALUMINUM CAN TYPES TYPE EB - FIG. A. 525 Volts D.C. Peak-
High grade inverted type dry electrolytic condensers. Internal sections are completely in sulated from metal container. Single mounting stability, minimum leakage current stabity, minimum leakage current

| No. | Mfd. | Size | NET |
| ---: | :---: | :---: | ---: |
| A14500 | 8 | $43 / 8 \times 13 / 8$ | $\$ 0.62$ |
| A14501 | 12 | $43 / 8 \times 1 / 2$ | .82 |
| A14502 | 16 | $43 / 8 \times 1 / 2$ | .91 |
| A14503 | $8-8$ | $43 / 8 \times 11 / 2$ | .94 |

TYPE KR "COMPACT" - FIG. B. Compact etched-foil dry electrolytic con-
densers. May be easily installed on the smallest densers. May be easily installed on the smalle
chassis. Multiple units have separate leads.

| No. | Mid | Size | NET |
| :---: | :---: | :---: | :---: |
| A14504 | 8 | $1 \times 21 /{ }^{\circ}$ | \$0.62 |
| A14505 | 12 | $1 \times 2 /{ }^{\circ}$ | . 82 |
| A14506 | 8-8 | $13 / \mathrm{x}^{3}{ }^{\circ}$ | . 94 |
| A14507 | 8-16 | $11 / 2 \times 47 / 10^{\circ}$ | 1.32 |
| A14508 | 8-8-8 | $11 / 2 \times 43 /{ }^{\circ}$ | 1.35 |
| 600 Valte D.C. Warking |  |  |  |
| A14510 | 4 | 13/8x ${ }^{1 / 2}$ \% | \$1.09 |
| A14511 | 8 | 13/8x4/2" | 1.53 |
| A14512 | 16 | $11 / 2 \times 41 / 2^{\prime}$ | 2.06 |

TYPE EA - FIG. C.
Single and multiple section electrolytics in aluminum containers. Mount in any position by means of clamping rings supplied. Can is commo. Mfd.

| No. | Mfd. | Size | NET |
| :---: | :---: | :---: | :---: |
| A14515 | 8 | $13 / 8 \times 43 / 8^{\prime \prime}$ | \$0.62 |
| A14516 | 5-15 | $21 / 2 \times 43 / 8{ }^{\prime \prime}$ | 1.35 |
| A14517 | 8.8 | $21 / 2 \times 43 / 8$ | 1.06 |
| A14518 | 8-16 | 21/2x43/4" | 1.38 |
| A14519 | 8-8-8 | $3 \times 43 / 0^{\circ}$ | 1.59 |
| A14520 | 9-9-18 |  | 2.20 |
| A14521 | 9-9-18-18 | 31/2×43/8* | 3.09 |

## WET ELECTROLYTICS

TYPE EY - FIG. D. 500 V. D.C. PEAK Ideal for all heavy-duty work where dry units give trouble. Low power factor and leakage cur rent. Self-healing. Stud and nut mounting.


Mid.
4
6
8
10
12
16
18 Size
$31 / 9 \times 13 / 9$
$41 / 2 \times 13$,
$41 / 2 \times 13$,
$41 / 2 \times 1 / 2$
$41 / 2 \times 1 / 2$
$41 / 2 \times 1 / 2$
$41 / 2 \times 1 / 2$

| No. | Mf | Size | NET |
| :---: | :---: | :---: | :---: |
| A14524 | 4 | $31 / 4 \times 13 / 9^{\circ}$ | \$0.47 |
| A14525 | 6 | $41 / 2 \times 13 / 8$ | . 56 |
| A14526 | 8 | $41 / 2 \times 13 / 8$ | . 56 |
| A14527 | 10 | $41 / 2 \times 11 / 2^{\circ}$ | . 62 |
| A14528 | 12 | 41/2x1/2" | . 68 |
| A14529 | 16 | $41 / 2 \times 1 / 2$ | . 79 |
| A14530 | 18 | $41 / 2 \times 11 / 2^{\circ}$ | . 88 |

NEW TYPE 'UP' ETCHED PLATE ELECTROLYTICS
Etched foil condensers in smallest size yet developed. Have unusually low power factor and extremely low leakage. Easy to in staunting flange. If condenser mounting finange. condenser must be nsulated. use bakelite


NET 0.62
.82
.94
.32 .35 09 .53
.06

| A14585 | 8.8 | 450 | x $23 / 4$ " | \$0.62 |
| :---: | :---: | :---: | :---: | :---: |
| A14586 | 8-16 | 450 | $11 / 16 \times 31 / 4$. | 79 |
| A14587 | 8-16 | 250 | $7 / 8{ }^{\prime \prime} \times 23 / 4{ }^{\circ}$ | . 62 |
| A14588 | 16-16 | 250 | $\times 23 \%$ | . 73 |
| A14589 | 8-8 | 150 | $3 / 4 \times 21 / 4$. | . 47 |
| A14590 | 8-16 | 150 | $13 / 16 \times 21 / 4$ | . 50 |
| A14591 | 20-20 | 150 | 7/8×21/2" | . 62 |
| A14592 | 10-10 | 50 | $5 / 8 \times 21 / 40$ | . 50 |
| A14593 | 10-10 | 25 | $5 / 8 \times 21 / 4{ }^{\circ}$ | . 41 |

## COMPACT DRY ELECTROLYTICS

## TYPE JR

Depend able, incxpensive, compact dry electrolytics. For use in limited space; make ideal replacements in the smallest midget sets. Suitable for pace is limitio service job where containers. With adjustable mounting humidit
525 V. D.C. PEAK, 450 V. D.C. WKG.

| No. | Mid. | Slze | NET |
| :---: | :---: | :---: | :---: |
| A14600 | 8 | $21 / 2 \times 11 / 6 \times 11 / 16^{*}$ | 50.56 |
| A14601 | 12 | $21 / 2 \times 1 / 8 \times 1$ " | 76 |
| A14602 | 8-8 | 21/2×13/8×11/8" | 88 |
| A14603 | $8-16$ | 21/2x2 |  |

$\begin{array}{llll}\text { A14603 } & 8-16 & 21 / 2 \times 2 \times 11 / 2 & 1.12\end{array}$
250 V. D.C. PEAK, 200 V. D.C. WKG.

| No. | Mfd. | Size | NET |
| :---: | :---: | :---: | :---: |
| A14604 | 8 | $21 / 2 \times 1 \times 96$ | \$0.47 |
| A14605 | 12 | 21/2x11/8x 1/6\% | . 59 |
| A14606 | 16 | 21/2×11/8× $11 / 16^{\circ}$ | . 65 |

## NEW <br> "SILVER MIKE" CONDENSERS

## 

TYPE 2 R. New molded silver-plated mica condensers for push-button circuits or wherever high stability is required. 1000 Volts D.C. test.
Size: 11/46" $x^{7} / 16$ ".

| No. | Mfd | EACH | No. | Mfd. | EACH |
| :---: | :---: | ---: | ---: | ---: | ---: |
| A14610 | .00005 | S0.24 | A14617 | .0004 | 50.44 |
| A14611 | .00007 | -24 | A14618 | .0005 | .44 |
| A14612 | 0001 | .24 | A14619 | .0007 | .59 |
| A14613 | .00015 | -29 | A14620 | .0008 | .59 |
| A14614 | 0002 | -29 | A14621 | .0009 | -65 |
| A14615 | 00025 | -29 | A14622 | .001 | .73 |
| A14616 | 0003 | .44 |  |  |  |

"DWARF" TUBULAR PAPER CONDENSERS

## TYPE DT

These units are exceptionally reliable, noninductive, small, all-purpose condensers. They are wax-impregnated a nd triple-sealed against moisture. High melting-point wax ends add strength and give extra protection to these strength and give extra protection to these
condensers. Low power factor and high DC resistance make "Dwarf" Tubulars ideal for all RF, IF, and audio by-pass requirements. Conservative DC rating and triple-testing assure thoroughly dependable service. With $21 / 2^{\circ}$ tinned leads.

| 400 | V | D. | RKING VOLTS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Mfd. | NET | No. | Mfd. | NET |
| A14625 | . 01 |  | A14632 | 06 | \$0.12 |
| A14626 | . 015 |  | A14633 | 1 | . 12 |
| A14627 | . 02 |  | A14634 | 2 | . 15 |
| A14628 | . 025 | c | A14635 | . 25 | . 15 |
| A14629 | . 03 |  | A14636 | 5 | . 21 |
| A14630 | . 04 |  | A14637 | 1.0 | .29 |
| A14631 | 05 |  |  |  |  |
| 600 VOLTS D.C. WORKING VOLTS |  |  |  |  |  |
| No. | Mfd | NET | No. | Mfd. | NET |
| A14639 | . 0001 |  | A14659 | . 025 | 0.12 |
| A14640 | . 00025 |  | A14650 | 03 | . 12 |
| A14641 | . 0005 |  | A14651 | . 04 | .12 |
| A14642 | . 001 |  | A14652 | . 05 | . 12 |
| A14643 | . 002 |  | A14653 | . 06 | .15 |
| A14644 | . 003 |  | A14654 | . 1 | . 15 |
| A14645 | . 004 |  | A14660 | 2 | .21 |
| A14646 | . 005 |  | A14655 | . 25 | . 21 |
| A14647 | . 006 |  | A14661 | . 3 | . 26 |
| A14648 | . 01 |  | A14656 | 5 | . 29 |
| A14658 | . 015 |  | A14657 | 1-. 1 | . 38 |
| A14649 | 02 |  |  |  |  |
| 1000 VOLTS D.C. WORKING VOLTS |  |  |  |  |  |
| No. | Mfd. | NET | No. | Mfd. | NET |
| A14480 | . 001 |  | A14489 | 015 | \$0.18 |
| A14481 | . 002 |  | A14490 | 02 | . 18 |
| A14482 | . 003 |  | A14491 | 03 | . 21 |
| A14483 | . 004 |  | A14492 | . 04 | . 21 |
| A14484 | . 005 | 7 C | A14493 | . 05 | .21 |
| A14485 | . 006 | c | A14494 | . 06 | . 21 |
| A14486 | . 007 |  | A14495 | . 075 | . 24 |
| A14487 | . 008 |  | A14496 | . 1 | . 24 |
| A14488 | 01 | 18 c |  |  |  |

## VISRATOR CONDENSERS

2000 V. D.C. PEAK - 1600 V. WKG. Oil-impregnated and processed paper tubular condensers especially suited for use in vibrato units. Withstand high peak and surge voltages

| No. | Mfd. | EACH | No. | Mid. | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14686 | . 0008 |  | A14692 | 02 | \$0.21 |
| A14687 | . 0025 |  | A14693 | 03 | . 21 |
| A14688 | . 005 | 21. | A14694 | . 04 | . 24 |
| A14689 A14690 | . 00075 | 4 | A14695 A14696 | .05 | . 26 |
| A14691 | - |  |  |  |  |



## MOLDED BAKELITE

 MICA CONDENSERSBuilt of highest quality components and carefully tested. Have India ruby mica dielectric. special war-treated stack. brown bakelite case and ${ }^{\text {positive terminal connections. Tested at }} 1000 \mathrm{~V}$. D.C. (on units up to $.003 \mathrm{mfd} .: 600 \mathrm{~V}$. test on higher capacities).

| TYP | 5 W | 5/8.' |  |  | $6^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Mid. | EACH\| | No. | Mfd. | EACH |
| A14664 | . 000025 | \$0.12 | A14669 | . 00015 | \$0.09 |
| A14665 | . 00003 | . 12 | A14670 | . 00002 | . 09 |
| A14666 | . 00004 | . 09 | A14671 | . 00025 | . 12 |
| A14667 | . 000005 | . 09 | A 14672 | . 0004 | 12 |
| A14668 | . 0001 | . 09 | A14673 | 0005 | . 12 |


| TYPE IW |  | $3 / 4{ }^{\text {' }}$ | " $\times 1 / 4{ }^{\prime \prime} 3 / 16^{\prime \prime}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14674 | 0008 | 50.12 | A14680 | 004 | \$0.26 |
| A14675 | 001 | . 15 | A14681 | 005 | 29 |
| A14676 | 0015 | . 15 | A14682 | . 006 | . 35 |
| A14677 | 002 | . 18 | A14683 | . 008 | . 38 |
| A14678 | . 0025 | . 21 | A14684 | 01 | . 44 |
| A14679 | . 003 | . 24 |  |  |  |

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## FOR COMPLETE INDEX SEE PAGES 191.192

# CORNELL - DUBILIER NOISE FILTERS - TESTERS 

## NEW ACCURATE DIRECT-READING CAPACITOR DECADES

These Cornell-Dubilier Capacitor Decades provide accurate standards over a wide range of capacity Ideal for Servicemen, Lab Technicians, schools etc. May be used individually, or in groups of the three decades as shown, or maximuecales give When grouped together, the three decaces gict range from. 0001 mid. to 1.111 mid. By connecting obtain the correct value of capacity merely hy rotating a selector switch. All this can be done while the set is hot. Guessing and searching for replacement values are eliminated, thereby saving time, money and unnecessary fuss. See description below for specifications of individual decades Each decade is furnished with calibration chart giving exact capacity values for all scale markings extending use to more precise measurements.

## MODEL CDA-5

A direct-reading decade having a range from .0001 mfd . to .011 mfd . in steps of .0001 mfd . Two scales are provided to cover the range: .0001 to .001 mfd . on one scale and .001 to . 01 mfd. on another scale. Employs highest quality mica condensers with $\pm 5 \%$ tolerance. Decade can be used continuously in circuits where voltage does not exceed. 220 V. A.C. or oon . D.C. Willacement values. Decade is finding exact replacement values. Decade is housed in attractive walnut bakelite case completely insulated for safe operation. Sup-



## BF-50 CAPACITOR ANALYZER

This instrument quickly and accurately mea sures important characteristics of all types of determine exact condition of all paper. mica, and electrolytic condensers, including A.C. motor starting types. Employs a Wien bridge, assuring permanent accuracy of capacity and power factor. Reading is not affected by line $v$ ltage variations. It is the only instrument of its type which prowides a complete test or an condensers. Halored easyfor adequate sensitivity, Has colored, easywith push-burton switches, D.C. voltage supply and visual eve leakage indicator. For $110-120 \mathrm{~V} .50-60$ cycles. Supplied in an attractive walnut cabinet with cord and test leads. Less tubes (12A7 and 6E5). Size: $61 / 2^{\prime \prime} \times 12^{\circ}$ $\times 93 / 4^{\prime \prime}$. Shpg. wt. 12 lbs . A1Oi75. NET
$\$ 24.40$

## BN CAPACITOR BRIDGE

 An ultra-compact condenser bridge for Servicemen and Technicians. measures capacity of paper. mica, electropaper, mica, electrosers from 00001 mfd to 50 mid. Employs a Wien bridge circuit for all measurements. Accuracy independent of
line voltage variations. A balance is indicated by a dual type visual eye. This instrument indicates the power factor of electrolytic condensers. Also has many ot her uses such as a continuity meter or a check test on defective concensers for opens, short, indicated on scale in microfarads. Head phones, indicated on cards or icher accessories are not meters, sticy an a rectifier and remplifier and a 6.F6G as a bridge detector. Built into an attractive walnut bakelite case. size $33 / 4 \times 5 \times 21 / 2^{\text {" }}$. This condenser bridge is the most compact and useful instruinent of its type ever offered to the service field. Supplied with test learls and instructions, less tubes (12A7 and 6AF6G). For $110-120 \mathrm{~V}$., 60 cycles.
Shpg. wit. ${ }^{3}$ Ibs. NET
$\$ 9.70$


MODEL CDB-5
This decade has a range from 01 mfd to 1.1 mfd, in steps of 01 mid. Has two scales with individual selector switches: one scale from 10 to ${ }^{1}$. All values read directly from clearly mid. As values scales. Uses high quality oil-paper embossed scales. 4 ses high quality iil-paper continuously in circuits where voltage does not exceed 220 V. A.C. or 600 V. D.C. Extremely compact for convenient use in wide variety of applications. Built into attractive walnut bakelite case and supplied with insulated bakelite binding posts. Size: $31 / 4 \times 5 \times 21 / 2^{\circ}$. Shpg. wt..
Alo161. NET.
$\$ 5.29$


MODEL CDC. 5
An accurate decade providing the higher condenser values from 1.0 mfd . to 10.0 mfd . in steps of 1.0 mfd . Has one direct-reading scale and one selector switch for the entire range. Uses high quality oil-paper condensers with $\pm 5 \%$ tolerance. May be used contimuously in circuits where voltage does not exceed 220 V . A.C. or 600 V. D.C. A time and money saver. Valuable in selecting the correct filter condensers in service work or set-building. Entire unit housed in attractive wal nut bakente caseInsulated bakelite binding posts convenienty ocated for easy connections. Size. A10 162 . NET.
s9.41

## NEW "QUIETONE" INTERFERENCE FILTERS



FOR USE AT RADIO RECEIVER

MODEL IF-18. An efficient all-wave, capac-itive-inductive, sectional-band type filter for use in connection with electrical appliances binding post for making ground connection in waln post for making ground connection. amps. $5 x^{31 / 2 \times 21 / 4}$. Shpg. wt. $61 \mathrm{lbs} . \$ 2.94$

MODEL IF-19. An efficient capacitive-inductive type filter for use where interference is severe. Has binding post for ground connection. Mounting ears permit filter to be set in any convenient position. In walnut bakelite case. 110 V . AC-DC at 5 amps . Size: $4 \times 23 / 8 \mathrm{x}$

$\$ 2.35$
MODEL IF-21. All-wave capacitive-inductive filter for electric shavers, barber clippers, etc.
 A7563. NET

MODEL IF-5. For small appliances such as food mixers, hair dryers, etc., where radio interrerence Walnut finish. Wt., 1 lb . A7565. NET.

## FOR USE AT APPLIANCES <br> APPLIANCES

MODEL IF-4. Ideal for use with small radio receivers, such as AC-DC midget sets, etc., power line between the radio receiver plug and wall receptacle. 110 V . A.C.-D.C. at 5 amps . Attractive walnut finished case. Housed in
 A7560. NET.

MODEL IF-6. For all types of home electrical appliances where interference is of moderately low intensity. Installed between appliance and power line with short return lead which reduces radiation. $2^{\circ} x^{3} / \mathrm{B}^{\circ}$ dia. Shpg. wt., 11 b .73 c
finish. Size: finish. Size: $2^{2} \times 1{ }^{3}$.
A7562. NET.

MODEL IF-20. A plug type filter for small electrical appliances where interference is very case, wainut, finish. Shpg. wt., 1 lb . 29 c

MODELIF-22. Special filter with 6 font rubber line cord and plug for electric shavers. 110 V A.C.-D.C. Shpg wt., 1 lb .
A7566. For Schick, Knapp Monarch, etc. A 7567 . For Packard, Reming- $\$ 1.03$
ton-Rand. etc. NET EACH......
$44 c$

## MODEL IF-7 FOR INDUSTRIAL USE

An ideal filter designed to block severe radio interference caused by motors, generators, elevators, diathermy machines, oil burners, etc. Especially suitable for factory, office, and apartment building installations. This Quietone consists of low-loss coils and highest quality capacitors that will correct noise conditions in both Broadcast and Shore-Wave receivers. A heavy-duty, capacitive-inductive filter for single phase, $110-120$. A. .-D.
at 5 amps. Housed in a heavy steel cut-out box, with hinged cover, finished at $S$ amps. Houser in a heavy steel cut-out hox, with or conduit connectors. in grey enamel. Provided wall mounting. Size: $6 \times 6 \times 4^{\circ}$. Shpg. wt.. 9 lbs. AT568.
\$4.41


## * A ARRDVDX CONDENSERS

## AEROVOX ELECTROLYTIC CONDENSERS

MINIATURE DANDEES


Type PRS. New tubular midgets in hermet-ically-sealed aluminum cans. For use in crowded spaces in midget, A.C.-D.C. and special varnished paper jacket insulation; ends of jacket spun over can rim to eliminate possibility of shorts. Properly vented. With handy $31 / 2^{\prime \prime}$ timned wire leads.

| $\begin{aligned} & A 13370 \\ & A 133 \\ & A 13 \\ & A 13 \\ & A \\ & A \\ & A \end{aligned}$ | $\begin{gathered} \text { Mfd. } \\ 4 \\ 8 \\ 12 \\ 16 \\ 20 \\ 8-8 \\ 8-16 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Wkg.V. } \\ 450 \\ 450 \\ 450 \\ 450 \\ 450 \\ 450 \\ 450 \\ \hline \end{gathered}$ | Slze <br> $13 / 66 \times 111 / 16$ <br> $15 / 6 \times 111 / 16$ <br> $15 / 10 \times 23 / 16$ <br> $11 / 16 \times 23 / 6$ <br> $11 / 6 \times 23 / 16$ $1 . \times 25 / 16$ $1 \times 25 / 8$ | $\begin{aligned} & \text { NET } \\ & 31 \mathrm{c} \\ & 35 \mathrm{c} \\ & 44 \mathrm{c} \\ & 52 \mathrm{c} \\ & 59 \mathrm{c} \\ & 62 \mathrm{c} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{r} A 13374 \\ A 13375 \\ A 13376 \\ A 13377 \\ A 13368 \\ \hline \end{array}$ | $\begin{array}{r} 8 \\ 12 \\ 16 \\ 24 \\ \hline \end{array}$ | $\begin{aligned} & 350 \\ & 350 \\ & 350 \\ & 350 \\ & 350 \\ & \hline \end{aligned}$ | . $916 \times 23 / 16$ <br> $13 / 16 \times 11 / 16$ <br> $13 / 16 \times 23 / 16$ <br> $13 / 16 \times 2316$ <br> $15 / 16 \times 23 / 16$ | $\begin{aligned} & 29 c \\ & 31 c \\ & 41 c \\ & 47 c \\ & 53 c \end{aligned}$ |
| $\begin{aligned} & \hline A 13378 \\ & A 13379 \\ & A 13380 \\ & A 1331, \end{aligned}$ | $\begin{array}{r} 4 \\ 8 \\ 12 \\ 16 \end{array}$ | $\begin{aligned} & 250 \\ & 250 \\ & 250 \\ & 250 \end{aligned}$ | $\begin{aligned} & 9 / 16 \times 11 / 16 \\ & 116 \times 11 / 16 \\ & 13 / 16 \times 11 / 16 \\ & 13 / 16 \times 23 / 16 \end{aligned}$ | $\begin{aligned} & 26 c \\ & 29 \mathrm{c} \\ & 38 \mathrm{c} \\ & 44 \mathrm{c} \\ & \hline \end{aligned}$ |
| $\begin{aligned} & \hline A 13394 \\ & A 13395 \\ & A 13396 \end{aligned}$ | $\begin{gathered} 8-8 \\ 8-16 \\ 16-16 \\ \hline \end{gathered}$ | $\begin{array}{r} 200 \\ 200 \\ 200 \\ \hline \end{array}$ | $\begin{array}{r} 3 / 4 \times 25 / 16 \\ 13 / 1 \times 25 \times 2566 \\ 7 / 8 \times 25 / 16 \end{array}$ | $47 c$ $59 c$ $68 c$ |
| A13382 | 4 | 150 | /6 |  |
| A13383 | 1 | 150 | 9/16x11116 | 26 c |
| A1338 | 12 | 150 | 1,1/6x111/16 | 29 c |
| A1338 | 14 | 150 | 1,1/6x ${ }^{1 / 1 / 16}$ | 31c |
| A1338 | 30 | 150 | 11/66 $\times 23 / 16$ | 38 c |
| A 13388 | 40 | 150 | 15/16x23/16 | 41 c |
| A13357 | ${ }_{8-16}^{8-8}$ | 150 <br> 150 | 3/7/ $\times 21 / 2$ | 47 c |
| A13359 | 20-20 | 150 | $788 \times 23 / 16$ | 50 $62 c$ |
| A13389 | 10 | 50 | 9/16x111/6 | 26 c |
| $\begin{aligned} & 339 \\ & 336 \end{aligned}$ | 25 | 50 | 11/16x11116 | 31 c |
| A 1336 | 100 | 50 | ${ }_{13} 16 \times 23$ | 47 c 59 |
| A13391 | 10-10 | 50 | 11/6x11/16 | 47 c |
| A |  | 25 | $96 \times 17 / 16$ | 24 c |
| A13393 | 25 50 | 25 | 1, $116 \times 11116$ | 29c |
| A | 100 | 25 | 13/16x $\times 11 / 16$ |  |
| A13364 | 10-10 | 25 | 5/8×11/2 | 5c |

## DRY ELECTROLYTICS

Space-saver midget units. Con servatively rated to stand up under hardest service. Encased in heavy containers; thoroughiy impregnat mounting brackets and leads. Each section of multiple units has separate leads

## TYPE PBS. 450

525 V. Peak, 450 V. DC wkg.

| No. | Mid. | Size | ET |
| :---: | :---: | :---: | :---: |
| A6750 | , | 1/2× 1/4×27/6 | \$0.38 |
| A6751 | 4 | 16x1 $\times 27 / 6$ | . .44 |
| A 6752 | 8 | 1/16x11/6x ${ }^{1 / 16}$ | 5 |
| A6754 | 12 | 11/16x1 1/18336 | 7 |
| A6755 | 16 | 17/16 $\times 11 / 8 \times 27 / 16$ | 85 |
| A6756 | 4-4 | $11 / 4 \times 11 / 8 \times 27 / 6$ | 70 |
| 46757 | 8-8 | 17/16511/8x276. |  |
| A6758 | 8-8-8 | $11 / 4 \times 11 / 2 \times 3$ | 29 |

TYPE PBS-250
300 V. Peak, 250 V. DC Wikg.

| 760 | 2 | 1/2x 3/4 $\mathrm{T}^{27 / 16}$ | 150.3 |
| :---: | :---: | :---: | :---: |
| A6761 | 4 | 1/2x 3/4x23/16 | 8 |
| A6762 | 8 | 9/16x ${ }^{1} 1 / 16 \times 2$ /16 | 7 |
| 6764 | 12 | 11/6x11/6x2\%6 |  |
| A6765 | 16 | 11/16x11/0x23/16 | 1 |
| A6759 | 20 | 11/16x1 $1 / 8 \mathrm{x} 2 / 16$ |  |
| A675 | 25 | 11/6x11/8x33/6 |  |
| A6763 | 30 | $11 / 16 \times 11 / 8 \times 3316$ |  |
| A6766 | 4-4 | 11/16x 3/4×27/6 |  |
| A6767 | -8-8 | $13 / 16 \times 13 / 10 \times 27 / 6$ |  |
| A6769 | 8-8-8 | $17 / 4 \times 13 / 8 \times 2716$ | 85 |

TYPE PBS-50
75
V. Peak, 50 V. DC
A 6981
A 6982

A 6983 | A6983 | 25 | 10 |
| :--- | :--- | :--- |
| $1 / 6 \times 11 / 8331 / 16$ |  |  |

## TYPE PBS-25

40 V. Peak, 25 V. DC Wkg.


ALUMINUM CAN TYPES


TYPE GL INVERTED-FIG. A
525 V. D.C. Peak-450 V. D.C. Working Inverted mounting, aluminum can condensers suitable for use in any filter circuit. Threaded stem, $3 / /^{\circ}$ diam. fitted with locking nut. All units equipped with $8^{\prime \prime}$ flexible insulated colorcoded leads. Multiple section units have two leads brought out from each section. M
is insulated from condenser sections.

TYPE GL.450-SINGLE SECTION


TYPE 2GL450-DOUBLE SECTION \begin{tabular}{l|l|l|l}
A6419 \& $4-4$ \& $13 / 8 \times 4$ \& $\$ 0.76$ <br>
A6420 \& $4-8$ \& $138 \times 4$ \& .85

 

A6421 \& 8.8 \& 13,844 <br>
\hline A6422 \& 8.16 \& $13 / 8 x^{4}$ <br>
\hline
\end{tabular}

TYPE 3GL450-TRIPLE SECTION


TYPE GLS MIDGET-FIG. B


TYPE E UNIVERSAL MTG.-FIG. C 525 Volis D.C. Peak- 450 Volts D.C. WorkIng


## TYPE PG WET ELECTROLYTICS

TYPEPG-Fig. D. 500 V. Peak, 450 V.Wkg. For heavy-duty woric where dry units give life. With stud and nut inverted mounting.

| A6845 |  | $13 / 6 \times 31 / 2$ | \$0.56 |
| :---: | :---: | :---: | :---: |
| A6798 | 10 | $\begin{aligned} & 11983 / 2 / 20 \\ & 1 / 8 \times 31 / 2 \end{aligned}$ |  |
| A6847 | 16 | $13 / 8 \times 4{ }^{1}$ | 7 |
| A6799 | 18 | $13 / 8 \times 4$ | 8 |
| A6848 | 20 | $13 / 6 \times 41 / 3$ |  |
| A6849 | $\begin{array}{r}30 \\ 35 \\ \hline\end{array}$ |  | 1.00 |
| A6843 | 35 <br> 40 | $11 / 3 \times 41 / 2 \times 4 / 2$ |  |

## TYPE PGM MIDGETS



## TYPE 1450 CONDENSERS

Accurate mica-tinfoil con densers in bakelite cases. Handy soldering lugs. soorking voits D.C. Tested to 1000 volts. Sealed against changes in bumidity.


A6893 .0001 A6895 .00025 EACH \begin{tabular}{l|l|l|l|l}
A6889 \& .00015 \& A6896 \& .00037 \& 15 <br>
A6894 \& .0002 \& A6897 \& .0005 \& 15 c

 No. Mid. NET No. Mid. NET A6898 .001 18 C A6904 . 005 26c A6900 .002 $21 \mathrm{c} A 6905$. 006 32c 

A6902 \& .003 \& 24 c \& $\mathbf{A} 6907$ \& 01 <br>
A6903 \& .004 \& 26 c \& A 6909 \& 02
\end{tabular}

CARTRIDGE CONDENSERS
Conservatively rated compact non-inductive paper condensers. Sealed in wax-impregnated paper tubes; with wire leads. Dual section

| 400 | Volt | Cap. | 600 | Volt |
| :---: | :---: | :---: | :---: | :---: |
| 68 |  | . 001 | A 68 |  |
| A6801 | EACH | . 002 | A6819 | EACH |
| A6802 |  | . 003 | A6820 |  |
| A68803 |  | . 004 | A6821 |  |
| A 6804 A 605 |  | . 005 | A6822 |  |
| A6805 | 9 | . 006 |  |  |
| A680 |  | . 015 | A6825 |  |
| A6808 |  | . 02 | A6826 |  |
| A6809 |  | . 03 | A6827 | 2 |
| 46810 |  | 05 | A6828 |  |
| A6811 | 12 c | 1 | A6829 |  |
| A6816 | 15 c | 15 | A6834 |  |
| A6812 | 5 c | 25 | A6830 |  |
| A68817 |  | 1.5 | A6831 | 2 |
| A6814 | 26 c |  | 46832 |  |
| A6815 | 41 c | .25-. 25 | A6833 | 50 |


|  | Volt | Cap. | 1000 Volt |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Mid. |  |  |
|  | NET | . 001 | A6793 | NET |
|  |  | . 002 | A6794 | AC |
|  |  | . 005 | A67995 |  |
|  |  | . 006 | A6836. |  |
|  |  | . 015 | 46837 |  |
|  |  | . 015 | A683 | 8 c |
|  |  | . 02 | 468 | 8 c |
|  |  | . 03 | A684 | 18 |
|  |  | . 05 | A6841 |  |
|  | 2c | .$_{25}$ | A6842 | 29 c |
|  | 29 c | 1.0 |  |  |


|  | (ELITE <br> ICA <br> ENSER |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Compact "postage stamp type" con densers. Ideal for quency and audio by-pass circuits. Sealed in bakelite cases against all climate and temperature condi-tions. Selectedruby mica dielectric. |  | - Type 1467 |  |  |
|  |  | Type | -7incovo |  |
|  |  |  |  |
|  |  | 1468 | 0, 0 O |  |
|  |  | (0) (0) |  |  |
|  |  |  |  |  |
|  |  | Oramover 10 |  |  |
|  |  |  |  |  |
|  |  | Type 1460 |  |  |
| p |  |  | $\begin{array}{\|l\|l\|} \hline \text { Type } \\ 1460 \end{array}$ | NET |
| Mfd. | 146 |  |  |  |
| . 00004 | A6850 | A6864 | 46875 |  |
| .00005 | A6851 | A68 | A6876 |  |
| . 000075 | A6852 | A6866 | A6877 | 96 |
| . 0001 | 4685 | A686 | A6878 |  |
| . 00015 | A6854 | A6868 | A6879 |  |
| . 0002 | A6855 | 46869 | A6880 |  |
|  | 46856 | 46870 | A6881 <br> 16882 | 12 |
| . 00035 |  | A6871 |  |  |
| . 0005 | A6858 | A6872 | A6883 | c |
| .0015 | 46859 | -....... | $A 6884$$A 6885$$A 6886$$A 6887$$A 6888$ | $15 c$$15 c$$18 c$$21 c$$21 c$ |
| . 0015 | A6860 |  |  |  |
| . 0022 | A6861 |  |  |  |
| .003 | A6862 |  |  |  |

## TUBULAR ELECTROLYTICS

TYPE PR. For replacement or construction work where space is not important factor Ideal for by-pass and filter use. With $21 / 2^{\prime \prime}$ leads.

|  | M $\ddagger$ d. | Wkg.V. | Size |  |
| :---: | :---: | :---: | :---: | :---: |
| 6911 | 2 | 450 | $31 / 4 \times 21 / 4$ |  |
| 2 |  | 100 | 3/4x21/4 |  |
| 4 | 10 | 100 | 1/6x21/4 | c |
| 5 | 20 | 100 | $7 / 8 \times 21 / 4$ | 53 c |
| 7 | 5 | 50 | 3/4x |  |
| 46918 | 10 | 50 | 3/4x21/4 |  |
|  | 20 50 | 50 50 | 7/8x | 44 c |
|  | 5-5 | 50 | 1/70 ${ }^{\text {x }}$ | $4{ }^{7} \mathrm{c}$ |
| 69 | 5 | 25 | $5 / 8$ | c |
| $A 6924$ | 10 | 25 | 3/4x | 9 c |
| 46925 | 20 | 25 |  | 5 c |
| 46926 | 25 50 | 25 | 11/4x23/4 | ${ }_{6} \mathrm{c}$ |
|  | 5-5 | 25 | 5 $\times 29$ | 44 |
| 46929 | 10-10 | 25 | 9/8×21/4 | 4 |

## Whigheot Qualty KNIGHI TRANSFORMERS

## KNIGHT FILTER CHOKES


*Plate coupling choke for Idetector tube. High impedance at audio frequency.

## KNIGHT AC-DC CHOKES



For any 4 or 5 tube midget. Semi-shielded. Rated at 15 Hy, at 40 M.A. Horizontal mounting. $6^{\prime \prime}$ insulated leads, Size: $15 / \mathrm{R}^{"} \mathrm{high},{ }^{213 / 46^{\prime \prime}}$ long,
$15 / 16^{\prime \prime}$ deep. Mtg. centers, 25/16".

| No. | Ohms | No. | Ohims |
| :---: | :---: | :---: | :---: |
| A11635 | 200 | A11639 | 400 |
| A11636 | 250 | A11640 | 450 |
| A11637 | 300 | A11641 | 500 |
| A11638 | 350 | A11642 | 550 |

NET
EACH
29.

## TUBE TESTER TRANSFORMER



An ideal transformer for use in "Build-Your-Own" Test Equipment. Also excellent for replacement purposes and for modernizing old erfuipment. Furnishes these flament voltages for tube tetters: $1.5,2.0,2.5,3.3,5.0$,
6.37 .5 is, 25 and 30 volts at 2.0 Amps. Also has high voltage winding to supply 250 Volts A.C. at 40 M.A. for plate voltage of tube under test. Completely impregnated. Size, $2,16{ }^{\circ}$ hign,
whidg, wt 3 dibs
A1f672. List, $\$ 3.50$
$\$ 1.95$
KNIGHT AUTO RADIO VIBRATOR TRANSFORMER
 A newly developed compact
transformer designed to meet transformer designed to meet replacement transformer for auto radio vibrators. Delivers 250 volts at 50 M . A. in conjunction with any standard vibrator. Upright type, $31 / \mathbf{B}^{\prime \prime}$ high, mtg. centers, $2{ }^{\prime \prime}$ x $11 / 4^{\circ}$. A low-cost replacement unit. At:1671.

KNIGHT 6.3 VOLT FILAMENT TRANSFORMER


Designed primarily for use with S.W. low-power transmitters and receivers. Convenient strapused for test bench voltage source, bell-ringing circuits. experimental setups in schools, etc. Will withstand normal overloads without harm. Rated at 6.3 V.. 1.5 amperes secondary, Primary 115 . 60 cycles With coded $6^{\circ}$ leads and wiring guide. Mtg. centers $23 / 4^{\prime \prime}$. Shps.
A1 1666 . NET.
$59 c$

## KNIGHT FIELD EXCITER POWER TRANSFORMER



This efficiently-bullt power transformer is
designed to deliver 160 designed to deliver out volts at 200 M.A. out 523 rectifier tube. Will furnish full excitation for either one or two 1000 ohm speaker fields in parallel connection. Primary 115 volts $50-60$ 225 M.A.-C.T. and 5 volts at 4 Amperes. Ali 673.

## KNIGHT HIGH-QUALITY <br> POWER TRANSFORMERS

splendid values in caref ully designed and well-constructed compact power transformers. Only fine quality materials are used throughout. Conservatively rated for ong-lived efficient service Several types insure selection of proper transformer for prac tically all set requirements. Terminal arrangement provides for sub-panel wiring. It is not necessary to briug leatis through chassis base. Easily installed as corner boits furnigh postive. solid mounting. Ideal for use in limited space. These transgrade units for replacement purposes. Use them regularly for grade units for replacement purposes. Use themergencies.


## FOR 6.3 VOLT TUBES

## FOR 2.5 VOLT TUBES

## 4 TUBE SETS

Primary: 115 V at $50 / 60$ cycles.
Sec.: 650 V at $40 \mathrm{M} . \mathrm{A}$.-C.T.; 2.5 V . at 3.7 Mtg. $2^{1 / 2 *} \times 2^{\circ}$. Wt. 2 bs
A6055. NET
71

## 5 TUBE SETS

Primary: 115 V. at 50/60 cycles.
Sec.: 650 V . at $4.5 \mathrm{M} . \mathrm{A}$.-C.T.; 2.5 V . at 5 A.-

A6O56. NET....
6 TUBE SETS
Primary: 115 V . at $50 / 60$ cycles.
Primary: 115 V at $50 / 60$ cycles. 675 V. at $50 \mathrm{M} . \mathrm{C}$ - C.T.; 2.5 V . at 7.5

A6057. NET
7 TUBE SETS
93.

Primary: 115 V . at $50 / 60$ cycles.
Sec.: 700 V . at $70 \mathrm{M} . \mathrm{A}, 5 . \mathrm{V}, 7 \mathrm{~V}$ at 3.5 Mtg.: $31 / \beta^{\prime} \times 21 / 2^{\prime}$. Wt. 4 libs.
A6058. NET
$\$ 1.56$

## 8 TO 10 TUBE SETS

Primary: 115 V. at $50 / 60$ cycles.
Sec. 700 V . at 90 M


## 4 TUBE SETS

Primary: 115 V.at $50 / 60$ cycles. 3 V. at 1.6 A.
Mtg.: $21 / 2^{*} \times 2^{*}$. Wt., 2 lbs
A6060. NET.
73.

5 TUBE SETS
Primary: 115 V. at $50 / 60$ cycles.
t 6.3 V . at 1.8 A

A6061. NET.....................
86.

6 TUBE SETS
Primary: 115 V . at $50 / 60$ cycles.
6.3 V at
$2 \mathrm{~A}-\mathrm{C} \cdot 5 \mathrm{~T}, \mathrm{~V}^{2 t} 2 \mathrm{~A}$.
$\$ 1.03$

## 7 TUBE SETS

Primary: 115 V . at $50 / 60$ cycles. $\mathrm{V}^{2}$. at 3.2 A ,

A6063. NET:

## 8 TO 11 TUBE SETS

Primary: 115 V at $50 / 60$ cycles.
Sec.: 700 V . at $100 \mathrm{M} . \mathrm{A}$.-C. T.; 6.3 V . at 4 A .


## KNIGHT AUDIO AND OUTPUT TRANSFORMERS <br> SPECIAL AUDIO


put. Open fram A17556 3 to 1 ratio centers: $21 / 2^{*}$. 65 c A1165

Push-pu
Ctrs.: $21 / 4$
A11663
New Tiny $3: 1$ Audio. 65


## OUTPUT TRANSFORMERS

To feed into 8 to 15 ohm voice coil. Open frame. A1 1658. Single $43,45,2 \mathrm{~A} 3,6 \mathrm{~A}, 25 \mathrm{~A}$,
A11659. Single 31, 42, 2A5. 6F6. 6N6. 6A4 6A6. ${ }^{13 / 3 x x^{1 / 8} \times 13 / 6}$
$49_{c}$
A 11660 . Push-pull 43, 45, 2A3, 6A5, 25A6, 25A7G. $2 x 1$ i $3 / 4 \times 35 / 6$
A1,1661. Push-pull 31, 42, 2A5, 6F6. 6N6, WA4. $2 \times 13 / 3 \times 35 / 6^{4}$
NET EACH.
$49 c$

## KNIGHT MIKE TRANSFORMERS OPEN TYPE

For single or double button microphone. Tapped primary Open frame type. $13 / /^{\circ} \times 17 /{ }^{*} x$ A. Mtg. center, $21 / 2^{\prime \prime} .52$ C

## SHIELDED TYPES



A6050. Single button coupling transformer. Turn ratio. 1 to 64 ; impedance ratio, 1 to mike to tube input. Fully shielded. Two button type A6051. Two button type. carbon microphone to single rid. Turn ratio, 1 to 45 ; impedance ratio. 22
\$1.32


## UNIVERSAL OUTPUT

This versatile transformer couples practically any power tubes, either single or push-pull. to versal mounting magnetic speake, $2 \times 15 / 9 \times 25 / \mathrm{m}^{\prime \prime}$ Shpg. wt.: ${ }^{2}$ ibs. YOUR PRICE...........69c
$\qquad$

## UNIVERSAL P.P. INPUT

May be used to couple any single plate to any combination of single or push-pull tubes. Universal mounting bracket. Size: $2 \times 1 \% \times 2$ AII646. NET. $\qquad$ 69.

## STANDARD AUDIOS

Ideal for replacement purposes. Oppen type con-
 Shpg. wt.7. 2 lbs. each. Straight audio. 1 plate to
${ }^{1}$ A $11648 .{ }^{3-1}$. Push-
 grids.
A1 1649 . Push-pull interstage transformer. Mandles ${ }^{2}$ plates to 2 grids
71.

HEAVY-DUTY UNIVERSAL OUTPUT
A heavy duty, unshielded output transformer for universal use. Accurately matches any single or P.p output stage to any speaker coil. Size: $23 / 4 \times 23 / 3 \times 1$
A1 1005 NET

SPECIIL TRANGFORMERS

## STANCOR UNIVERSAL POWER REPLACEMENTS



| Cat,No. | Mig. | Plate |  | Fil. 1 |  | Fil. 2 |  | Fil. 3 |  | Mtg. Ctrs. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | Mils. |  |  | V. | A. |  |  |  |  |  |
| A12915 | P6001 | 650 | 40 | 5 | 2.0 | 2.5 | 4.0 |  |  | $2 \times 21 / 2^{\prime \prime}$ | 3 lbs. | \$1.38 |
| A12916 | ${ }_{\text {P6002 }}$ | 700 700 | 50 70 |  | 2.0 | 2.5 | 7.25 9.0 |  |  | $2 \times 21 /{ }^{\prime \prime}$ | 3 lbs . | 1.76 |
| A12918 | P6004 | 700 | 90 | 5 | 3.0 | 2.5 | 12.5 |  |  | $21 / 8 \times 21 / 8{ }^{\prime \prime}$ | 4 lbs . | 1.91 |
| A12919 | P6005 | 700 | 70 | 5 | 3.0 | 2.5 | 9.0 | 2.5 | 5 | 21/4×21/8" | 6 6 lbs. | 2.35 |
| A12920 | P6006 | 700 | 120 | 5 | 3.0 | 2.5 | 12.5 | 2.5 | 3.5 |  |  |  |
| A12921 | P6007 | 800 | 110 | 5 | 3.0 | 2.5 | 15.0 | 2.5 | 3.5 | $21 / 2 \times 25 / 16^{\prime \prime}$ | ${ }^{6} 6 \mathrm{lbs}$. | 2.94 |
| UNIVERSAL REPLACEMENTS FOR 6.3 VOLT TUBES |  |  |  |  |  |  |  |  |  |  |  |  |
| A12985 | P6297 | 480 | 40 | 5 | 2.0 | 6.3 | 2.0 |  |  | $2 \times 21 / 2^{\prime \prime}$ |  |  |
| A12924 | P6010 | 650 | 40 | 5 | 3.0 | 6.3 | 2.0 |  |  | $2 \times 21 / 2^{\prime \prime}$ | 3 lbs . | 1.47 |
| A12925 | P6011 | 700 | 70 | 5 | 3.0 | 6.3 | 2.5 |  |  | $2{ }^{2} \times 1{ }^{\text {a }}$ | 3 Ibs. | 1.76 |
| A12927 | P6013 | 700 | 120 |  | 3.0 | 6.3 | 4.7 |  |  |  | ${ }_{5} 5$ libs. | 2.20 |
| A12928 | P6014 | 750 | 150 | 5 | 3.0 | 6.3 | 5.0 |  |  |  | S libs. 6 libs. | 3. |
| COMBINATION 2.5 AND 6.3 VOLT TUBES |  |  |  |  |  |  |  |  |  |  |  |  |


| A12922 | P6008 | 750 | 180 | 5 | 3.0 | 6.3 | 3.3 | 2.5 |  | 21 K6x $27 / 8{ }^{\prime \prime}$ | 7 lbs . |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12986 | P6294* | 750 | 85 | 5 | 3.0 | 6.3 | 3.5 | 2.5 | 9.0 | $21 / 4 \times 213 / 8{ }^{\prime \prime}$ | 4 l l bs. | 5 |
| A12987 | P6296 ${ }^{+}$ | 750 | 125 | 5 | 3.0 | 6.3 | 4.0 | 2.5 | 12.0 | 21/2× ${ }^{1 / 3}$ | 6 lbs . | 4 |
| A12988 | P6291 $\ddagger$ | 750 | 150 | 5 | 3.0 | 6.3 | 5.0 |  |  | $31 / 8 \times 21 / 2^{\prime \prime}$ | 6 lbs. | 3.67 |

*Aso 5 V . and 2.5 V . at 3.5 A . winding. +Also 5 V .2 .5 V . at 4 A ., and 2.5 V . at 1.75 A . windings.
$\$$ For motors in Push-Button tuning sets. $50-24-18 \mathrm{~V}$. windings.
STANCOR HALF-SHELL POWER TRANSFORMERS
The following half-shell type of transformers are similar to the center illustration above except that the transformers are not shielded at the bottom and have solder lugs instead of wire leads.

POWER TRANSFORMERS FOR 2.5 VOLT TUBES

| Cat. No. | Mig. Type | Plate : |  | Fil. 1 | Fil. 2 |  | Fil. 3 |  | Mtg. Ctrs. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | Mils. | V. A. | V. | A. | V. | A |  |  |  |
| A12930 | $\overline{\mathrm{P}-2770}$ | 650 | 40-C.T. | 5 | 2.5 |  |  |  |  |  |  |
| A12931 | P-2868 | 650 | 40-C. T . | $\begin{array}{ll}5 & 2 \\ 5 & 2\end{array}$ | 2.5 | ${ }_{1.75}{ }^{\text {C. }}$ ¢ $\mathbf{T}$ | 2.5 |  | 2 $2 \times 1 / 2^{\prime \prime}$ | $\begin{array}{ll}3 & \text { lbs. } \\ 3 & \text { lbs. }\end{array}$ | $\$ 1.47$ 1.65 |
| A12932 | $\left\lvert\, \begin{aligned} & \text { P-2869 } \\ & \text { P-28.50 } \end{aligned}\right.$ | 700 | 50-C. ${ }^{\text {c }}$ | $\begin{array}{ll}5 & 2 \\ 5 & 2\end{array}$ | 2.5 | ${ }_{1}^{1.75} \mathrm{C}$ C. T | 2.5 | 5.25 |  | $3 \mathrm{l} / 2 \mathrm{lbs}$. | 1.65 |
| A12933 | P-2859 | 700 700 | 70-C.T. $90-\mathrm{C}$ | 5  <br> 5 3 <br> 5 3 | 2.5 2.5 | 3.5 C.T. | 2.5 | 7.5 | $21 / 2 \times 31 / 8^{\prime \prime}$ | 4 1bs. | 2.06 |
| POWER TRANSFORMERS FOR 6.3 VOLT TURES |  |  |  |  |  |  |  |  |  |  |  |
| A12935 | P-2751 | 650 | 40-C.T. | $5{ }^{5} 12$ |  | . |  |  |  |  |  |
| A12936 | P-2771 | 650 | 40-C. T | 5 2 <br> 5  |  | , |  |  | $2 \times 21 /{ }^{\prime \prime}$ | $21 / 2 \mathrm{lbs}$. | \$1.32 |
| A12937 | P-947 | 700 675 | $50-\mathrm{C} \cdot \mathrm{T}$ $70-\mathrm{C}$ | 5 2 <br> 5 3 |  |  |  |  | $21 / 4{ }^{2} 13 / 16$ | 退 $21 / 2 \mathrm{lbs}$. | 1.47 1.62 |
| A12939 | P-948 | 700 | 120-C. T | 5 3 <br> 5 3 | 6.3 6.3 |  |  |  | $21 / 3 \times 31 /{ }^{\prime \prime}$ | 5 lbs. | 2.12 |
| A12940 | P-955 | 80011 | $160-\mathrm{C} \cdot \mathrm{T}$ | 5 3 <br> 5 3 | 6.3 | 3 |  |  | $23 / 4 \times 3$ |  | 2.35 3.53 |



## STANCOR OUTPUT TRANSFORMERS

These sclentifically designed output transformers are substantially built, using only the highest quality materials. Coils are carefully wound and highly insulated, Lammations are accurately made of fine silicon steel. Un-
shielded type. Will withstand hard continuous usage. For Class "A" amplification. Operate directly from plates of either single or push-pull power tubes into 6 to 15 ohm V.C. *1, 2, 4 ohm V.C. +Variable 1 to 30 ohm V.C. SINGLE TYPE OUTPUT TRANSFORMERS

| Cat. No. | Mfg. Type | Primary | Size | Mtg Ctrs. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { A12957 } \\ & \text { A12958 } \end{aligned}$ | A2203 A2200 | 45, 71A, 2A3, 25A6, 25A7G, 6Y6G | , |  | 1 lb . | 0.65 |
| $\begin{aligned} & \text { A12958 } \\ & \text { A12959 } \end{aligned}$ | A2200 | 45, $71 \mathrm{~A}, 2 \mathrm{~A} 3,25 \mathrm{~A} 6,25 \mathrm{~A}, \mathrm{G}, 6 \mathrm{Y} 6 \mathrm{G}$ $31.41,10,12,6 \mathrm{4}, 6 \mathrm{~A}, 38,89,53$, | * | $213 / 16^{\prime \prime}$ | 2 lbs. | . 82 |
|  |  | N7. | 35 |  | 2 lbs. |  |
| A12960 | A2313 | 42, 47. 6BS, 6F6, 6N6, 950 |  | $21316{ }^{\prime \prime}$ | 2 lbs. |  |
| A12961 | A3822* | 42, 47, 2A5, 6F6, 6N6, 950 | $15 / 16 \times 11 / 6 \times 23 / 8{ }^{\prime \prime}$ |  | 1 Jb . |  |
| A12962 | A3841 | $2500,4000,5000,6000,7000$ ohms. 500 Ohm Output. | $2^{11 / 16 \times 211 / 6 \times 23 / 4}$ | 211/16 | 2 lbs . | 06 |
| PUSH.PULL TYPE OUTPUT TRANSFORMERS |  |  |  |  |  |  |
| A12963 | A3842 | $8000,10,000,12,000,14,000$ ohms. 500 Ohm Output. | $2^{1} 1 / 16 \times 21 / 16 \times 23 / 8^{7 \prime}$ | 21/16" | $31 / 2 \mathrm{lbs}$. | \$2.06 |
| A12964 | A 2220 |  | $2 \times 15 / 8 \times 23 / 8$ |  |  | $71$ |
| A12965 | A2201 | PP45, 71A, 2A3, 6A5, 25A6, 6Y6G | $23 / 8 \times 15 / 8 \times 2^{\prime \prime}$ | $21136{ }^{\circ}$ | 2 lbs . |  |
| A12966 | A2231 | PP31, 41.6 , $6,38,6 \mathrm{~N} 7,12 \mathrm{~A} 7,19$ | $31 / 8 \times 15 / 8 \times 2^{\prime \prime}$ | $2^{1} 318{ }^{\prime \prime}$ | 2 lbs . |  |
| A12967 | $\text { A } 2312$ | PP 42, 47, 6B5, 6F6, 6 N6. 950 | $2 \times 15 / 8 \times 31 / 8$ | 213/6" | 2 lbs . |  |
| A12968 | A2285 | PP $43,45,59,71,2 \mathrm{~A}, 6 \mathrm{~A}$, | $25 / 8 \times 2 \times 41 / 16$ | 35\% ${ }^{\text {\% }}$ | $\begin{aligned} & 2 \text { lbs. } \\ & 31 / 41 \mathrm{bs} . \end{aligned}$ |  |
| A12969 | A3830 | 6L6, 6V6, $6 \mathrm{~A}, 46,6 \mathrm{~A}, 6 \mathrm{~N} 7$, Univ. | $25 / 8 \times 41 / 16 \times 21 / 4^{\circ}$ | 31\%" | $\begin{aligned} & 31 / 4 \mathrm{lbs} . \\ & 31 / 2 \mathrm{lbs} . \end{aligned}$ | $1.26$ |
| A12970 | A3823 | Single or PP plates, Univ. Output. | $15 / 8 \times 15 /{ }^{-1}$ | 23\% | $11 / 2 \mathrm{lbs}$. | $\begin{array}{r} 1.76 \\ .88 \end{array}$ |

## KNIGHT AUTOFORMER



## BELL-RINGING TRANSFORMER

 This sturdy little Jefferson transformer may be used in apartment building for operatnusciators, and door openers Secondary, with binding posts. provides 10 volts at 5 wats, capacity. Primary may be con- capacity. Primary may be concircuit. Primary has heavy. A., $50-60$ cycle circuit. Primary has heavy insulated lead mental work in schools and labs. Size, $2^{\prime \prime} \times$

$58 c$

## STANCOR UNIVERSAL FIELD.

 COIL SUBSTITUTE CHOKEDesigned to take the place of the speaker field on the test bench. May also be used as Substitute filter choke in scts. 3000 tapped ( 3 2500, 1000 , and 750 . Resistance and Cur1750 ohms @ $60 \mathrm{M} . \mathrm{A}$. continuous or 75 M.A. intermit-
 tent duty $500,1500,2000,2250,2500,3000$ termittent duty. $33 / 8^{\circ} \times 27 / 3^{\prime \prime} \times 3^{7}$. Wt., $21 / 3^{1} \mathrm{lbs}$. With instructions.
A11272. NET
STANCOR UNIVERSAL VIBRATOR TRANSFORMERS

\section*{The following five transormers were designed paring those receivers for not available. Use the brackets from the old transformer on these re-

placement units. Shpg placement units.
wt., $21 / 2$ lbs. each. <br> 

## ACME TRANSFORMERS

## STEP-DOWN

## TYPE

Will reduce line voltage of $200-240$ volts, 120 volts for operating radios, amplifiers, appliances, etc. Will safe-
 ly bandle any device consuming up to 200 receptacle. Wt. 8 lbs.

## VARIABLE

## VOLTAGE

## ADJUSTER

Maintains proper operating voltage under tions. Allows step-up or step-down action.


Primary tapped $85-100-115-130-145$ volts; sec.
115 volts. With voltmeter. For $50-60$ cycle A11266. Capacity 150 . ${ }^{\text {Watts. Shpg, wt., } 7 \text { lbs. NET. }} 7.06$ A11268. Capaelty 350 NET. 1.76 A 1269 . Capaclty 500
Watts. Shipg. wt., 14 lbs. $\qquad$ 12.94

## NEW VOLTROL

A new type of manual voltage regulator. The Voltrol has a fuli-range stepless control from 0 to 130 volts. $\mathrm{Ac}-$
curate within $4 / 10 \mathrm{~V}$. adjustment. Output is practically independ voltmeter to indicate voltmeter to indicate Sturdily iconstructed
 put receptacle isted in a ventilated case. Out5 V. Output cap., 130 V.-5 amps. $61 /{ }^{\circ}$ A1 1270 . WE'T ${ }^{191 \mathrm{bs} .}$
${ }^{\text {s }} 34.25$

## ANY TRANSFORMER REBUILT LIKE NEW

ALLIED offers a special transformer rebuilding service for all types and makes of transformers. All rebuilding is done efficiently and economically. Exact orlginal specifications are duplicated. We use the original case and laminations. All radio power transformers as well as trans-
formers for battery chargers, neon signs, diaformers for battery chargers, neon signs, dia-
thermy machines. Amateur radio equipment. thermy machines, Amateur radio equipment.
etc., are expertly rewound. Send us your Include all transformer with a $\$ 2.0$ deposit. inquiry, such as model of set, tube lineup, etc.

# SIDICOR TRANSFORWISE 

## EXACT DUPLICATE POWER TRANSFORMERS



## ALL TYPES AVAILABLE

The units listed below are precision-built transformers which conform exactly to original manufacturer's plysical and electrical specifications. No refitting or redrilling necessary-just pull out the defective unit, put in new unit. and solder conaections. We can supply Exact Duplicate Power ransformers for practically any set. Simply give all quote prices Units not shown below can also be shipped promptly upon receipt of your order.
 ATWATER KENT ${ }_{82}$ L 85 H. \& 2,70 ser 856 , 976

## BRUNSWICK

 14.21, 31, 81, 82. 3NC8, 5 NC C .
## CLARION

## AC60. <br> AC260 <br> AC300

AC61. AC70
crostey
505, 515, 516, 525 534, 635., 65. S17. $6577^{2} .547$
526.616 .555 general electric A-52. A-55. $\mathrm{E}-7, \mathrm{E}-76$ E-61. E-62. E-68. E-105. E-106
E-105, E-106. GRUNOW 660.661 .662 .670 $671,690,691$ KNIGHT SG8
No. NET Model

| A11507 | $\$ 3.76$ |  |
| ---: | ---: | ---: |
| All | 543 | 3.65 |
| Al | 2.65 |  |

$\begin{array}{ll}\text { A11512 } & 3.76 \\ \text { A11513 } & 2.94 \\ \text { A1516 } & 3.12\end{array}$ $A 11513$
A 1518
A 11524
A1

| A11501 | 1.76 |
| :--- | :--- |
| $A 11502$ | $1: 91$ |
| Al | 103 |
|  | 1.62 |

A11503
Al1504
A11505
A1 1506
A11531
A11534 4.20

## MAJESTIC

 151 (unmounted) 25,25 B


REE REPLACEMENT GUIDE
New fifth edition of Stancor's replacement transformer suide. A complete 38 -page alphabetical listing showing proper replacement transformers, chokes, audios, and output transiormers necessary to do a real servicing job Aso shows tube complements of an sets listed. Heps Select the transformer you want and then order from ALLIED. This useful guide will be sent FREE on request. Write for your copy now. You need this valuable guide in your service work. Keep a copy handy


## STANCOR

## FILTER CHOKES

These high-quality. con servatively-rated chokes are for filter or plate coupling use. The wellinsulated windiags are insure long-lived eficient 1706. 5 HFNRY at 40 M A12950. Typec-1706. 5 HENRYat $15 / 6 \times 21 / 4 \times 1 / 16^{n}$ D.mig. ctrs. Wt., $3 / 4 \mathrm{lb}$.
NET.

A 12951. Typec-1707.7 HENRY $2^{\text {n }}$ intg. ctrs. We., $3 / 4 \mathrm{lb}$. A12952. Type c-1003. 30 He 53e 50 MA. D.C. resistance 550 ohms. $17 / 13 x^{3}$ at
 A12953. Type C-1002. 30 HENRY at 75
 A12954. TYpe C-1001. 30 HENRY at ${ }^{39}{ }^{16} 6^{\circ} \mathrm{mmg}$ ctrs. Wt., 3 lbs . A12055 Trpe c-15is \$ 15 MA D. . . resistance. 750 HEN


FAMOUS JEFFERSON TRANSFORMERS

## STAR-SEALED

 TRANSFORMERS orm Outstanding values in high quallty transformers for use in any set or amplifier, A.C. or silicon steel Assembled in black enameled sheet steel case with nickeled binding posts. Size, $27 / 8^{n} \times 27 / 8^{\prime \prime} \times 23 / 8$ high. Mis. centers $23 / \mathrm{l}^{*}$. Sh A6030. $467-113.3$ to 1.
A6031: 467-116. 5 to 1.


## MIKE TRANSFORMERS

For use as microphone to grid trangformers. Single button types have turn ratio of 1 to 64 , double-butt on type, 1 to 45 . Flat respons
A6036. Type 467-413. Single Button;

PLASTIC-SEALED TRANSFORMERS
Hermetically sealed with a plastic coating which permanently adheres to and seals all cx posed surfaces. These climatermers are fully

 $\times 2^{4} \times 21 / 2^{\prime \prime} ; D-4^{\prime \prime} \times 21 / 8^{\prime \prime} \times 23 / 8^{\prime \prime} ; E-31 / 4^{\prime \prime} \times 21 / 0^{\prime \prime} \times 21 / 8^{\circ}$ AUDIO TRANSFORMERS

P. P. INPUT TRANSFORMERS

| No. | Type | Ratio | Size | NET |
| :---: | :---: | :---: | :---: | ---: |
| A6022 | $467-502$ | 1 to | A | \$ 1.00 |
| A6023 | $467-504$ | 1 to | B | 1.15 |
| A6024 | $467-506$ | 1 to 4 | E | 1.29 |
| A6027 | $467-508$ | 1 to 4 | D | 1.59 |

## OUTPUT TRANSFORMERS

For single 33, 42, 47, etc., or P.P. 71A, 45, etc. Have 7000 ohm primaries.

| No. <br> A 6028 <br> A6047 | $\begin{gathered} \text { Type } \\ 467.509 \\ 467-510 \end{gathered}$ | $\begin{gathered} \text { Watts } \\ 2 \quad 31 / 2 \\ \hline \end{gathered}$ | Sec. $0 h m s$ 4 to 6 6 to 8 | $\begin{gathered} \text { Size } \\ \text { A } \\ \text { B } \end{gathered}$ | $\begin{aligned} & \text { NET } \\ & .79 \\ & .94 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

## CHOKES

 | A6048 | $466-590$ | 20 | 50 | 425 | B | 888 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| A6049 | $466-540$ | 200 | 18 | 5000 | C | $: 76$ |


Models
No,
RCA-RADIOLA-VICTOR (Cant.) NET
 VERSAL AUDIOS These uncased audio ransformers are noted or their exceptionalls curve. They are machine wound for uniformity and aenualty steel laminations. Whth universal mounting plate and long flexible leads.
A12941. Type A-53. 10.000 ohns plate to
 A12942. Type A-63. 10,000 ohms plate to
 A12943. Type A-53C. 10.000 ohums plate to
 Meg. centers, $2^{*}$. We., $1 / 2 \mathrm{lb}$. NET 12944. Type A-63C. 10.000 ohms plate to
 strap mounting. $2 \times 31 / 4 \times 17 /{ }^{\circ}$
94.

A6037. Type 467-414. Double Button; strap mounting, $2 \times 31 / 4 \pi 17 / \mathrm{Bl}^{\prime \prime}$..... $\$ 1.03$ Shp wt. . 11/2 Ne. NET. Simgle Buttom
 SET.

## LINE TO VOICE COIL OUTPUT TRANSFORMER



Several of these trans formers may be connected in series or paralle arrangements for collp ling a nuinlser of spuakers
to a 500 oh in 1 in e Handles 12 watts. Primary impedance 1000 ohins, tapped 500 and 250 ohms. Secondary is A6026. Type 467-438. $\$ 1.76$

## STANCOR UNI-

## Triownson tiah Quabty TRANSFORMERS



UNIVERSAL DUPLICATE POWER TRANSFORMERS
A complete line designed to meet the requirements $50-60$ cycles. Average wi., 6 lbs. Write for other voltages and frequencies desired.

FREE REPLACEMENT ENCYCLOPEDIA A1 1004 . Be sure to get this helpful Thordarson Guide at once. Write for it now. It tells what Thorany set. You can service $99 \%$ of the sets listed in Rider's manuals with the 19 units listed below


## GENERAL-PURPOSE POWER TRANSFORMERS



A carefully selected listing of generalpurpose power transformers. Only the finest
materials are used in their construction materials are used in their construction. Choice of three types shown. All listings
110 V. $50-60$ cycles. Add $60 \%$ for 25 cycles 110 V. $50-60$ cycles. Add $60 \%$ for 25 cycles; order.) Typical Thordarconde deposit with order.) Typical Thordarson quality is bullt into each one of these sturdy units to as-
sure perfect performance coupled with sure perfect performance coupled with long
life and truly dependable service. life and truly dependable service.

| Cat. No. | Mfg. Type | Fig. | $\frac{\text { PLATE }}{\text { Volts Mils. }}$ |  | Fil. 1 |  | Fil. 2 |  | Fil. 3 |  | SIZE |  | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | V | A | V | A | V. | A | W | D H |  |
| A11014 | T60R49 | 2H | 560 | 30 | 2.5 | 3.5 |  |  |  |  |  |  |  |
| A11040 | T70R20 | 2 H | 600 | 50 | 6.3 | 2.5 | 5 | $\begin{aligned} & 2 \\ & 2 \end{aligned}$ |  |  |  | $\times 21 / 2 \times 23 / 8$ $\times 27 / 8 \times 3$ | $\$ 1.32$ 1.62 |
| A11015 | T75R47 | ${ }_{2}{ }_{2} \mathrm{H}$ | 610 | 125 | 6.3 | 2 | 5 | 2 |  |  | 37\% | x21/8x3 $\times 3$ / | 1.62 2.20 |
| A11016 | T70R78 | 2G | 680 | 55 | 6.3 | 1.5 | 5 | 2 |  |  | 33 | $\times 3 / 4 \times 45 / 8$ | 2.20 1.91 |
| A11019 | T70R61 | ${ }_{2}^{2 G}$ | 770 650 | 70 70 | 6.3 1.5 | 2.5 | 5 | 2 |  |  | 33 | $\times 31 / 9 \times 45 / 8$ | 2.35 |
|  |  | 2 F | 650 | 70 | 1.5 | . 5 | 1.5 | 4 | 2.5 | 3 |  | $\times 33 / 4 \times 45 / 8$ | 3.23 |
| A11021 | T70R62 | 2G | 700 | 145 | 6.3 | 4.5 | 5 | 3 |  |  |  |  |  |
| A11022 | T56R05 | 2G | 700 | 110 | 2.5 | 9 | 2.5 | 3 | 2.5 | 3 | 33 | $\times 37 / 8 \times 47 / 8$ | 3.23 |
| A11024 | T92R21 | 2G | 800 | 200 | 5.3 | 5 |  |  |  |  | $33 /$ | x $33 / 4 \times 47 / 8$ | 3.38 |
| A11026 | T74R28 | 2G | 880 | 125 | 6.3 | 3.3 | 5 | 3 | 2.5 | 3 |  | $\times \mathrm{x} 1 / 8 \times 47 / 8$ | 4.41 3.82 |
| A11027 |  |  |  | 38 V | BIAS | TAP |  |  |  | 3 |  |  | 3.82 |
| A111028 | T77R63A | ${ }_{2}^{2 G}$ | 720 750 | 70 | 6.3 | 2.65 2.2 | 5 | 2 |  |  |  | x31/4x37/8 | 2.06 |
| A11029 | T83R77A | 2G | 660 | 70 | 6.3 | 2.2 | 5 | 2 |  |  |  | $\times 31 / 2 \times 45 / 8$ | 2.20 |
| A11030 | T80R92C | 2 G | 840 | 200 | 2.5 | 3.2 | 5 | 2 3 | 2.5 |  |  | $2 \times 31 / 2 \times 31 / 2$ | 1.91 |
| A11031 | T17R30 | 2 G | 740 | 280 | 6.3 | 6 | 5 | 3 | 2.5 | 1.5 |  | $2 \times 45 / 16 \times 419 / 32$ | 4.41 |
| A11032 | T17R31 | 2G | 860 | 325 | 6.3 | 7 | 5 | 6 |  |  |  | x31/2x47/ | 5.00 |
| A11033 | T70R21 | 2 H | 700 | 70 | 6.3 | 3 | 5 | 2 | 2.5 | 4 |  | $\times 51 / 4 \times 47 / 8$ $\times 31 / 4 \times 3 / 8$ | 7.35 |

## UNIVERSAL 6 VOLT VIBRATOR TRANSFORMERS

 profits by stocking one each of the transformers listed below. Supplied with mounting feet ormay be used with original mounting brackets.

| No. | Type | Fig. | D.C.Volts | M. A. | W D H | Wt. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12735 | T14R33 | 3 C | 225 |  |  |  |  |  |
| A12736 | T14R34 | 3 C | 250 | 50 | 21/2×23/8x ${ }_{2}$ | $31 / 2$ 33 | \$2.75 | \$1.62 |
| A12737 | T14R35 | 3 C | 260 | 60 | $21 / 2 \times 25 / 8 \times 31 / 8$ | $4^{3 / 4}$ | 3.25 3.75 | 1.91 |
| A12738 | T14R36 | 3 C | 285 | 75 | $21 / 2 \times 27 / 8 \times 31 / 8$ | $41 / 2$ | 3.75 4.25 | 2.20 |
| A12739 | T14R37 | 3 C | 350 | 75 | $21 / 2 \times 31 / 8 \times 31 / 8$ | ${ }_{5}^{41 / 2}$ | 4.25 4.75 | 2.50 2.79 |
| A12741 | T14R38 | 2G | 320 | 100 | $31 / 4 \times 31 / 4 \times 45 / 8$ | $71 / 2$ | 4.75 5.25 | $2.79$ |
| A12743 | T14R39 | 2 B | 150 | + 40 | $3 / 4 \times 31 / 4 \times 23 / 8$ $2 \times 23$ | 21/2 | 5.25 2.75 | $\begin{aligned} & 3.09 \\ & 1.62 \end{aligned}$ |

115 VOLT $50-60$ CYCLE OR 6 VOLT D.C. MODEL

## FENCE CONTROLLER TRANSFORMER

AI 1211 , Type T-18V10. Recommended for use in Popular Mechanics'
wet-dry weather switch. Shps. wt., 2 lbs. NET...................


## THORDARSON "CHT"

 TRANSFORMERSIdeal for use in receivers, transmitters, etc. or wherever quality of components is an im portant factor. Designed for varying climatic We can supply all C.H.T. type transformers.

| No. | Type | NET | No. | Type | NE T |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A12710 | T15A66 | $\$ 4.26$ | A12722 | T15D85 | 54.41 |
| A12711 | T15A67 | 4.70 | A12723 | T15D86 | 4.41 |
| A12712 | T15A68 | 4.70 | A12680 | T15R04 | 2.79 |
| A12713 | T15A69 | 4.26 | A12681 | T15R05 | 6.17 |
| A12714 | T15A70 | 4.41 | A12682 | T15R06 | 5.73 |
| A12715 | T15A71 | 4.26 | A12683 | T15R07 | 6.17 |
| A12716 | T15A72 | 4.26 | A12684 | T15R08 | 8.08 |
| A12717 | T15A73 | 3.82 | A12724 | T15 S90 | 5.44 |
| A12718 | T15A74 | 3.82 | A12725 | T15 S91 | 6.76 |
| A12719 | T15A75 | 4.12 | A12726 | T15 S92 | 8.08 |
| A12720 | T15A A5 | 6.17 | A12727 | T15 S93 | 8.82 |
| A12699 | T15C52 | 2.94 | A12728 | T15 S94 | 10.29 |
| A12698 | T15C5 | 3.23 | A12729 | T15 S96 | 6.47 |
| A12721 | T15D87 | 6.47 | A12730 | T15 S97 | 8.53 |

## "TRU-FIDELITY'

## TRANSFORMERS

Completely shielded. Can be used as standards in laboratories, etc. Leads can be taken trom top or bottom. Handy tlon. Size, $21 / 2 \times 31 / 8 \times 41 / 3^{\circ}$. Wt. $41 / 4$ ibs. (*Indicates capacitive ter tap, for balanced transmis-


| No. | Type | NET | No. | Type | NET |
| :---: | :---: | ---: | :---: | :---: | :---: |
| A11173 | T90A06 | 510.58 | A11177 | T90A04 | 58.82 |
| A11174 | T90A02* | 10.29 | A11178 | T90A05 | 9.70 |
| A11175 | T90A01 | 9.70 | A11179 | T90S07* | 10.58 |
| A11172 | T90A10* | 9.41 | A11180 | T90 S08 | 10.29 |
| A11170 | T90A00* | 10.00 | A11169 | T90S13 | 11.76 |
| A11171 | T90A11* | 11.76 | A11181 | T90S12* | 8.23 |
| A11176 | T90A03 | 8.82 | A11182 | T90C09 | 7.35 |

## THORDARSON TELEVISION

 TRANSFORMERST-16R50. For No. 1801 Kine scope tube and 879 rectifier. $1-2000$ or 3000 V. D.C. No. M.A. Sec. No. $2-21 / 2 \mathrm{~V}$. at fil. voltage. See T-16F55 beA 11261 . NET


T-16R51. For use with No, 1800 Kinescone and 878 rectiner. Sec. No. $1-6000,4500$ or amperes. (No fil. voltage.) No. $2-21 / 2$. at
A11262. NET. .......... 8 ? T-16F55. Filament transforme 1801 Kinescopes. Pri. 115 V. 60 cycles. A1/263. NET ${ }^{2}$.
\$6.47

## RCA TELEVISION PARTS

Now avaliable-a complete llne of necessary parts for the Experimental Television Re ceiver. Designed for maximum efficiency in
operation when used with the RCA 1800 and operation when used with the RCA 1800 and
1801 Kinescope tubes. Detailed literature on the following parts will be sent free or requiest Ask for RCA Television Folder No. 2853.

No. RCANo. Description NET
A13175 32898 Vertical Osc. Trans. A13176 32899 Horizontal Osc. Trans. \$1.05 A13177 33020 Two Section Filter Cap. 1.59 A13178 33120 Low Voltage Reactor $\begin{array}{lll}\text { A13179 } & 33190 & \text { 3-Section Filter Cap. } \\ \text { A13180 } & 33211 & \text { High Voltage Rect. }\end{array}$

A13181 33340 Socket 60 $\begin{array}{ll}\text { A13181 } & 33340 \\ \text { A13182 } & \mathbf{3 3 3 4 1} \\ \text { Vert. Coupling Cap }\end{array}$ $\begin{array}{ll}\text { A13182 } & 33341 \\ \text { A13183 } & 33390 \\ \text { Port. Coupling Cap. }\end{array}$ A13184 9857 Yoker Trans. A13185 9861 Power Trans. | A13186 9862 Horiz. Output Trans. | 10.50 |
| :--- | :--- |
| 13.50 |  | A13187 32900 Vert. Output Taas. $\quad 10.5$ A13188 33018 Filter Cap.

3.30
2.25

ALLIED IS FIRST WITH ALL TELEVISION SUPPLIES. We can supply all types of television tubes and parts for experimental purposes as fast as they are
released. Sice page 39 for television tubes.

#  <br>  <br>  <br>  <br>  <br>  <br>  <br> FIG. 2-F <br> FIG. 2-E <br> FIG. 3-B <br> FIG. 2-B <br> FIG. 3-E <br> FIG. 2-C <br> FIG. 2-G 

## COUPLING TRANSFORMERS

The latest Thordarson high quality transformers, designed for practically every input, output, mixer or line purpose. A transformer for almost any need wifl be found in the listing below. Complete essential information used by referring to primary and secondary impedances shown. This listing together with a tube chart giving plate impedances of tubes to be used is all that is necessary to select proper matching or coupling transformer. All units are supplied in a variety of mounting arrangements to meet every possible chassis mounting requirement. All units have been carefully designed and are precision-built to rigid, exact specifications. We can supply all other Thordarson transformer types. Send us your order, or write for prices. Average shipping wis., 4 lbs.

TUBE TO LINE (LOW LEVEL)

| No. | Type | Fig. | Primary | Secondary | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A11038 | T14A90 |  | CT | $500 / 125$ | \$1.47 |
| 11039 | T14A91 | 2-F | 20. |  | , |
| MIXER OR LINE TO TUBE OR GRID |  |  |  |  |  |
|  |  |  | $200 \mathrm{CI}$ |  |  |
| $\text { A1 } 1045$ | T55A16 | $2-\mathrm{F}$ | $200 \mathrm{OR}$ | $\begin{aligned} & 100,000 \mathrm{CT} \\ & 100,000 \end{aligned}$ | 1.62 |
| A 1046 | T63A72 |  | 500, 400, 600,800 | 100,000 | 2.2 |
| A11048 | T61A94 | ${ }^{2}-\mathrm{F}$ | 500. 125 | $100,000 \mathrm{CT}$ |  |
| A11037 | T83A78 |  | 100 | 400.000 CT |  |
| 1044 | T23A57 |  | 00 | 400,000 | 1.32 |

*Similar to Fig. 2F, but has biading post terminals.
MIKE TO LINE TRANSFORMERS

| A11053 | T70A82 | $2-\mathrm{F}$ | 200 CT | $500 / 125$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A1 1054 | T70A83 | $2-\mathrm{F}$ | 100,000 | $200 / 50$ |

## OUTPUT COUPLING TRANSFORMERS

|  |  | $\begin{aligned} & 2-E \\ & 2-E \\ & 2-E \\ & 2-B \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-B \\ & 2-G \\ & 2-F \\ & 2-F \\ & 2-G \\ & 2-F \\ & 2-F \\ & 2-F \\ & 2-G \\ & 2-G \\ & 2-G \\ & 2-G \\ & 3-B \\ & 3-B \\ & 3-B \\ & 3-B \end{aligned}$ |  |  | $\begin{array}{r} \$ 1.91 \\ 2.06 \\ 1.18 \\ 1.18 \\ 2.35 \\ 2.06 \\ 2.35 \\ 2.35 \\ 2.06 \\ 2.35 \\ 2.35 \\ 3.83 \\ 2.35 \\ 2.20 \\ 3.82 \\ 1.76 \\ 2.65 \\ 2.65 \\ 3.53 \\ 3.53 \\ 3.82 \\ 7 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

*Has third winding for obtaining $10 \%$ inverse feed-back.

## LINE TO SPEAKER VOICE COIL

| A 12776 | T60S48 | 2-E | 500 to 3000 | Univ. V. C. | \$1. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | T14S80 |  |  |  |  |
| A12778 | T76S74 | 2-E |  | 84 to 250 |  |
| A12779 | T17S17 | 2-E | 500 or 25 | 4-8-16-25-50 | 3.82 |

## CLASS "B" AND "AB' DRIVERS



TRANSCEIVER AUDIOS

| A11090 | T54D63 | 2-F | 20.000 | 1-19 or 2-49 "B" | +\$1.32 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A11091 | T67 M69 | 2-F | 10,000 | 2.700 2.4 |  |
| A11092 | T68506 | ${ }_{2-\mathrm{F}}^{2-8}$ | 7,000 | 10-2,000 | 1.4 |
| A11094 | T72558 | 2-B | 10,000 | 2.000-50 | . 97 |
| A11095 | T72A59 | 2-8 | 5,000-200 | 100,000 |  |

## AUDIOS-OUTPUTS-CHOKES

The representative listing below includes the most popular transformers in the famous Thordarson line. These units are supplied in a variety of mointings (as illustrated) for convenience in replacement work. (Flgure c mounting type transformers offer two methods of mounting or universal application. Engineered correcty in every detall with units carry regular Thordarson guarantee. Individually packed proper hook-up diagram. If the transiomer yourret wit promptly send us your order with deposit, and we will

STRAIGHT AUDIO TRANSFORMERS

| Cat. No. | Type | Fig. | Ratio | Slze Inches | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A11121 | T47A25 | 2 -C | 3:1 | $23 / 8 \times 2 \times 15 / 8$ |  | \$1.03 |
| A11122 | T29A99 | 2-B | 3.2:1 | $23 / 6 \times 2 \times 2$ | $21 / 4$ |  |
| 123 | T57A36 | 2-F | 3.2:1 | $21 / 8 \times 2 \times 21 / 8$ | $21 / 2$ | . 18 |
| A11125 | T57A38 | 2 2-F | 3:1 | $3 \times 11 / 2 \times 21 / 2$ | 21/4 |  |
| A11127 | T75A74* | ${ }_{2-\mathrm{F}}^{2-\mathrm{F}}$ | 2:1 | ${ }_{2}{ }^{1 / 8 \times 21 / 8 \times 23} 8$ | $31 / 4$ | . 32 |

*Has static shield between primary and secondary windings.
$\dagger$ For either straight or push-pull use

> PUSH-PULL INPUTS

| 8 | T14A29 | 2-C | 3.2:1 | $21 / 2 \times 21 / 6 \times 17 / 8$ | $21 / 4$ | 1.32 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A11129 | T33A91 | 2-B | 3.2 :1 | $21 / 1 \times 2 \times 2$ | $21 / 4$ | - 18 |
| A11130 | T57A39 | 2-F | 3.2:1 | $21 / 8 \times 2 \times 21 / 6$ | $21 / 2$ | 32 |
| A11131 | T57A40 | 2-B | 3:1 | $3 \times 21 / 2 \times 2$ | 3 | 1.62 |
| A11132 | T57A41 | 2-F | 3:1 | $3 \times 21 / 2 \times 21 / 2$ | $31 / 4$ | . 76 |
| A11133 | T57A42 | 2-B | 3:1 | $21 / 2 \times 2 \times 3$ | 2 | .91 |

PUSH-PULL INTERSTAGE

| Cat. No. |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Type | Flg. Ratlo | Slze | Lhs. | NET |

 *May be used in Class "AB" Amplifiers where some grid current flows.

OUTPUT TRANSFORMERS
FOR . 1 TO 29 OHM VOICE COILS
Cat. No. Type Fig. Primary Size Lbs. NET $\overline{A 12763} \overline{\text { T57S01 }} 2-E \quad \begin{aligned} & \text { Universal for single } \\ & \text { or P. P. Tubes. }\end{aligned}$ 23/8x2 $\quad \times 2 \quad 21 / 4 \$ 1.18$



*For heavy-duty power tubes drawing up
FOR 6 TO 12 OHM VOICE COILS
A12767|T33S99 |2-B |PP45, CtC.........|23/8x2 x2 | 21/4|\$0.88 FOR 1, 2, AND 4 OHM VOICE COILS
 A12768|


## PLATE COUPLING CHOKES

| Cat. No. | Type | Flg. | MA | Hys. | Size | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A11145 | T29C27 | 2-B | . 5 * | 700 | $2 \times 23 / 8 \times 11 / z$ |  | \$0.88 |
| A11146 | T52C98 | ${ }_{2}^{2-F}$ | -5* | 700 300 | $\begin{array}{ll}23 / 8 \times 2 & \times 1 \\ 23 / 8 \times 2 & \times 21 / 8\end{array}$ | 21 |  |
| A 1148 | T67C46 | ${ }_{2}$ - ${ }^{2}$ | 5. | 300 | 23 \% ${ }^{2}$-2 | 21 | O |
| A11143 | T68C08 | 2-F | 35 | 22 | 23/9x2 $\times 21 / 8$ | $21 / 2$ | 0 |
| A11144 | T14C70 |  | 5 | 22 | $11 / 2$ dia. x21/2 | 2 | 1.47 |

*For use as plate inductance with S. G. tubes. Max. Cap, 8 MA

## FILTER CHOKES



## A.C.-D.C. CHOKES



# INTERFERENCE ELIMINATORS • FITIERS 

AEROVOX FILTERS


## TYPE IN-24

 ELIMINATOR- Eliminates power
- line Interference
bimit
- Simple one-minute installation
Completely eliminates all power-line noises when connected between noisy motor and line. Greatly reduces man-made static from elecrs, washers, and other in terfering electrical devices. Provided with inductance as well as capacitance for thorough filtering action. Aerovox Interference Elim-
inators increase your radio enjoyment. No inators increase your radio enjoyment. No
tools needed-just plug in and connect to tools necded-just plug in and connect to
ground. Handles 3 amps. Complete with cord ground. Handles 3 amps. Complet
and plug. Size: $4^{\prime \prime} \times 21 / 8^{\circ} \times 31 / 8^{\prime \prime}$. Shpg.
A6953. List, $\$ 4.75$. NET
$\$ 279$


## TYPE IN-28 FILTER

For direct use with radio set or on sinall appliances causing interference. Plugs in between connection cord and outlet. Has mounting A6955. NET,
56.

## TYPE IN-29 FILTER

An efficient filter especially suited for sources which are variable in char. acter but strong in intensity. Ideal for ellminating noise caused by electric Plugs and other vibratlng devices. 6 plags in between connection cord of $13 / 8 \times 3^{\prime \prime}$. Slipg. wt., 1 ib.
44.

## TYPE IN-30 FILTER

 A medium-duty filter, similar in ap-PN-29, but provided with Inductance in addition to capacitance for elimination of more intense inter ference. May effectively be used cither at source of interference or at radio set. Plugs in directly between attachment cord and outlet. Measures: $13 / 8 \times 3^{\circ}$.

## A6957. NET

73. 

A6958. TYPEIN-31. Similar to above but for elimination of more size, $13 / 8 \times 3^{\prime \prime}$. NET.............. $\mathbf{8 8}_{c}$


TYPE IN-27 FILTER
For use between radio set and electric relatively small. Also sultable for application directly to small appliances which are sources of low intensity interference. Size: $13 / 1$ xI $1 / 2^{\prime \prime}$ 38.

## INTERFERENCE ANALYZER

A clever device indicating immediately which of above filters is needed to eliminate sperlific noises. Plugs into outlet ahead of interfering
device. Rotary device. Rotary selector picks
proper filter combination Proper filter combination For A.C. or D.C. Shpg. wt., 6 lbs. $\$ 6.86$
AG959. YOUR NET PRICE... 6.8

## ANTENNA SUBSTITUTE

## Plugsinto electric outlet ahead of rad

set. Lead connects with set antenna post. A good aerial substitute under A6952. NET
59.

## MILLER ALL-RUBBER SHAVER FILTER

Shock-proof, unbreakable, molded-rubber construction. Employs iaductivecapacitive circuit. A sure cure for intertience fom electric shavers. A7214. NET
88.

## END RADIO NOISE!

Noise enters a radio set either from the aterial or from the power lines. To determine which. connect the aerial post of the set to the cluassis or ground. If the noise stops, an all-wave antenna such as those listed on pages $136-137$ should be installed. However, if the noise persists, a power line filter slould be selected from the types listed below. Uuless description states otherwise, most interferance eliminators serve best when installed at source of interference rat her than at radio set. If uncertain of choice, if tion of proper noisc-eliminating method

TACO H-F ALL-WAVE LINE FILTERS

## A composite filter

 complete filter cir cuits. Covers short wave, and ultra-short-wave as well as the standard Rroadcast bands. R.F. choke filter system stops noises fily would ordinarily enter the set
through the power
 line. Most efficient when installed on the interference-causing dedrawing not more than 200 watts at 120 volts Measures only $4^{\prime \prime} \times 4^{\prime \prime} \times 5^{*}$. Easily installed volts. out tools. Plug in and connect to ground with atrachment cord and unbreakable rubber plug. In brown metal case. Shps. wt., $\$ 441$ A7903. Model 100. NET
$\$ 441$


## amps. Wt., 2 lbs. Un derwriters' Approved. <br> A 7213 N List. \$4.00.

## CONTINENTAL FILTERNOYS

Free your radio reception from annoyappliances. Efficient Filternoys units eliminate or materially reduce " units made" static caused by vacuum cleaners, refrikerators, shavers, mixers, etc. For 110-120 Volts, A.C. or D.C.
A 7218 . Type R01DH, Plug-in type let. Will carry 5 amperes.
NET....


A7220. Type R01H. Rejection type for use in. 5 amp. capacity.
A7219. Type F01DH. Plug-in type for 300 watts of noise at motors using less than 300 watts.
NET.
59.

## TYPE GOIDH

Wire-in suppression-type unit with two chokes and two condensers with grounded frame. Mounts on motors, dlathermy or dental machines, etc. drawing less than 300 watts A.C. or D.C. $33 / 8^{*} \times 11 / 4^{*}$.
A7221. NET
$59 c$


## F-18 DIVERTER

Prevents interference from reachng radio set by diverting it to ground. Use where neutral power bakelite case. Plugs into wall outet or light socket into wall out
A 7217 . NET.


29

## 110

NOISE-ELIMINATING FILTERETTES

## NOISE MANUAL

A helpful manual published by the Tobe Deutschmann Corp. Contains full information on man-made electrical noises and how to prevent them from reaching the radio set. Will pay fo A8449.
29.


## MODEL 7 AC-DC POWER LINE FILTER

An easily installed Tobe capacity type line filter which will effectively
eliminate line noises. Plugs into electric light socket or wall receptacle Receiver plug fits into top of alter unit Materially reduces disturbing radio interference from
power lines, For 110 volt lines. Shpg. wt., 1 lb .
A8406. NET.
59.

## RAZOR FILTERETTE

A practical filter unit to reduce inter ference from electric razors. Enjoy carly morning programs, time signals, etc., vithout the disturbing buzz of your razor. Just plug unit in wall receptacle and plug razor in other end. In black bakelite case only $11 / 2^{*}$ A8402. NET.
59.

## FILTERETTE JUNIOR

A simple yet thoroughly efficient vacuum cleaners, cash registers, drink mixers, hair dryers, dictating machines, sewing machines, etc. In bakelite case, $11 / 2^{\prime \prime}$ dia. $\times 23 / 3^{\prime \prime}$ long. Con-
venient to attach. Wt. A8403. NET
73.


## JA FILTERETTE

A light-weight filterette for attachment to apetc. Appliance cord must be cut and fe in. stalled as permanent equipment. \$1.03
 exceed 130 V . Wt, 2 no
A8405. NET
\$2.79

## CORNELL-DUBILIER QUIETONE

A new interference filter terially refluces power line interference. Employs highly effective alllwave
capacitive-indut capacitive-inductive type,
filter. Install between fiter. Install between amps. In walnut-finished bakelite. Carries. x $3 / 4$. With 6 foot rubber cord and plug. Has A55882. Type IF-18.
s 2.94

## FILTERVOLT

 NOISE FILTERAn efficient new filter to eliminate moderate noise interferencefrom all types Suitable for installation directly alezad of radio set or at source of noise dis turbance. Assures enjoy formance. Shpg. wt., $11 / 2$ lbs. A5564. List, \$2.85. NET.


# NOISE \& ANTENNA ELIMINATORS 

## NEW SPRAGUE PROFESSIONAL METHOD OF NOISE ELIMINATION



## INTERFERENCE LOCATOR

A new high-quality, low-priced Interference Locaor. Consists of a specially designed, portable, battery-operated receiver with built-in speaker. Uses self-contained lood anterna, as well as a elescoping ish-pole type. of case allowing actual venieatly moun of nowreduction levels. Self-condemonstration of noiseoreduction change-over to ained batteries. Switch permits changeover reduction on premises. With complete $\$ \mathbf{8 7}$ A11450. NETPRICE
TIMEPAYMENTS: 54.09 down, $\$ 5.06$ monthly for 8 months

## INTERFERENCE ANALYZER

A compact, profersional
instrument widely used by power companies, Se to use anyert analyzet


A11461. IF-15. A triple-section filter for RMA recommended design. Size, $21 / 4^{\circ} \times 1$ dia KET leads. $73 c$ A11462. IF-25. FIg. A. Double-section Used or medium-sized motors up to 1 Hip; $\times 13 / 8^{\circ}$ dia.
$\$ 1.32$ A11463, iF-G1. Fig. B. Metal encased, ingle-section filter for use on brush connector

Al 1464 , iF-Gio. High-capacity 38 e section filter with enclosed terminals. Used with $1 F-11$ on 3 -wire distribution syster. $\$ 9$ NET.
. 18 A1 1455 if 11 , Dual high-capacity filter


A11458. IF-21. Dual, compact filter with 20 V . A.C. rating. Case grounds to mover rame. Size, $23 / 16^{\circ} \times 1$ dia.
59.

A11465, iF-si, Single, 2 lead filter section with insulated case. Used on relays, buzzers, etc Size, $2^{\circ} \times 3 / 4^{\circ}$.
44.

A11466. if. Ri. Resistor-capacitor filter section for use across contacts in reactive cir
cuits. $21 / 2^{\prime}$ I $1^{\prime \prime}$ dia. 82 e
NET.
82 c
A1 1467 . IF-R2- Same construction as IF-
 A11459. cH-1. Fig. C. Metal encased . 10 Amp. size. $31 / 8^{*} \times 17 / 3^{*} \times 11 / 2^{*}$
A11460. CH-2. R.F. filter choke to carry 20 amperes. 8 inch pigtail leads. Size

ply conto circuis of any
into the circuit odio interference. Rotating the selector switch connects any one of 60 different filter combinations into the circuit. The proper type of filter can thus be accurately determined. Eylminates guesswork-saves you money. Indicates the filter necessary without costly experimentation. Interference booklet and chart supplied free. Get into the profitable noiseeliminating field with this valuable, accurate instrument.
Al1451. NET PRICE
s23.46

## NOISE ELIMINATION BOOK

A valuable booklet compiled by Sprague en. gineers to help you determine quickly the source of radio interference. All cypes and sug ference are considered and the remedies sug-

A11470.
25.


## FAMOUS DX LIFETIME AERIALS

Efficient non-directional antennas, fully-assembled. Designed to increase selectivity and reduce interference. Especially suitable for successful short wave reception. Built of $7 / 24$ stranded enamel copper wire 25 feet of rubber-covered lead-in wire soldered on.

## NO. 60 AERIAL

 A9135. Length, 50 ft .6 spacer rings. Contains 250 ft . wire. Shpg. NET ${ }^{\text {Wet }}$.s2.79

## NO. 46 DOUBLET SYSTEM

Ideal for use with any All-Wave or Broadcast set. Consists of:-2-20 ft. cage has 3 spacer rings and contains 100 ft , of wire. Should be used with an All-Wave Coupler. Wt.. 4 lbs.
$\$ 3.75$


## SET MATCHING TRANSFORMER For matching ehe transmission line of any doublet aerial to any All-Wave or Short Wave receiver. Works with any transmission line to eliminate noise and strength. A5545. 81c

## AERIAL

 ELIMINATORReplaces outside aerial. Condenser and built in to give an efbuitin to give an er 75 feet of wire. Measures $5 \times 21 / 9 \times 11$. shpg. wt., 1 lb . A5499.\$1.05

## TOBE NO.TENNA



Tobe engineers have devel. oped this highly efficient aerial eliminator after thorough re. search. Will bring in broad casts without noise and interference. Ideal for use in locations where it is not conven ient to install an outdoor an tenna. Small and well-made May be put in the radio cabinet. Easily attached to any make or model receiver. No
AB409.

## MEISSNER WAVE TRAPS

Interference created by powerful local stations or code and long wave signals can-be eliminated by using these units. They are installed in eries with A5679. Dual Universal Model. Will eliminate interfering signals in the broadcast, police, and I.F. channels. Dual controls tune from 400 to $700 \mathrm{K.C}$. .
and from 650 to $1950 \mathrm{~K} . \mathrm{C}$. Iron-core construction and from 650 to $1950 \mathrm{K.C}$. Iron-core construction The attenuation is -40 DB .
$\$ 1.55$


## FOR BROADCAST BAND

Cover 400 K.C. to $1600 \mathrm{~K} . \mathrm{C}$
A5652. 400 to 700 K.C.] EACH

A565i. 456 Unshielded . . 38 c

## R.C.A. MULTI-RANGE WAVE TRAP

 A new low-cost, universal wave trap of superior design and remarkable performance. A verage attenuation 40 to over the entire broadcast come. Mial ship, police, and amateur interference from commercial ship, police, and amateur sy broadcast stations. Frequency range, $450 \mathrm{~K} . \mathrm{C}$. to 2100 K.C. Adequately shielded for protection against interference and reaction with receiver circuits. Causes no signal ence and reaction with receiver A7599. NET PRICE.ヶ. 09


## AERIAL ELIMINATOR

 AND ANTENNA TUNER Cins new device operates as a noise reducer when used with an outside aerial. Tunes antenna circuit to desired signal providing a better signal-to-noise ratio May also be used by itself as an works with any receiver; will improve reception. prove receptionFOR AMATEUR. BAND Cover Amateur bands and $456 \mathrm{~K} . \mathrm{C}$. A5655. 40 Meter Band EACH A5657, 80 Meter Band 75 A5658. 160 Meter Band 53c


## INDOOR ANTENNA

 AND DYNATROL FILTERCombination indoor aerial and line nolse filter. Plugs into light socket and makes use of service ine as antenna. May be used in conjunction with regular outside antenna to gain increased pickup. serves to reduce noise and inding prost connections.
A5518. NET......80c

80

## RCAFII RSM

## RCA "MAGIC.WAVE"

ALL-WAVE ANTENNA
A new factory-wlred All-Wave Antenna system may be from 20 to 120 feet in length; as many as 16 sets may be used. New magnatite core transformers give high efficiency and good noise reduction. Has built-in lightning arrester. Consists of: Receiver and Antemna Coupling Transformers; 60 feet of Antenna Wire; 45 feet of transmission cable; 5 feet of ground wire; 5 in
sulators; 1 ground clamp. Shpg. wt., 10 lbs. ATET40. No. 9812.
s 3.43
A7593. No. 9849. Antenna Coupler only WET............................. $\mathbf{W} 1.15$ A 7532 , No. 9814 . Distribution Transformer. NET................................. 10 A7533. No. 9813. Set Coupler only. For each NET.............................. \$1.47


RCA "SPIDER-WEB" ALL-WAVE ANTENNA
This unique antenna insures greater signal pickup on every band, bringing in more stations all-wave reception over a frequency range from 140-23.000 K.C. Complete factory assembling and soldering of all parts makes installation simple. Includes: 6 coils of $7 \times 22$ stranded antenna wire; 2 hangers; 1 coll of lead-in wire. receiver and antenna coupling transformers; 7 "U" clips; 2 antenna transformer connections; complete instructions. RCA's finest antennarecommended for the best Short-Wave and standard Broadcast reception. Ideal for use in antennas. Shpg. wt. 10 lbs . A7580. No. 9685. NET.
$\$ 5.26$
A7581. No. 9689. This kit when added to the Spider-Web increases range to cover from
 88.

ANTENNA INSULATORS AND ACCESSORIES FOR ALL REQUIREMENTS

GLAZED INSULATORS


Glazed porcelain; corrugated for minimurn leak age. Wt. $1 / 2 \mathrm{lb}$. A6192. $21 / 2$ Inches 10 FOR 19c.

A6193. 4 Inches
$2{ }_{2 c}$
10 LOTS, 40 c .
EACH.
5.

A6.194. 5 Inches.
10 FOR 84 . EACH

## GLASS INSULATORS



Absoiutely climate-proof Extremely efficient; delong. Inexpensive, sturdy insulators for use in any type of receiving or lowpower transmitting anA6196 A6 196.10 for 19 c NETEACH.

FYREX INSULATORS


Strong, rugged insulators with low power loss and Climate-proof. Genuine Pyrex glass.
A3750. $35 / \mathrm{s}^{\text {n }}$ long. For Receiving Aerials. 20 O A3751. $71 / 2^{*}$ long. Will
handle up to 250 watts. handle up to 250 watts. NETEACH.

75

## MUELLER CLAMP

 Durable and rigid because of channeled construction. Case-hardened screw. Cadmium plated. A6508. Lots of 10.
200 for 54.25. 200 for
EACH. $46 c$
$6 c$

## GRIPPER

GROUND CLAMP

耍

## This heav

 clamp may be used on anypipe or rod up to $11 / 2^{\circ}$ in diameter. Polnted screw assures positlve contact A3599.EACH...
10 FOR
$.3 c$
22c

AIRPLANE INSULATOR


## STRAIN INSULATOR

An extremely husky
strain insulator for use in suy wires or supporting wires for antennas. Made of the very finest quality brown glazed porcelain, $21 / 4^{*}$ long and $11 / 2^{\prime \prime}$ diam.
AK195. 10 FOR 54c.
6

EYE WALL INSULATORS
White glazed porcelain ring mounted in sturdy galvanized wires to wall. Strons and durable; will hold up indefinitely.
A3403. 3 INCH.


WINDOW LEAD-IN
Fits between sash and sill. Fahenstock connector on each end for quick, easy connection of lead-in. Duco insulated braid will stand
up under all weather conditions. A3428C16 inch. $5 c$
A3427. 12 inch.
10 FOR 23 c.
NETEACH.
3.

## 

DUAL WINDOW LEAD.IN Designed for use with any twoIs fully insulated: brass screw terminals at both brass screw tighter connection. 12 " long A6198. YOURPRICE...Se

## SPRING AERIAL

 Especially desirable for use where aerial space is limited. Easy to erect. Is non-directional. Stretch
of 15 to 30 ft . With two fibre end insulators. A3433. YOURPRICE, I IC

## PORCELAIN

## NAIL KNOBS

Sturdy split knobs of glazed white porcelain. Leather $13 / /^{*}$ high, $11 / \mathrm{s}^{*}$ diam. Slotted for 2 wires. Wt. 6 oz
A3418. 10 FOR 18c.
NET EACH
NET EACH
2.

## PORCELAIN TUBES

Durable, non-absorbent porcelain. A6212 ${ }^{3 \prime}{ }^{3 \prime}$ Long ${ }^{\prime \prime}$
2.

A6213. ${ }^{\prime \prime}$ Long. $22^{\frac{1}{2 c}}$

## 

## TRANSPOSITION BLOCK <br>  <br>  <br> SPRING ADJUSTER

Prevents antenna sag. Powerful, compression type rust-proof spring. With porcelain insulator
end rings. Especially suited for end rings. Especially suited for susing. Wt. 1 Ib. 18.

## AERIAL CONNECTOR

For connecting aeri al and lead-in cables home acrial systems. Cadmium-plated AS421.... Sc


## INSULATED STAPLES



## PUSH-CLIPS

For fastening lamp cords radio ext cords. etc., close to floor or wall molding Slips behind molding,
holding wire tightiy
A6520. Brown.
A6521 \& lvory.
PER CAR 8 Cllps,
PER Card
In Lots of 10 Cards,

68


# RADIO AND TELEVISION 



TACO ALL-WAVE AERIAL
A new self-selecting all-wave aerial, electrically and mechanically designed to render highest possible efficiency. The use of dual preciaion-built transformers assures perfect matching to any Broadcast, Short-Wave, or All-Wave receiver. Entirely eliminates interference and provides maximum signal pickup even in noisy locations. Aerial length is only 60 feet. Consists or, Antenna 30 ransformer; 1-Receiver Transformer; 2-30 toot coils of stranded aerial wire; factory-assembled proof transmission cabse, ating screw-eye; 2and soldered; 1-insulating screw-eye, complete installation instructions. Shpg. $\$ \mathbf{\$ 7}$ AB416. NET

TACO NOISE-REJECTING


## COUPLER

A variable impedance an
tenna-matching unit. Matches any antenna transmission line to the input circuit of any radio set.
Simple to install; quickly and easily adjusted by and easily adjusted by means of top knob. With
tion; screw termi wire leads for set connec Shpg. wt., 1 lb

51.47

## KNIGHT VERTICAL ANTENNA

The newest development in home type antennas. Mounts broadcasting type antemna broadcasting type antemna construction noid sthan olde horizontal antennas. Provides efficient reception with All-Wave, Sroadcast or Sil. No fuss and bother with masts and horizontal wires. Insulator furnished provides positive weath erproof insulation. Universal bracket allows for mounting anywhere. Complete antenna assembly includes 4 section 12 foot mast. universal mounting bracket. 40 feet of lead-in lightning arrester, insulators, etc. Shpg. wt., 41 bs .
A10503.
ALL-DIRECTIONAL AERIAL


Increases the selectivity and sensitivity of any set. An f new design Permits absoIutely All-Directional recepcion. Will materially improve reception onshort wave bands; makes possible improved efficiency on standard broadpractically anywhere May practically anywhere with ay crewdriver. Eliminates all dangling wires, etc. Requires small mounting space. An unusually efficient aerial at an attractive low price. 40 foot lead-in. Shpg. wit., 4 lb
${ }^{8} 1.95$

## A10010.

## RCA TELEVISION ANTENNA

For good video reception a scientifically dearned antenna system is a necessity. This new RCA Double Dipole Antenna has been ReA designed especialy bands for strong reception of picture signals, as well as short-wave and proadcast bands for sound signals. Assures high signal strength at reduced noise levels Consists of 4 special television antenna rods, wooden mounting pole, and mounting acces sories. All metal parts are corrosion-proof. Field tests have proved the worth of this new antenna. For high signal pickup, wide coverage, flexibility of installation, and ruggedness of construction it is un $\$ \$ 60$ A7 7536 .

Type 9871. NET $\qquad$
A7537. Type 9870. Double "V" Wire Type Antenna. Popular-priced television antenna for use in localities where reflection is not a problem. Covers 44-50 and $50-56$ M.C. channels. Fact ory assembled; includes junction
box and 90 feet transmission line. $\$ 3$ box and 90 feet transmission line. \$3. 00

A7538. Type 9872. Reflector. For use with Type 9871 antenna in areas where reflection or distortion is encountered. Improvanted signals. NET
$T^{\text {rej }}$


KNIGHT DE LUXE ANTENNA IDEAL FOR THESE SETS:

## Crosley R.C.A. Knight Philico Grunow Zenith

 or for any set with standard or doublet input. This is one of the finest factory assembled AllWave antenna systems available. It utilizes the famous doublet principle to provide maximum efficiency. The special transmission cable cancels out noise. A proper impedance match be tween antenna and receiver is assured through the use of a two-position coupling transformer. The Knight De Luxe Antenna is quickly and easily installed. The 60 foot overall length makes it well-adapted for locations where space is limited oractorls of stranded aerial ire, 60 -foot length of transmission cable 1-crossover insulator. 1-impedance matchine transformer 2-glass insulators, 2-por ing transformer, - eyewall insulator, and 1 - double wind ow lead-in. Shpg. $\$ 189$ A3391. NET $\qquad$ ..... 89
## KNIGHT STANDARD ANTENNA

An efficient all-wave antenna for use with any set having input for either single or double wire lead-in. Consists of $2-3$-root coils No. 16 stranded copper wire assembled with porcelain nsulator and strip. With instructions. Wt., 4 lbs. \$ 1.9 A3389. NET

## NEW ICA TENNASCOPE LOOP

A newly-designed "built-in" type antenna eliminating need for outside aerial and ground. Easily connected to any set by following simple instrucratio and better selectivity Housed in provides higher signal to noise set cabinet. Size : $8^{\prime \prime}$ long, $6^{\prime \prime}$ high. $11 / 4^{\prime \prime}$ deep. Wt., 21 lbs. $\$ 103$ A5680. NET

## POPULAR LIGHTNING ARRESTERS

APPROVED ARRESTER
 A high-grade dependable air gap
type lightning arrester. Approved by Underwriters. Por-
celaia construction celain construction nals. An unusual value at this very low price A3425. 10 FOR 62c.
7.

A3CH.

## DOUBLET ARRESTER

Two arresters combined in one single unit. May be used indoors or outdoors any transmission line ith screw terminals
Black porcelain case b. 5549. NET
17.

## ELECTROSTATIC ARRESTER

 Combination lightning and static arrester. Incorporates choke coil and condenser acting as noise and static reducer and filter. Affords maximum protection against hre hazard. A really effective device that improves radio reception and protects your set. A5533. NET43. 

## ADJUSTABLE ANCHOR

Specially designed adjust-
able anchor for keeping guy wires tight. Rustproof steel Eye-screw with wing nut
easily adjusts wire to proper easily ad
tension.
A112

## BABY BAKELITE ARRESTER



YIS-O-GLOW ARRESTER Uses neon element and operates on low voltage. Sensitive and will carry heay ydis. charges
real protections
Shpg. wt., 1 lb .
 A 3407 . NEw . . . . . . . . 59 A3408. Duplex Type. For Doublet

STORM KING ARRESTER A new lightning arrester that will provide positive protection. Absolutely assures against dangerous static dis-
 a two-wire lead-in a two-wire lead-i
A3432. NET.

## TENSION INSULATOR काuccucucucs. -

Holds antenna tight by means of a heavy spring. Porcelain insulator at one end. May be
used withany antenna. Wt., $1 / 2 \mathrm{lb}$. A11297. NET

CELLULOSE ACETATE
 PUSH-BACK WIRE Finest hookup wire. Celinsulation, covered over all with lacouered basket-weave rayon braid. Solid conductor is No. 20 tinned cop-
per: stranded is 10 -strand No. 30 per: stranded is 10 -strand No. 30 tinued copper. 25 foot spools.

No. Collo A2450 Red A2451 Blue A 2452 Green A2453 Black A 2454 Yellow NET 18 Stranded No. Color A2456 Blue A2457 Green A 2458 Black A 2459 Yellow NET NO. 18 STRANDED LOW-LOSS WIRE
For A.V.C. and A.F.C. circuits
where leakage must be low. Made $1 / 64^{\prime \prime}$ rubler strands No. 30 wire. sulation. 25 ft . spools.

| No. | Color | NET |
| :--- | :--- | :--- |
| A2395 | Red | EACH |
| A2396 | Blue |  |
| A2397 | Grreen | 8 |
| A2398 | Black | 8 |



No. 14 Stranded Similar to above but heavy-duty usc No. 14 conductor trandis of No 30 made up of 41 A2460 inst foot spool. Black. NET
$34 c$ A2461. 25 foot spool, 34.

No. 20 Double Brald Double braid, waxed push-back wire with Number 20 tinned conductor. 25 foot coils.

 Special assort-
ments of 4- $25-\mathrm{foot}$ ments of $4-25$-foot
coils of Belden hook-up wire. No. 20 tinned copper tate push-back insulation covered with basket-weave rayon braid. A2918. Solld. A2919. Stranded. NET 73 C


## LEAD-IN WIRE

## RUBBER-COVERED

 Stranded conduct or, overed with special rubber insulation to allow ring. Finest qualits.No. Size
 NET
0.3
1.83
.2
1.4
1.3

## SHIELDED

Heavy rubber insula tion over stranded con ductor. Overall shield of tinned braided copper wire. Weatherproof. Stad highsequality wire.
No. $\mid$ Size Length $\frac{\text { NET }}{14}$

MICROPHONE CABLE
(8) 1 )

Shielded, rubber-sheathed mike cable; low capacity rubber core with tinned copper and phosphor bro
 $\begin{array}{llll}\text { A2 } 245 & 26 & 5 \mathrm{c} & \$ 3.97 \\ \text { A2446 } & 20 & 31 / 2 \mathrm{C} \\ 2.94\end{array}$
FORCAREON MIKEAND No. Cond Per Ft. 100 Ft. $\begin{array}{lll}A 2876 & 2 & 41 / 2 c \\ \text { A2 } 273.82 & 3 & 5 \mathrm{c}\end{array}$


## BELDEN ARMORED

 SPEAKER CABLE
## (6) गVD

## RUBBER-COVERED

 MULTIPLE CABLEFor P.M. or electro-dynamic speakers and for power supply lines. Individual conductors rubber covered. cotton wrapped and jacket of heavy. flexible rubber. $\begin{array}{lcrr}\text { No. } & \text { Cond. Foot } & 100 \text { Ft. } \\ \text { A2390 } & 2 & 3 \mathrm{c} & \$ 2.20 \\ \text { A2391 } & 3 & 31 / 2 \mathrm{c} & 2.79 \\ \text { A2 } 992 & 4 & 4 \mathrm{c} & 3.38 \\ \text { A2 } 393 & 5 & 5 \mathrm{c} & 4.26\end{array}$


BAKELITE ARRESTER
Underwriters* approved. Provides compact. Bakelite.body. 2 e A2403. EACH


DOUBLET ARRESTER
For complete protection with any doublet antenna system. Sturdy brown porcelain case. $181 / 2 \mathrm{c}$

## APPROVED ELECTRIC SHAYER CORDS

Underwriters' approved 6-foot allrubber cord and plug for electric shavers. Replaces old cord. EACH $\begin{array}{ccc}\text { No. } & \text { Razor } & \text { EACH } \\ \text { A2438 } & \text { Schick } & 51 \\ \text { A2439 } & \text { Packard } & \end{array}$

Weatherproof, armored speaker cable that will stand hard usage. Consists of 2 parallel strands No. 18 wire with cotton wrap, $1 / 44^{\prime \prime}$ rubber shield, paper wrap, and gat-
vanized steel armor overall. Ideal vanized steel armor overall. Ideal tion out-of-door speaker connec A2404. PERFOOT
100 FOOT COIL.

## COMMUNICATION

 SYSTEM CABLE
## 

High-grade cable for communication systems. Consists of No. 19 solid copper wire. double enameled, with cotton wrap, waxed col-or-coder cotton braid, twisted pai A24 $14{ }^{4}{ }^{\circ}$ OT
$2 c$
76


MATCHED IMPEDANCE TWISTED PAIR LEAD-IN
66.4 ohm twisted pair transmission line. Two No. 18 conductors and weat wherprelor-coded rubber signed to match most all-wave ar tennas and receivers. ${ }^{\text {S }} 2324.75$ Ft. Coll. C A2325. 500 Foot Coli. $\$ 6.98$

For additional IIstings of cable for transmisston lines, aerials
etc., see pages 163 and 165.

AERIAL WIRE BELDENAMEL

$7 \times 20$ ENAMELED
A24 15. ${ }_{\text {List, } 100 \text { 1.33. NET. ....... } 78 .}^{8}$ A24. 16. 1000 ft List. $\$ 12.85$. NET. .. $\$ 7.57$

SOLID ENAMELED

| $\text { A24 } 100 \text { Ni No. } 10 .$ 100 ft . NET. |
| :---: |
| $\text { A24 } 19 \text { No. } 12 .$ |
| $12420 \text { ft. NET. } 14 .$ |

## STRANDED BARE AERIAL WIRE

Finest quality Belden stranded bare copper wire. Ideal for all types of aerials. High conductivity; very little stretch. In continuous length coils.

A2462. 50 FEET.
19.

A2463. 75 FEET. NET . 27 c A2464. 100 FEET. NET. 35 c A2465. 1000 FEET.
$\$ 3.50$
$7 \times 26$ WIRE
A2466. 50 FEET. 10 c
A2467. 75 FEET. NET. . 14 C A 2468.1000 FEET.


## ALL-RUBBER CORD SETS

The modern safe cord for replacement on lamps, radios, etc. Conlamp cord with Belden unbreak able soft rubber plug. $71 / 2 \mathrm{ft}$ approved cord. Ends "Corditis...
 10 FOR
A2448. Same as above but 12
t. long. NET EACH...... 28 c


## BELDEN POWER

 LINE FILTERA highly efficient inductive-capaaterference fiter that eliminate power line. Has 2 dual condenser sections and 2 dual high " $Q$ choke coils. Works with any set Plug filter into power line outle and plug set cord into filter receptacle. $4^{\prime \prime} \times 31$ foot cord and plug Size:
A2400. NET
s4.41

# AERIAL WIRE AND EQUIPMENT 

## Values in aerial wire

STRANDED ENAMELED 7 STRANDS No. 22 Excellent for Ali-Wave aerial
 A344.5. 100 Ot tach 45 .
 7 STRANDS No. 26 A fine value in a light wir A3447. 50 ft. 14.
 A3449. 200 , EFACH 51. 7 STRANDS No. 20 Heay duty wre tor long 3ire



## SOLID ENAMELED

Hard-drawn solid enameled copper wire for $x$-mitting or receiving. No. A3450 A3450
A3

A 345 $\begin{array}{r}3452 \\ \text { A3453 } \\ \hline 3454\end{array}$ | A3455 | 14 | 100 | $: 35$ |
| :--- | :--- | :--- | :--- |
| A3456 | 14 | 200 | $: 68$ |



## HANDYCORD LAMP CORD

Rubber-jacketed, flexible cord; each conductor is No. 18 stranded copper wire, separately insulated in toush rubber sheath that splits down center when pulled apart. Fine for lamps, radios, etc A3410. Brown. PERFOOT $\begin{array}{ll}\text { A3412: Black. } & \text { Grey. } \\ \text { A } & 1 / 2 c\end{array}$ A3414: Gree
s 1.10

RUBBER SERVICE CORD
Round flexible weather-proo年 ered and coded; with cotton wrap ping and outer live rubber sheath

A2435. 2 Cond.
100 ft . \$1.95.
PERFT........
100 Ft. \$2.45.

## TEST-LEAD WIRE

Extra-flexible No. 18 test lead wire. Ideal for replacing wornout test-prod leads or for making new test equipment. Made of 41 strands of No. 34 tinned copper wire, with waxed cotton wrapping, and $1 / 32^{\prime \prime}$ wall of rubber. A2385. Red.
A2s. A2387. Red. A2388. Black

21/2c 3.

ER FOOT.................

## Exceptionally high-quality hard-drawn

 copper wire. Has high conductivity and very little stretch. Enameled wir vill not corrode. Ideal for all types o aerials: single wire, doublet, or cage Broadcast sets. Servicemen: take ad Broadcast sets. Servicemen. take ad your aerial wire profit.
## STRANDED BARE

7 STRANDS No. 22 Standard size for all aerials. A3435. 50 ft . Colls. 17.

 7 STRANDS No. 26
 A3439. 100 ft . EACH . 15 Sc A 3440.200 ft.
10 for $\$ 2.75$. EACH 30 e 7 STRANDS No. 20
 A3473. 100 ft. $\$ \mathbf{~} 5.15$. EACH 55 c $\begin{array}{ll}\text { A3474. } \\ 10 \text { for } \$ 10.30 . ~ & \text { ft. EA.. } \$ 1.10\end{array}$

## PHOSPHOR BRONZE

Strongest aerial wire. Has high conductivity; non-stretching. Used commercially on ships.

| No. | Size | Feet | NET <br> EA. |
| :---: | :---: | :---: | :---: |
| A3460 | $7 \times 22$ | 100 | $\$ 1.10$ |
| A3 461 | $7 \times 22$ | 200 | 2.10 |
| A3 462 | $7 \times 24$ | 100 | .75 |
| A3463 | $7 \times 24$ | 200 | $1: 40$ |
| A3 464 | $7 \times 26$ | 100 | .60 |
| A3465 | $7 \times 26$ | 200 | 1.10 |

## APPROVED CORD SET

 lamps, fans, lamps, fans, $\mathrm{amplifiers}$, etc. 6 foot cord wi rubber plug. An excellent value in A3498. YOUR PRICE. 4 e

## FLEXIBLE SPAGHETTI

 GIANT SPAGHETTI Black cambric tubing. impregdiameter, $36^{\circ}$ long. A2899. NET $\$ 1.25$

## BELL WIRE

## No. 18 solid cop-

per wire with a
sulation. par
affin-impreg
nated.
A2440. $1 / 2 \mathrm{Lb}$. Coll. 16 C
A2441. 25 Foot Coll.
AET
$6 c$

## SPECIAL VALUE AERIAL KITS

## de LUXE AERIAL KIT

## An exceptionally fine kit. Will im

 prove reception of any radio set. Contains 100 feet of 7 strand copper aerial wire; 45 feet of rubber-covered 25 fead gorwire; 25 feet of ground wire; 4-porcelain insulators; 2-screw-eye incelain insulators; sulators; 1-lightning arrester; 1 window lead-in strip; 1-adjustable ground clamp. Easily installed in any easy instructions packed with each kit. Shpg, wt., 6 lbs. A3486.


## STANDARD AERIAL KIT

A real value in a complete aerial kit. Includes all materials for a "Marconi type" antenna for use with any receiver. Consists of: 90 leet of $7 \times 26$ stranded copper aerial wire; 25 feet of rubber covered lead-in wire, window lead-in strip; two porcelain insulators; two nal knobs; and an adjustable strap-type ground clainp with instructions. Shipping wt. 4 lbs. A3485. YOUR NET PRICE

## ALL-PURPOSE LEAD-IN WIRE

## TWISTED PAIR

 SHIELDED LEAD-IN
## C8x88\% 20 solid copper conductors; weat her-proof insulation with cios <br> A 2487.50 FR. Colls. $\$ 0.85$ A2488: 100 Ft. Colls. 1.62 <br> 

## WEATHERPROOF

## TWISTED PAIR

Low impedance transmission lineTwo No. 22 stranded copper conductors, rubber-co
A2434. 50 Ft. Colls $\$ 0.46$
A2432: 100 Ft. Colls. $2: 89$


## RUBBER TWISTED

 PAIR LEAD.INFor all noise-reducing doublet an tenna systems. No. 18 twisted rubber-covered stranded wirc.
A3488. 50 Feet..... $\$ 0.45$ A 3489.100 Feet...... .88 A3491. 250 Feet..... 2.10


Underwriters' approved. No. 18 1/32 rubber insulation with black cotton braid. For extension or A3592. Per toot...... 100 . 30
A3593. Per 100 Ft.... 1.30

## ANALYZER CABLE

For use in repairing or moderniz ing test equipment. Tinned, stranded conductors with in-
dividual rubber and color-coded dividual rubber and color-coded A1670. 8 Conductor. Has 2 No. 16 and 6 No. 20 wires. 9 e
PER FOOT A1671.9 Conductor. Has No. 16 and 7 No. 20 wires. $\mathbf{I O}_{\mathrm{C}}$
PER FOOT.............

## TELEPHONE WIRE

For telephone or multiple speaker in stallations. No. 19 solid tinned copper
with $y_{12}$ rubber insulation; glazed cotton 4 (295. 3 Conductor.


RUBBER COVERED LEAD-IN WIRE STRANDED
Stranded No. 18 rub
er-covered lead-in wire. Flexible wire

| No. | L | 10 for |  |
| :---: | :---: | :---: | :---: |
| A3479 | 25 | \$0.95 | \$0. |
| A3480 | 50 |  |  |
| A348 | 100 |  |  |
| A349 | 250 | 7.98 |  |
| A3482 | 1000 |  |  |
| $\begin{aligned} & \text { SOLID } \\ & \text { High quality No. } 16 \\ & \text { rubber covered lead-in } \\ & \text { wire. Weatherproof. } \end{aligned}$ |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| $\frac{\text { No. }}{\text { A3475 }}$ | Ft. |  |  |
| $A 3475$ | 25 | $\begin{array}{r} \$ 1.14 \\ 2.18 \\ 1.18 \end{array}$ | \$0. |
| A3477 | 100 | 4.27 |  |
|  | 250 | 10.65 |  |
| 3478 | 1000 |  |  |

## SHIELDED

LEAD-IN For broadcast use.
No. 18 stranded tinned wire; rub ber-covered; tinned A3492 50 Feet.
YOUR PRICE..........49e A3494. 100 Feet. 96 c A3499. YOURFeet. $^{250.38}$

## LEAD.IN AND AERIAL WIRE

 10 strands of No 30 copper wire. in-sulated with Gutta Percha. Free-stripping.

| No. | Length | NET |
| :---: | ---: | ---: |
| A3471 | $25 \mathrm{ft}$. | $\$ 0.12$ |
| A3470 | $50 \mathrm{ft}$. | .23 |
| A3469 | $100 \mathrm{ft}$. | .44 |
| A3466 | $250 \mathrm{ft}$. | 1.05 |
| A3468 | $1000 \mathrm{ft}$. | 4.05 |


and midget be used under rugs, etc. 37 c A3484, ${ }^{25}$ Feet. $10 c$

LITZ WIRE Superior quality for lowstrands No. 38 high conductivity copper, wh double-silk covered A3401. Spool. NET 100 Foot Spool. Fot Spool 120

# HOOKUP \& MAGNET WIRE-CABLES 



HIGH-GRADE MAGNET WIRE ON SPOOLS
on spouls in cuntinuous lengtis. Excelleut for winding armatures and field coind receiver and transmitter coils, rewinding power tranding armatures and field coils, shools, laboratories, radio builders, experimenters, etc. Standard B. \& S. Gauge. Ve than listed below. Write for attractive prices which will sulation in larger quantities purchases of magnet wire. Plain Enameled Double Con save you money on quantity purchases of magnet wire. Plain Enameled, Double Cotton, or Double Silk types.
PLAIN ENAMELED
$1 / 2$ LB, SPOOLS

| No. | Size | Ft. | NET |
| :---: | :---: | :---: | :---: |
| A3520 | 14 | 38 | \$0.20 |
| A3521 | 16 | 63 | . 23 |
| A3522 | 18 | 101 | . 24 |
| A3523 | 20 | 159 | . 25 |
| A3524 | 22 | 253 | . 26 |
| A3525 | 24 | 402 | . 26 |
| A3526 | 26 | 640 | . 31 |
| A3527 | 28 | 1013 | . 34 |
| A3528 | 30 | 1602 | . 38 |
| A3529 | 32 | 2543 | . 41 |
| A3530 | 34 | 4042 | . 45 |
| A3531 | 36 | 6410 | . 56 |

## double cotton

1/2LB. SPOOLS

| No. | Size | Ft. | NET |
| :---: | :---: | :---: | :---: |
| A3533 | 14 | 36 | 50.25 |
| A3534 | 16 | 61 | . 27 |
| A 3535 A 3536 A 353 | 18 | -96 | . 29 |
| ${ }^{\text {A }}$ A 3537 | 22 | $\begin{array}{r}150 \\ 234 \\ \hline\end{array}$ | . 32 |
| A3538 | 24 | 362 | . 38 |
| A3539 | 26 | 558 |  |
| ${ }_{\text {A }}{ }^{\text {A } 3541}$ | 28 30 | ${ }^{842}$ | . 61 |
| A3542 | 32 | 1889 | . 90 |
| A3543 | 34 | 2746 | 1.14 |
| A3544 | 36 | 3801 | 1.40 |

DOUBLE SILK 1/4 LB. SPOOLS

SINGLE COTTON ENAMELED MAGNET WIRE
An exceptionally high-grade mageasy handling. Cotton wran for enamel gives adequate insulation Each suoul holds one continuol drawn, insulated length. B. \&: $S$, uniformaly


HANDY MAGNET WIRE SPOOLS

on handy marked spools. Double-coteon quantities silk and enamel types. Sleeve spool prevents cangling. Keep an assortment on hand preven YOUR PRICE ANY SPOOL.

| doubl | co | tron |  | LE | LK | PLAIN | EN | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Size |  | No. | Size | Feet | No. | Size | Feet |
| ${ }_{\text {A }}^{\text {A } 2755}$ | ${ }_{16}^{14}$ | ${ }^{33}$ | ${ }^{\text {A } 27771}$ | 14 | 19 | A 2785 | 14 |  |
| ${ }_{\text {A }}{ }_{\text {A2757 }}$ | ${ }_{20}^{18}$ | ${ }_{4}^{42}$ | ${ }^{\text {A } 27772}$ | 18 | ${ }_{31} 1$ | ${ }_{\text {A }}{ }^{\text {A2787 }}$ | ${ }_{18}^{16}$ | 40 48 48 |
| ${ }_{\text {A2159 }}$ | ${ }_{22}^{20}$ | $\begin{aligned} & 80 \\ & .80 \\ & 10 \end{aligned}$ | ${ }^{\text {A22774 }}$ | ${ }_{22}^{20}$ | ${ }_{6} 6$ | ${ }_{\text {A }}{ }_{\text {A } 27888}$ | ${ }_{22}^{20}$ | ${ }_{135}^{88}$ |
| ${ }_{\text {A }}{ }_{\text {A } 27615}$ | $\begin{aligned} & 24 \\ & { }_{26}^{26} \\ & 98 \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline 110 \\ \hline 188 \end{array}$ | ${ }^{\text {A22776 }}$ | ${ }_{26}^{24}$ | 83 101 | ${ }_{\text {A }}{ }_{\text {A } 2791}$ | ${ }_{26}^{24}$ | ${ }_{2}^{200}$ |
| ${ }_{\text {A } 2763}$ | ${ }_{30}$ | 192 | ${ }^{\text {A22778 }}$ | ${ }_{30}^{28}$ | ${ }_{141}^{119}$ | ${ }_{\text {A2793 }}{ }^{\text {a } 279}$ | $\begin{aligned} & 208 \\ & 30 \\ & 30 \end{aligned}$ | ${ }_{540}^{420}$ |
| A ${ }_{\text {A }}$ | ${ }_{34}^{32}$ | ${ }_{218}^{216}$ | ${ }^{\text {A } 2779}$ | -32 | 193 | A Al793 | 32 |  |
| ${ }^{\text {A } 2766}$ | ${ }_{38}^{36}$ | ${ }_{264}^{266}$ | ${ }^{\text {A2787 }}$ | - | 219 | ${ }_{\text {A2796 }}$ | ${ }^{36}$ | ${ }_{150}^{150}$ |
| ${ }^{\text {A } 27688}$ | 40 | 325 | ${ }_{\text {A } 2783}$ | 38 40 | 245 | ${ }_{\text {A2798 }}^{\text {A297 }}$ | 38 40 | 1980 <br> 2430 <br> 20 |
| YOURPRICE |  |  |  |  |  |  |  |  |

## PUSH-BACK HOOK-UP WIRE



This tinned push-back hook-up wire is of the highest quality. Only evenly-drawn pure copper wire is used. Available in both solid and stranded
wire. The stranded wire is made up of sarefilly twisted individual strands with up of carefully that gives them unusual flexibility.

## FIVE DIFFERENT COLORS

treated damp-proof braiton covered with paraffin Available in five distinctive colors Use back easily color for each circuit for ready identification. Buy in quantities at our attractive low prices
No. 20 SOLID
25 FOOT ROLLS


## 1000 FOOT SPOOLS <br> above in 1000 ft wire as described in any color listed. Specify color A3570. NET..... \$3.2?

No. 14 SOLID 25 FOOT ROLLS
High-voltage insulation. Ideal for transmitters, poiver packs, etc.
A2870. Black.



## 1000 FOOT ROLLS

Stranded push-back hook-up wire
in 1000 ft . lengthe. colors listed. Specify color. A3590. NET 1000 FT. $\$ 3.60$

No. 18 SOLID 25 FOOT ROLLS
Heavler wire especially suited for A3394. Black. PER


## CABLES FOR EVERY PURPOSE

MULTI-CONDUCTOR STRANDED CABLES


SHIELDINE OVERALL Tightly woven overall shielding of fine tinned copper wire. Each lated with rubber. Any length No. Cond. Perft. 100 Ft | A 3507 | 2 | 3 c | $\$ 2.4$ |
| :--- | :--- | :--- | ---: |
| A3508 | 3 | $31 / 2 \mathrm{c}$ | 2.9 |
| A3509 | 4 | $41 / 2 \mathrm{c}$ | 3.7 |
| A 3510 | 5 | 5 c | 4.3 |
| A3511 | 6 | 6 c | 5.2 |
| A 3512 | 7 | 7 c | 6.1 |



EXTENSION CORDS
Flexible braid-covered cords with phone tips and connector
A5555. 20 Ft Cord. NET 35 c A5556. 30 Ft. Cord. NET 51 c A5558. Extra Connector...8C

## HEADPHONE AND SPEAKER CORDS

Copper tinsel inner conductor braid. Tips are firmly anchored. SINGLE CORDS A2932, 4 foot cord. Tips on
one end; spades on other. For A2933. 4 foot cord. Tips on NET EACH 8c 10 for 75 C . $\quad 100$ for $\$ 7.15$. DOUBLE CORDS
A2934. Sparles on one end. A2935. Tips on both en
NETEACH
10 for $\$ 1.75,100$ for $\$ 16.95$ CANNON RUBBER CORDS Durable rubber head-set cord. 6 feet long.

## HIGH IMPEDANCE MICROPHONE CABLE

## 

Low, capacity, high-impedance microphone cable, shimped ance rubber-jacketed. Conductor is of fine stranded No. 26 copper; e tremely flexible. Low-loss *A 2469 is No. 20 stranded copper; for hard usage over short distances. 4 Per Ft.

SINGLE CONDUCTOR

|  | Capac- | Per | $\mathbf{1 0 0}$ |
| :---: | :---: | :---: | :---: |
| No. | ityt | Ft. | Ft. |
| A2499 | 24 mmf. | 4 c | $\$ 3.25$ |
| A2497 | 26 mmf. | $31 / 2 \mathrm{c}$ | 3.10 |
| A2481 | 36 mmf | $21 / 2 \mathrm{c}$ | 2.31 |
| A2469* | 27 mmf. | $41 / 2 \mathrm{c}$ | 3.75 |
| DOUBLE CONDDUTOR |  |  |  |
| A2498 | 30 mmf. | $51 / 2 \mathrm{c}$ | $\$ 4.10$ |

A $2498 \quad 30 \mathrm{mmf} . \quad 51 / 2 \mathrm{c} \quad \$ 4.10$


## CARBON MIKE AND UTILITY CABLE

Heavy rubber jacket over tinned copper shielding. Ideal for out No, Cond. PerFt. 100 Ft $\begin{array}{lllr}\text { A3514 } & 2 & 31 / 2 \mathrm{c} & \mathbf{2} .65 \\ \text { A3515 } & 3 & 4 \mathrm{c} & 3.70 \\ \text { A3516 } & 4 & 51 / 2 \mathrm{c} & 4.85 \\ \text { A3517 } & 5 & 61 / \mathrm{c} & 5.70 \\ \text { A3518 } & 6 & 71 / \mathrm{c} & 6.85\end{array}$ $\begin{array}{llll}\text { A3518 } & 6 & 71 / 2 \mathrm{c} & 5.70 \\ \text { A3519 } & 7 & 81 / 2 \mathrm{c} & 6.85 \\ & & 7.55\end{array}$

## COLORED RUBBER HOOK-UP WIRE <br> Stranded tinned <br> No. 20 copper wire with flexible rubber <br> 

A3575 2 foor colls

| A3572 | Red. | NET |
| :--- | :--- | :--- |
| A35 3. | Green. | EACH |
| A3574. | Blue. |  |
| A3575. | Black. |  |
| A3576. | White. |  |

O FOR $\$ 1.02$.
A3577. 1000 FT, ROLLS
Speclfy color. NET,

## No. 16 STRANDED

A27rent carrying cap., 6 amp A2745 Black.

Colls. Each 21
Current carrying cap., 15 amp
A2747. R1ack
A2747 Black.
25 Foot Colls, Each... 31 .
No. 12 STRANDED
Current carrying cap., 20 amp .
A2 248 , Red.
A2 25 Root coilsck
48

## AMATEURS!

## HERE'S YOUR BUYING GUIDE FOR 1940!

The following section is your complete directory to everything in Ham Radio. Here is the largest and finest selection of Hain equipment ever offered anywhere. Here is every new 1940 rig, receiver, and gadget-plus ALLIED'S complete listing of all standard lines of parts and accessories. Be wise, O. M.! Stick to ALLIID - the one, dependable source of all Amateur equipment.

Model 610 Power Pack. A Model 61 plug-in type power compact, plitting operation ors pack per 430 or 438 recetvery. froma $\begin{aligned} & \text { Complete, ready to } \mathrm{use} \\ & \text { C12.50 }\end{aligned}$

430


Complete.
A147......


## FAMOUS "HOWARD" <br> MODEL 130. Designed to provide maximum performance for the beginning Amateur or Short Wave Listener with a limited budget. Developed and produced in the Howard Radio Laboratories, worid-iamous producers of quality radio receivers for many years. Combining streamthe Model 430 is a 6 tube communication type receiver of which any the Model 4,0 is a tube commumiation type receiver of which any KC in four frequency range bands. controlled by a range selector switch on front panel. Range indicating pointer at side of multi-scale full vision dial tells you at all times exactly which frequency range is in use. Fullvision dial is of the slide-rule type with traveling vertical marker for main tuning; separate bandspread indicator dlal at side. Features include: Iron-core 1.F.'s. Beat Oscillator with adjustable pitch control, Electrical bandspread, A.V.C., Send-Receive standby switch, Audio gain control, built-in dynamic speaker and power supply, and convenient grouping of all operating controls. Entirely self-contained in a small compact table cabinet finished in telephone black: trimmed in satin silver. For 110 volts, $50-60 \mathrm{cycles} A$.C. Shpe. wt. 15 lbs . A 14790 . Complete with tubes. NETCASH PRICE <br> s2995

Time Payments: $\$ 4.50$ down, $\$ 4.50$ monthly for 6 months.
MODEL 460. This newly released Howard ten tube Superhet covers a tuning range from 43 MC to 540 KC in four bands, and incorporates a buile-in Noise Limiter and Frequency Monitor. Noise Limitet is very effective in cutting down irregular interference such as ignition noise or atmospherics. New Frequency Monitor has separate drum dial with fundamental calibrations spread over heng accuracy for checking frequency. locating signals of known frequency, and for accurate bandspread pre-setting. Full-length. fullvision dial has separate scale for each frequency range, with separate 340 degree bandspread dial. Other features are: Ceramic coil forms, Vacuum tube voltmeter type " R " meter. Copper-plated chassis, Band-in-use indicator, Iron-core if transformers, Unfversal antenna input. Phone jack, AVC, and Indirect dial illumination. Supplied in modern welded steel cabinet, with full set of tubes, and $8^{\prime \prime}$ dynamic speaker in matching metal cablnet. For 110 volts $50-60$ cycles. Shps. wt., 44 lbs. A14793, Model 460, less crystal.

57995
Time Payments, $\$ 8.00$ down, $\$ 6.36$ monthly for 12 months. A14794, Model 460, with crystal.
Time Payments: $\$ 9.00$ down, $\$ 7.15$ monthly for 12 months.

## AMATEUR RECEIVERS

MODEL 438. A more advanced model of the famous 430, with additional features that make it one of the finest of the medium-priced communication receivers. Full 8 tube circuit. with tuned R.F. stage on all mands and two Iron-core I.F. stages. Complete continuous tuning range from 540 KC to 43.000 KC in four bands; front panel range control switch and separate range-in-use indicator dial. Full-vision type slideswied dal for main tuning, with electrical bandspread and separate bandspread dial. Has built-in' $6^{*}$ dynamic speaker with 2 watt audio output; speaker muting type headphone jack. Power supply is bult-in but Model 438 also has provision for use with 6 volt power supply where AC line is not available. Controls on fromt panel are: AC On-off switch. Beat oscillator pitch control, Range selector, Main tuning control. A.F. gain control, Bandspread tuming control. AVC On-of, Crystal In-Out. Frystal phasing, and Stand 110 volts, $50-60$ cyeles. Shps. wt., 24 lbs. A14791. Model 438, less crystal.
s4995 CASM PRICE, with tubes
..........
months. A14792. Model 438 with crystal and tubes.
Terms: $\$ 6.00$ down, $\$ 7.15$ mo. for 8 mos. CASH PRICE.. S59. 95



Housed in sturdy black wriakle finish cablnet. Size. $171 /$ long. $10^{\prime \prime}$ high, and handles. Handsomely built.

Regularly supplifed for opera.
tion from $105-120$ voles, $50-60$ tion from $105-120$ voles, $50-60$
cycles. Available for use on cycles. Available for use on
ot her voltages on special orother voltages on spe
der. Write for prices.

## HAMMARLUND MODEL HQ-120

The Hammarlund $\mathrm{HQ}-120$ was designed to meet the most critical demands of both the Amateur and the professional operator. This ultra-modern 12 tube receiver covers a continuous tuning ranke of from 540 KC to 31 MC in 6 bands. Precise workmanship and selectivity, sensitivity, and stabillty are exceptionally high. Every feature essential for top performance has been incorporated. Special tuning condenser construction permits 310 de grees of bandspread or each Amateur band; direct calibration of tuning dial permits accurate logging. A new type of crystal filter giving siz posi-
tions of selectivity for Phone or CW makes operation a pleasure even tions of selectivity for phone or Cof makes opcration a pleasure even under unusually crowded conditions of reception on Amateur bands. Buitin noise limiter circuit overcomes objectionable noise disturbances; onerates meter indicates in " S " units and is calibrated Si to S 9 and up to 40 DB above "S9." Tuned preselector gtage with three high gain IF stages produce highest possible signal-to-nois ratio with maximum attennation of image frequencies. Panel control of antenna cormpensator permits adjustment for peake performance on each band. Send-Receive switch with external break-in relay terminals. Automatic voltage regulator compensates
forline variations. With $\mathbf{8 F}^{*}$ P.M. type speaker. Write for complete descripfor line variations. With $8^{*}$ P.M. type speaker. Write for comp
tive literature. For 110 volts $50-60$ cycles AC. Wt., 47 lbs .
A 14815 HQ-120, with tubes and speaker, less crystal. TERMS: $\$ 11.70$ down, $\$ 9.30$ mo. tor 12 mos.

SII700
A 14816 . $10-120-x$, with tubes. speaker and crystal.
TERMS: 12.90
 trols; Noise Limiter; On-Of Switch; Standby Switch; Controllable Selectivity; Crystal Filter with Phasing Control: Audio Output of 5 Watts etc. Tubes used are 3 6SK7, $2-6 \mathrm{SJ} 7$, $1-6 S \mathrm{SA}, 1$ utput of 7 $91 / 4^{\circ}$ high. For operation from $110^{1}-80$. Solts, 60 cycles $A$ long, $121 / 2^{\prime \prime}$ deep. $9 / 4 h^{\circ}$ high. For operation from 110 Volts, 60 cycles A.C A14775. $\$ \times 23$. Less speaker. CASHPRICE Alatzo A14776.S
\$127.50


## HT-7 FREQUENCY STANDARD

An all-purpowe calibrating instru: ment for all types of frequency checking in the "Ham" station. Consists of a stable crystal oscillator providing either 100 or 1000 KC output, plus a 10 KC multivibrator and harmonic amplifier. A real necessity
A14788
COMPRBTE.
NET CASH.
\$2950 S4.43 monthents: $\$ 4.43$ down


## MODEL SX-24

incorporating many features developed in the famous, MODEL $\mathbf{S X - 2 4}$. incorporath previously available only iner is truly an Hallicrafters Laboratorically priced communication is provided by means this new and economer. Frequency Meter I onim for main tuning control outstandilg perforilluminated tuning diam, and both directy calibrated. of two transthe electrical bandspread sytivity in six positions from and DB, and one or the Limiter; Variable selecter calibrated in S inition, and a Buittin Noisear IF, Carrier level mecter. Frequency stabilization, contribute to Crystal to bre bridge-type crom 540 KC to 43.5 MC an covide ample full four band tuning range from and two high-gain ifs prove switch for peak performance. TR. Feternal terminats irom For 110 volts. $50-60$ 56950 cycles. Size, $191 / 4{ }^{"} \times 99^{1 / 2^{"} \times 101 / 8}$, less speaker.

# hallicrafters 

## THE SUPER-SKYRIDER SX-17

Origimally available only as a "Custom" receiver to a limited number of Amateurs, the $\mathrm{SX}-17$ has earned its top-flight ranking in the Created reason of its high performance under all typen of service Created by popular demand. a (he $\mathrm{SM}-17$ is outstanding in perform ance, distincy and sumsitivity. What, unbelievable in its aelectivity, sirable feature of advanced design in engineering and operating flexibility. Here is complete, continuous tuning from the top of the Broadcast bamd dovis to 5 meters, from 545 to $62,000 \mathrm{KC}$. A unique dual tuning system makes the Super-Skyrider the easiest tuning receiver you've ever handled. A directly-calibrated six-band dial with automatic band indicator tells at a glance just what portion of the tuning range it's set to receive. The exclusive Hallicrafter 1000 deeree spiral bandspread dial separates closely crowded station with astotishing ease, Iron-core i. F. sages with Broant and too, is 1. F. expander assure tremendous selectivity. Important too, is bands! Has two stages of tuned pre-selection and built-in Autobands i Has two stages of tuned pre-selection and possible with flywheel tuning. AVC on-off switch, beat oscillator pitch control, variable beat oscillator injector, RF and AF gain pontrols, sehd-receive switch, phasing control for I. F. and crystal controls, send-receive switch, headphone jack, directly calibrated signal meter, tone control, external terminals for break-in relay control, Broad and Sharp selectivity control, extremely high signal-to-noise ratio, and dynamically-balanced electro-mechanical bandspread tuning. Jses 13 tubes: 2 6K 7 -RF. 6L7-1st Det. $6 K 7-18 t$ IF. $6 K 7$-2nd IF, 6R7 2 nd Det.-AVC -1 st Audio. 2 6 V6G-MP Power Output. $6 J 5$ H. F. O. $6 J 7$ Meter Amplifier $617-$ B. F. O. 615-Noime Suppressor, and 5Z3-Rectlier. For $110 \mathrm{~V} .50-60$ cycles. $12^{*} \mathrm{PM}$ speaker to match receiver is also With tubes. See riglit for prices of various combinations, including With tubes. See gait for prices.

## THE POPULAR SKY-CHAMPION

Meet the Sky Champion 1-a real winner for quality performance -a blue-ribbon champion in its price class. It's "got what it takes" to make it a favorite with the Short-Wave DX fan and Amateur operator. Features are: separate Bandspread dial. RF and AF gain controls, individual coils for each band, inertia tuning mechanism, Beat Frequency Oscillator, AVC switch, Tone Control, Beat. Oscilator switch, send-receive switch, is continuous tuning in four phone pack, band from 545 KC to $44,000 \mathrm{KC}$ for dependable reception on Broadcast. Amateur, and Short-Wave bands. Eight
 modern circuit which provides maximurn gain, selectivity, and sensitivity. Speaker is built in-there's nothing else to buy. Slinal-to-noise ratio is surprisingly high. In fact, in every way. the Sky Champion is a super-efficlent low-priced receiver that will put a real thrill into SW DX-ing or Amateur operation. It offers you professional styling, conveniently grouped controls, operating flexibillty, and above ali, precision workmanship and performance that are truly outstanding. Has provisions for operating from batteries or from vibrator type power pack and 6
Fior $110 \mathrm{~V}, 50-60$ cycles A.C. Shpg. Wt.. 34 lhs.
A14771. S-20. With Tubes.

## NET CASH PRICE

S4950
Time Paymentes $\$ 4.95$ down. $\$ 5.90$ monthly for 8 months.

THE SKYRIDER MARINE MODEL
A new, improved model of an 8 tube receiver for special communication requirements such as Marine and Aircraft service, for Jewelers. $\stackrel{\text { tion requirements such as }}{\text { Press stations, and other services which require dependable re- }}$ Press stations, and other survices which reguire dependable re-
ception on frequencies from 140 KC to 18.5 MC . In its design, expecial emplatis has heen placed on 600 meter and 700 meter expecial emphasis has heen placed on ow ineter and tiones from 16.2 to 2150 meters $(18.5 \mathrm{MC}$ to 140 kC on 4 Bands. Uses: $2-6 K 7,2-6 J 5$. 1 - 6 L 7 . $1-607 \mathrm{M}$. $1-25 \mathrm{~L} 6$, and 1- 2525 tubes. Incorporates many features such as: Built-in speaker, AVC. Beat Oscillator. Tone and Volume Controls. RF gain control, 'Phone jack, and Stand-by switch. Sensitivity and selectivity are excellent; I. F . melectivity only 18 KC wide at 10 times down. Improved image rejection at the higher frequencies is whieved through the use of $1600 \mathrm{KC}-1 . \mathrm{F}$, transformers. Directly-calibrated $338^{\circ}$ Main Tuning Dial; efficient mechanical band-spread with separate dial provider easy and simplified tuning. Mounted in signed, ruggedly-built communications type receiver is one of the signed, rusgedly-built communications type receiver is one of the and built-in spaaker. Shpg, wt., 50 lbs.

s6450
Time Payments: $\$ 6,45$ down, 57.69 per montin for 8 months.


IT'S EASY TO BUY YOUR S-17 NOW!
Why struggle along with an outmoded receiver that can't cope with present day operating conditions? You can get your $\mathrm{S}-17$ or $\mathrm{SX}-17$ now for only a few dollars down, and spread the balance over 6. 8. or 12 months. Easy payment teriss for 12 months given below; but if you prefer. similar casy terms can be arranged for shorter periods of time.
A14778, 517 . leers speaker and crystal.
Terms: $\$ 22.55$ down, $\$ 9,98 \mathrm{mo}$. lor 12 mos . CASH
SI2550
A 14779.517 . With speraker, less crystal.
Terms: 513.75 down, 518.93 mo. for 12 mos.
Terms: $\$ 13.75$ down, $\$ 18.93$ mo. for 12 mos
A $14780.5 \times 17$. With crystal, less speaker.
Terms: $\mathbf{3 1} 3.75$ down, $\$ 10.93$ mo. for 12 mos. CASH
$\$ 137.50$

A $14781 . \$ \times 17$. With crystal and speaker. $\mathbf{~ T e r m s : ~} \$ 14.95$ down. $\$ 11.89$ mo. for 12 mos. CASH.
$\$ 149.50$


MODEL HT-6 25 WATT TRANSMITTER
It's been tried before, but only The Hallicrafters could give yon the successful HT-61 it's a transmitting instrument of quality throughout, capable of all average power output of 25 watts on any Anrateur Band from 1.7 to 60 MiC. for either Phone or CW. Coils for any three bands may be plugged in and pre-tuned with a separate crystal for each band; band-switching is a to the antema. Plug in coils for use with crystals operating on fundamental frequency are available for $160,80,40$, and 20 meters. (Slight additional charge for 10 and 5 meter coil sets.) Electron-Coupled units for the oscillator are available for each of the 160,80 , 40 , and 20 ineter bands at mall extra cost. Tulers used are: $1-6 \mathrm{~L} 6$ Oac.-Dblr. I-RK39 R.F. Power Amplifier. 1 6F5 Mike Ireamplifier. 1 - 6 IS Audio tmplifier, 2 6L6G Class AB Modulators, and $2-5 Z 3$ Rectifiers. Size: $20^{*}$ long, $12^{\circ}$ deep, $y^{*}$ high. For 110 V. 50-60 cycles A.C. Shpg. wt., 75 lbs.
A14785 HTG-6 Transmitter, with all tubes, less coils and
s9900 crystals. NET CASM PRICE, $\$ 7.87$ monthiy ior 12 months. A14786. Complete with tubes and coils for three banda, less crystals. Specify three bands desired from clioice of $160,80,40$,
and 20 meters.) CASH PRICE.
S113.85
(Write for complate dich 59.05 monthly for 12 month

Communication Receivers


## NC-101X AMATEUR MODEL

An unusually efficient 11 tube Communications Receiver de. signed exclusively for use on the Amateur bands. Micrometer type dial with 500 divisions and worm gear drive, together with
special coil assembly provides maximum bandspread on each special coil assembly provides maximum bandspread on each
band. Has tuned RF stage and two high-gain IF stages for high band. Has tuned RF stage and two high-gain IF stages for high
selectivity and sensitivity with crystal filter for use when ORM selectivity and sensitivity with crystal filter for use when QRM
is heavy. Carrier level meter calibrated in S units. With tubes and $10^{\circ} \mathrm{PM}$ speaker. For 110 volts 5060 cycles. Shps. wt. . 71 lbs. One of the most popular and efficient A14843 RICE.

ร2900
Time Payments: $\mathbf{\$ 1 2 . 9 0}$ down, $\mathbf{\$ 1 0 . 2 6}$ monthly for $\mathbf{1 2}$ mos. NOTE: The NC-101X is also available with direct-reading dial as used on NC-100A at same price. Specify NC-101XA on order if deaired with direct-reading type dial.



## BROWNING VISUAL FREQUENCY MONITOR

Built to the most exacting requirements to answer the problem of procise irequency measurement on the Amateur bands. Basically a heterodyne frequency meter with built-in mixing circuit. Incorporates a
lighly stable $100-1000 \mathrm{KC}$ oscillator which can be easily
checked against WW, and checked against WWV, and three other separateoscilators $40,20,10$, and 5 meter bands. $40,20,10$, and 5 meter bands. Calibrated $51 / 2$ Inchlaboratory type dial permits accuraze as 2 quency checking as cose at KC at 14 MC . Electric eye provides visual indication of provides visual indicates frequency deviation of carrier. Operates from 110 volt AC oreration and can be read directly withoul charts or directy without charts or tulses. Shpg. wt..
13 lbs, A 10670 NET.
$\$ 31$ for 6 mos. 100-1000 K.C. STANDARD The "heart" of the Browning Freguency Monitor, a highly stable EC coil unit is avallable separately for those who prefer to build their own 100 1000 KC . standard. In $2^{\prime \prime} \times 2^{\prime \prime} x$ Cap" padders. $\$ 25$ Ciflers Wier $\$ 345$


## FAMOUS NATIONAL HRO

World-famous for performance; built to taeet the most exacting of communication requirements. Hiros canklng Amateur and Commercial stations. With two preselector stages providing remarkable inage suppresslon and high Signal-to-Nuise ratio and cwo higti-gain air-tuned IF stages with Litz-wound colls, the usable sensitivity and selectivity are exceptionally high. Other circuit details include manual and automatic volume control; vacuum-tube-volmeter ty pe carrier levelind cator with meter calibrated in $S$ units, single-signal crystal filter with wide-range adjustable select ity, single micrometer-type dial cuning with ach Amateur drive; extreme bandspread that 400 divisions of the 500 band except 60 meters) over coil assemblies; standby switch, and simple switching device to convert cuils by switch; and simple switching device to con with coils for general coverage use. Supplied comple tubes (3-6C6.4-6D6. $1-6 B 7,1-42$ ). Requires power supply listed below. Shps. wit., 62 1b.
A14802. HRO Standard, less power
s179º
A14803. No. 697 Power Pack with 80 tube. For e. For
5.90 A14804. MCS $8^{\circ}$ PM Speaker in matching metal A14805. HRO Standard recelver with No. 697 power pack and MCs speaker. $\$ 20.70$ NET. $\$ 20.97$ down. $\$ 16.67$ monthiy for 12 months ADDITIONAL HRO COILS
A1407
A1408
A1404
A1405
A1406 $50-100 \mathrm{KC}$.
A1408. $175-400 \mathrm{KC}$.

A1405. $900-1000 \mathrm{KC}$
$\$ 22.50$ WE CAN ALSO SUPPLY HRO Ir. receiver, as mounting, or special HRO rack mounted unlts with coll racks, power supplies, and speaker.


## RME-70 \& RME-69 RECEIVERS

Here it is, the precision communication recelver With features galore features that were formerly available only in the RME-69, as optional and at extra cost. The RME-70 brings you veak perforinance-precision eraftsmanslup-selected highest quality components and an overall order of efficiency that will put pep and thrills into your operating hours. Handsomely and 70 attratively housed in a metal table cabinet, the Rer illuminated dials and a larger and 70 features larger illuminated dials and a larger and more legible signal meter calibrated in $R$ ribels. Non-fatiguing controls with smooth backlashdecibels. Non-fatiguing controls tvith sunooth backlashfree gear drive permit finger-tip hairline tuning Main dial accurately calibrated from 50 to 180 for logsing bands; bandspread dial marked 0 to 180 for logging accurately. Uses i-imiter, bteak-in control terminals on rear of chassis, R. Fiter; bteak-in control terminals on rear of chassis fiter all help to make operation fiexible. For 110 volts 60 cycle AC. Shpg, ivt. 65 lbs. A14810 RME-70, with tubes,
speaker. CASM PRICE
512675 Terms: $\$ 12.68$ down, \$ 10.08 monthly for 12 months. A14811. RME-70 with tubes and $8^{\circ}$ speaker in matching cabinet
\$138.60
CASH PRICE
(\%)

## RME-70 \& DB-20 COMBINATION

Here's a complete receiver-preselector combination that will really "go places" when it comes to turning in peak recelving performance. Consists of the R Mice by side in and fainous DB-20 Preselector mounted side by side in
one cabinet, $281 / 2^{\circ}$ long, $10^{\circ} \%^{\circ}$ wide, $9^{\circ}$ high. in elther one cabinet, 28.2 long. $101 / 2$ vide, black or grey wrinkle finish. Complete
less speaker. NET CASH........... \$1
A14812. NET 48.35
A14813. Speaker in metal cabinet. NET. S11.85
SEND FOR COMPLETE LITERATURE describing the $R M E-70$ and $R M E-69$ receivers and combinations, DB-20 Preselector, DM-36 and DM-36A Expanders, and other RME Products.

## The Easiest Amateur TIME PAYMENT PLAN Ever Gffered!

## SEND US YOUR ORDER WITH DOWN PAYMENT

 The purchase of Amateur enuipment on Time Payments ordinarily requires more careful consideration than would be necessaly if the same equipment were purehased for cash, in order to avoidexcessive charges. ALLIED'S Alnateur Division now offers the excessive charges. ALLIED'S Ainateur Division now offers the most economical plan available-desikned for your protection with tower down payment reruirements and ower service charge tlian
ever before. Before you buy, add together the total of monthity ever before. Before you buy, add together the total of monthity, payments and down pavment, and subtract You'll find the ALLIED the difference is the service charge yout pay. You'll hnd the ALe price.
Description Hallicrafters

Sky Buddy
Sky Cha
Marine
Defiant SX-24
Defiant \& Spkr 5-10
S-17 \& Spkr.
SX-17 \& Spkr. - SX-23 \& Spkr. HT-7 Stan
438 less crystal 438 with crystal 460 with crystal Hammarlund HQ-120 HO-120X
RME-70 less speaker RME-70 with speaker Browning Freq. Mon.
Guthman Freq. Mon.

HERE ARE OUR TERMS FOR THE
FOR THE
Monthly

| Cash Price | Down Pay. | No. of Months | Monthly Payments |
| :---: | :---: | :---: | :---: |
| \$ 29.50 | \$ 4.43 | 6 | \$ 4.43 |
| 49.50 64.50 | $\begin{aligned} & 4.95 \\ & 6.45 \end{aligned}$ | 8 | 5.90 7.69 |
| 69.50 | 6.95 | 8 | 8.29 |
| 81.50 | 8.15 | 12 | 6.48 |
| 69.50 | 6.95 | 8 | 8.29 |
| 125.50 | 12.55 | 12 | 9.98 |
| 137.50 | 13.75 | 12 | 10.93 |
| 137.50 | 13.75 | 12 | 10.93 |
| 149.50 | 14.95 | 12 | 11.89 |
| 115.50 | 11.55 | 12 | 9.19 |
| 127.50 | 12.75 | 12 | 0.14 |
| 29.50 | 4.43 | 6 | 4.43 |
| 29.95 | 4.50 | 6 | 4.50 |
| 49.95 | 5.00 | 8 | 5.96 |
| 59.95 | 6.00 | 8 | 7.15 |
| 79.95 | 8.00 | 12 | 6.36 |
| 89.95 | 9.00 | 12 | 7.15 |
| 117.00 | 11.70 | 12 | 9.30 |
| 129.00 | 12.90 | 12 | 10.26 |
| 126.75 | 12.68 | 12 | 10.08 |
| 138.60 | 13.86 | 12 | 11.02 |
| 31.35 | 4.70 | 6 | 4.71 |
| 33.52 | 5.03 | 6 | 5.04 |

## HOW TO ORDER ON TIME

1. Send us your order with down payment; include the names and addresses of your employer and three business houses from whom you have previously received credit.
2. When we receive your order and down payinent, we send you a Time Payment Contract for your signature, and check your credit. 3. Your signed contract is received by us at approximately the same time we complete our credit check. When our Finance Com
LEADING AMATEUR EQUIPMENT

| Description | $\begin{aligned} & \text { Cash } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Down } \\ & \text { Pay. } \\ & \hline \end{aligned}$ | No. of Months | Monthiy Payments |
| :---: | :---: | :---: | :---: | :---: |

$\frac{\text { Descriptio }}{\text { National }}$

| $\begin{aligned} & \text { Cash } \\ & \text { Price } \end{aligned}$ | Down Pay. | No. of Months | Monthiy Payments |
| :---: | :---: | :---: | :---: |
| \$ 49,50 | \$ 4.95 | 8 | \$ 5.90 |
| 99.00 | 9.90 | 12 | 7.87 |
| 99.00 | 9.90 | 12 | 7.87 |
| 120.00 | 12.00 | 12 | 9.54 |
| 110.50 | 11.05 | 12 | 8.80 |
| 142.50 | 14.25 | 12 | 11.33 |
| 129.00 | 12.90 | 12 | 10.26 |
| 165.00 | 16.50 | 12 | 13.12 |
| 209.70 | 20.97 | 12 | 16.67 |
| 129.00 | 12.90 | 12 | 10.26 |
| 129.00 | 12.90 | 12 | 10.26 |
| 117.00 | 11.70 | 12 | 9.30 |
| 123.00 | 12.30 | 12 | 9.78 |
| 41.28 | 4.13 | 8 | 4.93 |
| 49.02 | 4.90 | 8 | 5.85 |
| 195.00 | 19.50 | 12 | 15.50 |
| 175.00 | 17.50 | 12 | 13.91 |
| 113.85 | 11.39 | 12 | 9.05 |
| 32.24 | 4.8 ; | 6 | 4.84 |
| 33.00 | 4.95 | 6 | 4.96 |

NOTE: Similar temms can be arranqed on any new eruipment released by various manufacturers after publ
this rable as a guide, or write to us for full details. Use ALLIED'S Time Payment Plan and Save Money!

# AMATEUR TRANSMITTERS 

## KNIGHT 'JUNIOR" AMATEUR STATION



## FAMOUS NATIONAL 600 WATT TRANSMITTER KIT

Sa OM, if you're looking for the latest thing in transmitter kits, stop looking right here, for the National 600 is tops when it comes to performance, professional styling, ease of construction, and simplicity of operation. Bandswitching 35 T buffer and 203 Z modulators power? Y power for the up to 600 watts input to the push- Power? You bet! With stage, you can go places with either 'Phone or CW He final up to a good skywire, and you won't have to take a back seat even for the "California won't have to take a back alone isn't everything-you kont depenct But performance husky Thordarson CHT transformers and chokes, too! Big oil-filled filter condensers, National condenters, sockets and coils, and every part chosen for its ability to stand up under service-that's your assurance that when you throw switches. you're "on the air" without a hitch. Construction is a cinch; panels and chassis are drilled and finished, and all small parts furnished, as well as complete instructions We could fill a couple of pages telling you about the Nations. 600. and still leave the story only half told. Drop us a card and we'll send you a sixteen page descriptive booklet.
COMPLETE R. F. UNIT KIT. Contains panel, chassis meters, dials and all parts. Uses $1-35 \mathrm{~T}$ and 2-100 TH tubes. 1. Complete, less tubes. NET....... \$76.60 COMPLETE MODULATOR UNIT KIT: Contains panel, chassis, transformers, meter, all parts, and hardware Uses 2032 tubes.
A9503. Complete. less tubes. NET,
s43.48
COMPLETE MEDIUM VOLTAGE POWER SUPPLY KIT: Contains all trainsformers, chokes, condensers, panel,
and chassis. Uses 2-866 tubes. A9505. Complete, less tubes. NET.
\$52.98

## HIGH VOLTAGE POWER SUPPLY KIT: Contains all

 transformers, chokes, condensers, parts, meter, panel, andA9507. Complete less tubes. NET........ \$81.35

## COMPLETE TRANSMITTER KIT

For those who prefer to purchase the encire National 600 Payment Plan, we offer a COMPL our convenient Time accessories. Includes the four kits listed above (A95011 A9503, A9505, and A9507), a fully enclosed black wrinkle finish Deluxe Steel Cabinet (A14701 on page 166), all tubes ( 1 Eimac $35 \mathrm{~T}, 2$ Eimac 100TH, 2 Taylor 2032, and 4 Taylor 866), NTE-A or NTE-B Exciter unit (described below) with black wrinkle finish rack panel and complete with tubes and four unmounted 80 meter crystals, all necessary wire, cable, and instruction book.
A9513. Complete National 600 Watt
${ }^{5} 457^{50}$
Time Payments: $\$ 45.75$ down, $\$ 36.37$ mo. for 12 months.


## NTE EXCITER UNITS

An ultra-modern exciter unit that provides sufficient RF excitation for any low-power or medium-power buffer stage, plus a 15 watt speech amplifier, housed in a single table style cabinet. Used in the famous National 600 Watt Transmitter described above, it represents an ideal basic unit for any Amateur station. Ingeniously designed to prevent stray button type band-changing permits rapid shit pushone band to another. Multiple crystal holder pro vides for instant selection of any one of four crystals Entirely self-contained, including of four crystals. supply. RF chanael consists of 6 L . crystal oscillator ollowed by three 6 L 6 frequency multiplier stages. High-gain audio channel has input for crystal mike and provides plenty of drive for any type Class ' $B$ '" modulator stage. Audio output is from Class " $A$ ""
push-pull 2 A 3 's. The NTE exciter is offered in black push-pull 2A3s. Che $\begin{gathered}\text { a } \\ \text { wrinkle metal cabinet for table is offered in but may be }\end{gathered}$ obtaincd with black wrinkle rack panel at $\$ 6.00$ net additional. Supplied with full set of tubes, less only crystals. For operation from 110 volts $50-60$ cycle
AC. Shpg. wt., 70 lbs.


A9509. NTE-A. For operation on 5, A 9510 , and 80 meters. Table type cabinet. 20,40 , and 80 meters. Table type on 10, NET, EITHER
MODEL
T. P. \$12.90 129.00 For relay rack panel add $\$ 6.00$ to Net Price and specify on order.

## HALLICRAFTERS' "HT" HAM TRANSMITTERS

## Modern in styling and professional in appear

 ance; built around the latest tubes and most advanced circuits. Conservatively rated power output; will out-perform many 150 to 250watt home-built rigs. Generously oversized watt home-built rigs. Generously oversized
components for utmost dependability. Flexcomponents for utmost dependability. Flexibility and simplicity of operation make it an
ideal unit for use by beginner or advanced ideal unit for use by beginner or advanced
Amateur. Supplied for operation with any three-band combination desired. Accessorices required are: Astatic D104 crystal mike, Bias battery, and transmitting key. MODEL HT-2
For CW only. Less modulator and accessories. Shps. wt. ${ }^{120 \mathrm{lbs}}$ A 10170 NT....... $\$ 1775.00$
$\$ 17.50$ down, 12 monthly payments of $\$ 13.91$.

## SPECIFICATIONS

OUTPUT: 50 watts Phone, 100 watts CW RANGE: $10-20-40$ meters; single control bandswitching. TBEs: 2-6A6 osc., 1st and 2nd doublers, 1 RK47 R. F. amplifier. RECTIFIERS: 2-523, 1-80, 2-866. MODULATORS: $1-6 \mathrm{~J} \%$, $1-65$, 4-6L6. Modulation capabily $100 \%$ METERS: 4 , check all cir Phone-CW Switch Band-Switche Switches, trol. CABINET: Wand-Switch, Gain Con$113 /{ }^{\prime \prime}$ high. $191 / 4^{\circ}$ deep. SUPPLIED COM. PLETE with tubes, $10-20-40$ meter coils, and one 40 meter crystal. Write for complete des. criptlve literature.

MODEL HT-1
For Phone and CW. Less accessories. Shpg Wt., 145 lbs.
$\$ 19.50$ down, 12 monthly paymen 195.00

- famous hallicrafters quality
- 50 WATTS 'PHONE- 100 WATTS CW
- SINGLECONTROLBANDSWITCHING
- $100 \%$ MODULATION FOR 'PHONE
- FACTORY-BUILT-READY TO WORK


# AMATEUR TRANSMITIERS 



## BROWNING

 PRESELECTORSDesigned and developed in the famous Brownin the famous Brown- ing Laboratories, this regenerative type pre stlector unit covers the complete range from 5 bands. Provites high-gain for receptiou of signals otherwise too weak for adergate reselective by reason of main tuning dlaj with separate bandspread control; sensitivity is variable by means of regeneration control. Kit contains all parts including $7^{*} \times 10^{*} \times 6^{\prime \prime}$ metal cabinet, drilled chassis and panel, dial and complete five-band wired tuner unit. Uses $1-1851$ or 1852 tube.
A 10687 . Complete kit, less $\$ \$ 350$
tube and power supply. NET... tube and power supply. NET
ed A 10688 . Completely assembled
Browning Preselector. Less tube $\$$ 16.50 and power supply. NET

## KNIGHT FIELD STRENGTH

 METER KITDescribed in detail on page 386, sixteenth edition of the ARRL Handbook, and put into convenient ready-toassermble kit form. A necessity in every Ama-
teur Station: can be teur Station: can be transmitter output under varying condicions, making antenna radiation tests and patterns, checking amplifier neutralization, etc. This instrument will supply the only accurate method of tuning and adjusting any beam type antenna by actual measurements of radiated field at front. back and sides. Uses $1 F 6$ as diode rectifier and am-
plifier. Kit contains all parts, case tube, meter, and batteries. A9538. Complete Kit. NET.
$\$ 935$

## MEISSNER SIGNAL SHIFTERS



STANDARD MODEL
Every operator of an Amateur transmitter can now have quick
accurate control accurate control Will allow quick QSY over the en${ }_{20}$ tire band in 10 160 meter bands. Output is approx 7.5 wates. Tuning dial has precision vernier scale. Can be link-coupled to transmitter for remote conto matic position switch. Uses 1-6F6. 1-6L6 and 1-80. With 80 meter coils and RCA tubes Extra coils listed below. For A9 899 Cycles.
A9899.
$\$ 428$

## DELUXE MODEL



Similar to model described above but including
newand extremenew and extreme ly accurate ver-
nier dial, voltaze nier dial, voitage
regulation for the regulation for the
oscillator tube. oscilator tube tubes, and key. click filter for chirp-less and crystal-pure CW Supplied with 80 meter coils; additional coils for other bands listed below. Black or grey finish; black supplied unless arey is specified. With R.C.A.tubers A14820.
$\$ 4902$
Terms: $\mathbf{3 4 . 9 0}$ down 55.85 mo for 8 mos A 14821 . Relay Rack Model with 80 meter coils and RCA tubes. Specify grey or black finish. NET ADDITIONAL COILS
A5600. 160 Meter Coils. A5603. 20 Meter Coils. A5601. 80 Meter Coils. A 5604. 10 Meter Coils. A5602. 40 Meter Coils
NET, PER SET
$\$ 2.45$

## STANCOR 20-P AMATEUR TRANSMITTER KIT



Standard parts used throughout are selected to assure ample and conservative ratings. Transmitter section consists of 6F6G as pentode type crystal oscillator, with RF amplifier. 6 J 7 input stage fe audio section 6 C 5 voltage amplifier, 6N7 Class "A" driver, and 6N7 Class "B" modulator. Heavy-duty power supply uses 523 tube. Features unusually flexible operation. Switching from CW to phone is easily done in a few seconds time. Output of RF amplifier is designed to couple to any 72 ohm antenna transmission line. The $20-\mathrm{p}$ kit comes metal cabinet Includes finished chassis metal cabinet. Includes finished chassis drilled, transformers, chokes, condensers drihed, transformers, chokes, condensers, plete instructions and diagrams for quick and easy assembly. This is an ideal rii for emergency work, for low-power auxiliary transmitter, for portable use, or as a complete CW-phone rig for the beginner. For 110 Volt, 60 cycle A.C.
A9540. Complete 20-P
kit. less tubes. crystals. and $\$ 3 \leqslant 50$
metal cabinet. NET metal cabinet. NET........
A 14760 . Metal cabinet for 20-P Transmitter. NET..................... \$5.14
ITTING EQUIPMENT

## NEW U-50 SUPERHET

An up-to-the-minute communications type super using new Loktal tubes and packed with super using new Lok tal tubes and packed with features that provide top-notch perita. V.T. Reltmeter type " ${ }^{\text {S" meter; six }}$, band tuning range from 490 to $61,000 \mathrm{KC} ; 73 / 4$ laboratorytype calibrated dial with 50 to 1 vernier drive; Antenna circuit resonator; Noise Silencer; and automatic voltage regulation. Full 3 -gang tuning condenser; magnifier type dial indicator. New circuit uses 11 tubes. Send for descriptive literature and Time Payment details. Less tubes and speaker.
A10652. U-50-Super Kit. $\$ 4895$ A1 0664 . U-50 completely $\$ 56.30$
A10654. Tube Kit. NET
\$7.53
A10653. 8 PM Speaker in metal cabinet. $\$ 9.70$


## GUTHMAN "SEND-'CEIVER"

A complete Amateur Station especially suited to the besinning Amateur's requirements. Concrative two tube receiver and a single tube crystal-controlled type transmitter, with builtin power supply for 110 volt 60 cycle operation, all in one unit. Receiver uses 7 C 7 and 7 C 5 Loktal tubes; transmitter uses 7C5 tube; power supply uses 80 type rectifier. Bandswitching type transinitter works on 160 ,
80.40 .20 , and 10 meters; provision for three $80,40,20$, and 10 meters; provision for three
crystais. Adapter kits available to convert crystals. Adapter kits available to convert
transmitter for voice operation. Send for transmitter for voice operation. Send for A10665. U-31 "Send-'Ceiver" $\$ 237$
Kit. less tubes, crystals and $\$ 29$ cabinet. NET A10663. "Send-'Ceiver" as above but supNET Completely wised. U-31W. $\$ 36.72$ A10666. Metal Cabinet. NET.... $\$ 2.97$ A10667. Tube Kit. NET.


## SIX-BAND 'PHONE-CW

 TRANSMITTER KITA universal type transmitter for Phone or CW operation on $160,80,40,20,10$, and 5 meters. Operates from either 110 volts 60 cycles AC or from 6 volt storage battery Uses Loktal tubes, 7A4 crystal oscillator, 7C5 RF amplifier, 7 C 7 mike pre-amplifier, 7 C 5 modulator 83 V rectifier for AC operation. Has built-in synchronous type vibrator for 6 volt operation Band-switching and selection of any one o three crystals from panel. Can be used for permanent station, mobile, or portable opera cabinet. With 5.10 meter coils.
A10655. U-36 Kit. $\$ 237$
A 10668 U-36 Transmitter. completely
wired, less tubes, meter and $\$ 367 ?$ wired, less tubes, meter and $\$ 36.72$ A10656. Tube kit. NET........... \$4.80 A10657. Metal Cabinet. NET..... 2.36 A10658, $20-40$ Meter coils. NET... 1.76 A10559. 80-160 Meter coils. NET.. 1.76 Send for literature and Time Payment details.

## U-10A FREQUENCY METER

 Designed by MeMurdo Silver, this precision type frequency meter-monAmateur to comply Amateur to comply quirements at modquirements at moderate cost. OperAC or DC it utilizes its own tubes as heating clements for extrieme
ity Directly calibrated for $160,80,40,20,10$ and 5 meters. adequate bandspread insures and 5 meters; adequate bandspread insure precision frequency readings accurate to with complished by means of WWV transmissions. or local BC stations. Has 100 KC calibratin oscillator and cathode-ray frequency deviation indicator. Actual accuracy depends only on skill of operator. Write for complete descriptive literature. 20 lbs. A10651. Completely wired
and assembled; with tubes.
$\$ 33$
52
NET
Terms: $\$ 5.03$ down, $\$ 5.04 \mathrm{mo}$. for 6 mos
We can supply all Guthman Amateur products. Write us for descriptions and prices.

## FAMOUS NATIONAL CONDENSERS

## RECEIVING CONDENSERS

 TYPE SE $270^{\circ}$ Straight line frequency plates, $270^{\circ}$ insulated. Plates and frame are aluminum; two bearing rotor with front bearing insulated to prevent noise. Rotor contact is impedance pigtail. Type SEU 15 mmf . and 25 mm. condensers have thick plates with roundvoltages. All other types have cut plateg; edges are not polished. Air-gaps are as follows: for SE types-. $026^{\prime \prime}$; Air-gaps are as follows: and for SEU types-.055".

| $\begin{gathered} \hline \text { STOCK } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { TYPE } \\ & \text { No. } \end{aligned}$ | CAP. MMF. | No. of Plates | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\overline{41300}$ | SEU-15 | 15 | 6 | \$1.50 |
| A1310 | SEU-20 | 20 | 7 | -1.65 |
| 41301 | SEU-25 | 25 | 9 | 1.65 |
| A1302 | SE-50 | 50 | 11 | 1.80 |
| A1303 | SE-75 | 75 | 15 | 1.95 |
| A1304 | SE-100 | 100 | 20 | 2.10 |
| A1305 | SE-150 | 150 | 29 | 2.25 |
| A1306 | SEH-200 | 200 | 27 | 2.25 |
| A 1307 | SEH-250 | 250 | 32 | 2.40 |
| A 1308 | SEH-300 | 300 | 39 | 2.40 |
| A1309 | SEH-335 | 335 | 43 | 2.55 |

## TYPE ST $180^{\circ}$

Similar to SE types above, but with $180^{\circ}$ Compact in size. Airgaps are as follows more STHS, STH, and STHD-.018; Types STD and $\mathrm{St}-.02 \mathrm{~m}^{\mathrm{m}}$, STHS types have single bearing, others are double-bearing.

| STOCK No. | $\begin{aligned} & \text { TYPE } \\ & \text { No. } \end{aligned}$ | CAP. M MF. | No. of Plates | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| A1311 | STHS-15 | 15 | 3 | \$0.84 |
| A1312 | STHS-25 | 25 | 4 | \$0.84 |
| A1313 | STHS-50 | 50 | 7 |  |
| A1314 | ST-35 | 35 | 8 | - |
| A1315 | ST-50 | 50 | 11 | 1.08 |
| A1316 | ST-75 | 75 | 15 | 1.20 |
| A1317 | ST-100 | 100 | 20 | 1.35 |
| A1318 | ST-140 | 140 | 28 | 1.50 |
| A1319 | ST-150 | 150 | 29 | 1.50 |
| A1320 | STH-200 | 200 | 27 | 1.65 |
| A1321 | STH-250 | 250 | 32 | 1.80 |
| A1322 | STH-300 | 300 | 39 | 1.95 |
| 323 | STH-335 | 335 $50-50$ | 43 | 2.10 |
| A1344 | STHD-100 | 100-100 | 11-11 |  |

## NEW TMH-35D CONDENSER

Special U.H.E, type split-stator condenser Isolantite insulated. 3000 volt spacing. Max.

\$2.70

## EXPERIMENTERS TYPE

 CONDENSERSA superior low-priced SW set builders. Sturdy allbrass construction with bake lite insulation. Rotor and stator plates easily removed. Single hole mounting.
*Double spaced; others single.



ULTRA-MIDGETS UTRA-MIOGETS For Ultra H.'F. use in
receivers and transmitreceivers and transmit-
ters for padding or neutralizing. Shaft extends
at rear for easy gangat rear for easy gang
ing. Isolantite base.

## TYPE UM: SINGLE-SPACED



TRANSMITTING CONDENSERS

deak, Coni-
cal front bearings; single ball thrust, radial rear bearing. Has Isolantite insulation.

| NO. | TYPE | M MF. | Plates | NET |
| :---: | :---: | :---: | :---: | :---: |
| A 1358 | TMS-100 | 100 | 10 | \$1.50 |
| A1359 | TMS-150 | 150 | 14 | 1.65 |
| A1360 | TMS-250 | 250 | 23 |  |
| A1362 | TMS-500 | 300 50.50 | 27 $5-5$ |  |
| A1363 | TMS-100D | 100-100 | 9.9 |  |
| A1365 | TM SA-35 | *35 | 8 | - |
| A1366 | TM SA-50 | *50 | 1 |  |
| A1367 | TMSA-50D | 50-50 | 11-11 | 2.40 |

TYPE TMC—MODERATE POWER For use in power
stages of transmitters where peak voltage does not exceed 3000 V. Exframe. With full Isolantite insula-
tion. Aluminum tion, Aluminum
plates have buffed edges ${ }^{2}$ air-gap is
$.077^{\prime \prime}$. Conical front

bearing and radial rear bearing with single ball thrust. Stator of solit-stator model is supNo. Norted

| No. | TYPE | M MF. | Plates | NET |
| :---: | :---: | :---: | :---: | :---: |
| A1375 | TMC-50 | 50 | 7 | \$2.40 |
| A1376 | TMC-100 | 100 | 13 |  |
| A137 | TMC-150 | 150 | 21 |  |
| A1380 | TMC-100 | 300 |  |  |

## TYPE TMA HEAVY-DUTY

Isolantite insulation. Aluminum plates. Peak voltage of airgaps; $, 077-3,000 \mathrm{~V} . ;-171-6,000 \mathrm{~V} . ;$
$.265-9.000 \mathrm{~V} . ; 359-12-000 \mathrm{~V}$.

| NO. | TYPE | M M F . | $\begin{aligned} & \text { Alr- } \\ & \text { Gap } \end{aligned}$ | NET |
| :---: | :---: | :---: | :---: | :---: |
| A1384 | TMA 300 | 300 | . 077 | 7.20 |
| A1385 | TMA 200 D | 200.200 | . 077 | 9.00 |
| Al ${ }^{\text {A }}$ | TMA-50A | 50 100 | . 171 |  |
| A 138 | TMA-150A | 150 | . 171 |  |
| 3 | TMA-230A | 230 | . 171 |  |
| A | TMA-50DA | 50-50 | . 171 |  |
|  | TMA-100DA | 100-100 | . 171 | 10.50 |
| 139 | TMA-100B | 100 | 265 |  |
| A139 | TMA-60DB | 60-60 | 265 |  |
| A1395 | TMA-50C | 50 | . 359 |  |
| A1396 | TMA-100C | 100 | . 359 |  |
| 41397 | TMA-40DC | 40-40 | . 359 | 8.10 |

## ROTOR CLAMPING DEVICE

A1556. For clamping rotor shaft of TMA or NET...... Holds firmly.

## TYPE TML <br> Have self-cleanin rotor contact; thick capacitor plates with rounded edges, Cast aluminum frames and dural tie bars. Isolanvoltage of airgaps <br> 10,000 V.; ,469 $-15,000$



| M M F | $\begin{aligned} & \text { Alr } \\ & \text { Gap } \end{aligned}$ | NET |
| :---: | :---: | :---: |
| 75 | 719* | 15.60 |
| 150 | . 469 " | 15.90 |
| 100 | . 469 " | 14.10 |
| 50 | .469** | 9.90 |
| 245 | . $344 *$ | 17.10 |
| 150 | .344* | 15:60 |
| 100 | . $344{ }^{\prime \prime}$ | $15: 00$ |
| 75 | . $344{ }^{\circ}$ | 10.80 |
| 500 | . $219^{*}$ | 21.00 |
| 350 | . 219 | 16.80 |
| 250 | .219* | $15.60$ |
| 30-30 | . 719 * | 15.90 |
| 60-60 | . 469 * | 17.10 |
| 100-100 | . 344 * | 18.90 |
| 60-60 | . $344{ }^{\text {* }}$ | 16.50 |
| 200-200 | . $219^{\circ}$ | 21.00 |
| 100-100 | . $219^{*}$ | 17.10 |

## NEUTRALIZING CONDENSERS



A high-voltage condenser for neutralizing the Max. capacity 12 mmf . Adjustable tubes Max. capacity 12 mmf . Adjustable..$^{\prime \prime}$ to
$1.6^{\prime \prime}$ Isolantite insulated.
A1370. NET.................. $\$ 3$.
$\$ 3.90$
TYPE NC-500
High-voltage condenser to neutralize WE-251A justable from $5^{\prime \prime}$ to $1.9^{\circ}$. A1373. NET.
$\$ 7.50$

## TYPE TCN

A heavy-duty neutralizing condenser with a peak voltage rating of 6000 volts. Maximum capacity 25 mmf . For use with $203 \mathrm{~A}, 852$. ${ }^{A} \mathrm{~A}^{3} \mathrm{ET}^{68}$.
\$2.40

TYPE STN
Suitable for neutralizing the type $45,47,10$, or similar tubes. Isolantite insulated. Max. cap., 18
mmf . Peak voltage breakdown 3000 volts. Ideal for buffers or Aloublers. NET..... \$1.20


PRECISION GANGED CONDENSER WITH MICROMETER DIAL Aprecision con-
denser assembly for H . F . cirgedly built. with four
 shaft. Insulated ro
tors have brush
type contacts, Sta-
tor insulated with
 No MF. PER SEC. 225 MMF, PER SEC


11523 . Complete A1355 16.50 enclosed worm drive and micrometer dial described above.
NOTE: Above condensers are also available in Gingle sectlon types, $150,200,350$ and 500 mmf .
Grounded rotor. EA CH............. $\$ 9.00$

## SHAFT COUPLINGS

## TYPE TX-9

A1550. A small efficient condenshaft. Insulation is Steatite.
A1555. TX-10. Similar to TX-9
but has bakelite insulation. NET...... 3 e
TYPES TX-11 \& TX-12
Flexible shaft with $1 / 4^{2}$ hubs for Iriving off set has Isolantlite insulated hubs.
A1551.
75
insulated.
XET. Plain hubs, not 36.

## TYPES TX-1 \& TX-2

For use with transmitting
condensers in high voltage
Hubs will finsulation is of glazed Isolat is $1^{\prime \prime}$. TX -2 any $1 / 4^{\prime \prime}$ shaft. TX- 1 leakage path is $1{ }^{\circ}$

MEADQUARTERS

Wrave
O Ingm
the national

## NTX-30 TRANSMITTER

Designed along the lines of the original NTE series of combination exciter units, the new NTX-30 provides a compact, high efficiency transmitter or R excter-button band-change tion. Features a fast push-button band-change control for rapid berortless selection of any desired frequency band. Highly stabilized, high efficiency circuit uses 61,6 buffer-doubler stages, and parallel three 6L6 buffer-doubler stages, and paralles $2-83 . \mathrm{s}$. A lighly efficient circuit.

## OPERATES ON $\mathbf{1 0 - 2 0 - 4 0 - 8 0 ~ M E T E R S ~}$

Keying is in final amplifier or in oscillator for break-in operation. Final RF tank coils are AR16 plug-in type. Output circuit for antenna coupling is for 12 ohm untuned ane. Normal input 60 watts; power output used as low-power CW transmitter or as driver unit for highCower RF amplifier. The NTX- 30 is supplied power Rete with a set of tested tubes, tank coils for $10,20,40$ and 80 meters, 4 -in-1 crystal holder, and complete instructions. Less crystals. For 110 volt $50-60$ cycles.
A14800. Black wrinklefinish table modiel. A14801. Relay Rack More less crystals.
${ }^{\text {s }} 123.00$
N. P. siz 1230 down. $\$ 9.78 \mathrm{mo}$. for 12 mos.


NATIONAL R-100 R.F. CHOKE
Ideal for high frequency circuits. Extensively used in receivers and low-power stages of transmitters. Has continuous 4 sertion unidersacWinding on 1 solantite is only $1 \mathrm{mmfd} .21 / 2 \mathrm{MH} .125 \mathrm{MA}, 50 \mathrm{ohm}$ D.C. resistance 60 c . Y OUR PRICE.... 36 c A1478. R100U. As above but on small standoff insulator for vertical mounting; lug terminals. NET. A1480 R300. Similar to R100 1 MH. 300
MA, 10 ohm D.C. resistance. NET..... 36 C

## - X-MITTING CHOKES

Universal chokes with honey-cont-type windings. Rated at 600 MA continuously. Inductsistance. R152 is for the 160 meter band, and R154 for the 40 meter band. A1488. R154
${ }^{\text {s }} 1.35$
A1483. R154U. For 20,40 and 80 meter bands. Five section honeycomb type coil on 1solantite core. with solder lugs. Rated at DET resistance. ..................... $\mathbf{~ D} 5$


## LOW FREQUENCY OSCILLATOR COIL

Two separate inductances, closely coupled, in aluminum can. Used in super-regenerative sets as interruption-trequency osci-
lator. Sec. Inductance. 6.25 mh . unes to $100 \mathrm{~K} . \mathrm{C}$. with . 000 A1476. NET

# NATIONAL COILS AND COIL FORMS 



## TRANSMITTINE

 INDUCTORSA new series of low-loss airspaced coils for use in exciters, buffers, and low power finals. Victron-insulated. All theire listed will and all have separate windings and all have separate windings or lit couph socket A1412 (not supplied.)

| End Link No. | Center Link No. | Type No. | Megacycles | $\begin{gathered} \text { NET } \\ \text { EACH } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| A1417 | A1416 | AR16-160 | 1.7-2.0 |  |
| A 1607 | A1611 | A R16-80 | 3.5-4 |  |
| A1608 | A1612 | A R16-40 | 7-7.3 | c |
| A 1609 | A1613 | AR16-20 | 14-14.4 |  |
| A1610 | A1614 | A R16-10 | 28-30 |  |
| A1419 | A1418 | AR16-5 | [56-60 |  |



## FIXED TUNED <br> EXCITER TANK

Ideal for use in multi-band exciters using bandswitching. Aluminum case. $4 \times 238{ }^{2}$ " contains two 25 mmf .2000 Volt condensers and XR-2 coil form, $11 / 2$ long, 1 diam. Plug-in base fits tube sockdensers; tunes from top.
A 1512 . TYPE FXTB. 5 Prong.
A1513. TYPE FXTB. 6 Prong. S 2.94
NET EACH..................... 4. A 1511 . TYPE FXT. Without $\$ 2.70$
plug-in base. NET..................

## PLUG-IN COIL



## BASE AND SHIELD

New National combination o plug-in coil base and shield, especially suited for mounting condensers and coils when it is desirable to have them shielded. yet easily removable. Shield can neasures: $2^{\prime \prime} \times 23 / 8 \times 41 / 8$. Specia ow-loss base is available in 5 or (A1346-1347) or separately (A1348-1349).

| Catalog <br> No. | Type <br> No. | Prongs | NET <br> EACH |
| :---: | :---: | :---: | :---: |
| A1346 | PB-10 | 5 | $45 C$ |
| A1347 | PR-10 | 6 | $45 C$ |
| $A 1348$ | $P B-10 A$ | 5 | $24 C$ |
| $A 1349$ | $P B-10 A$ | 6 | $24 C$ |



## TUBE AND

 COIL SHIELDSHigh grade non-magnetic aluminum shields. Coil shield measures $3^{\prime \prime}$ dia. $x$ $33 / e^{*} \mathrm{~h} / \mathrm{gh}$ and is offered alone or with mounting
base. Tube shield includes cap and mounting base and is suitable for tubes such as $57,58, .77,78$, etc. A1597. B30. Coil Shield Only.
A1598. B30. Coil Shield with Base. 21 c 30.

A15T․ T58. Tube Shield. .................................. 4 c

## GRID AND PLATE CLIPS

Unique construction assures perfect continuous contact with grid or plate cap of tube. A 1547 . For Standard Glass Tubes. A1548. F
A1549. For Transmitting Tubes, such as 866, T20, 809, 0312 , etc.
NET EACH
6.


## receiver

## COIL FORMS

Low-loss R-39 forms which are extremely popular with Amateurs and Experimenters. Easy to work. Fingergrip rim. $11 / 2^{\prime \prime}$ dia.. $21 / 4^{\prime \prime}$ long. A1490. 4 Prong. ${ }^{4} 1491,{ }_{5}$ Prong. $\}$ ACH. 45 e $\left.\begin{array}{l}\text { A1491, 5 Prong. } \\ \text { A1492. } 6 \text { Prong. }\end{array}\right\}$ EACH.

## MIDGET FORMS

Small coil forms designed with excellent form factor contributing to high efficiency in H.F. circuits. O R-39 composition. colls are machingroove and drill them to suit individual needs. XR-1 and XR-2 forms measure: $1^{\prime \prime}$ dia. $\times 11 /{ }^{\prime \prime}$ long; wall prongs; others are plain. AET…............................. Without Prongs. 30.

## 21.

NET......................................

## A1567. XR-3. $9 / 16^{*}$ Dia. $\times 3 / 4^{*}$ long With-

 out Prongs. 18 。
## PLUG-IN COIL FORM AND SOCKETS

This completely new UR10A coil form and socket as10 A coil consists of the XRmeters and Isolantite Plugin Base and Socket. Five prong base easily attached
 to coil form by means of two screws. Base may also be used separately for air-wound coils. Socket and five mounting jacks complete with special attachments for mounting on TMA condensers if desired. A1503. TYPE UR-10A. Coil
A1505. ITYPE PB-15. Plug-in
A1506. TYPE XB-15. Socket

## TRANSMITTER FORMS

Grooved and drilled ceramic forms for winding low-loss transmitter coils. Wil make your home made colls look professiona. R10A orm measures: is $5^{\prime \prime}$ diameter. Both forms will fit the PB-15 plug and XB-15 socket above. A (Ind A $1494 . \times R-10$ A. 20 or 40 meter bands. NET.................................. Ait997. XR. A4A. 80 meter band. $\mathbf{2 . 1 0}$

## BUFFER COIL FORM AND SOCKET

A new Isolantite, lowloss coil form assembly, $13 / 4$ " $\times 31 / 2$ long. Plug with five prongs is easily attached to coil form by
equipped with five rugged side-wiping con tacts. Plug and socket are made of R39 lowloss insulation.

| No. | Type | Description | NET |
| :---: | :---: | :---: | :---: |
| 1498 | UR-13 | Complete Assembly | \$1.50 |
| 1499 | XR-13 | Coil Form only |  |
| A1500 | PB-5 | Coil Plug only |  |
| A1501 | XB-5 | Coil Socket only | 45 |

## COIL FORMS

Unglazed Isolantite forms for winding your own coils. Drilled for leads. Socket type XB-16 also fits all
AR-16 coils. Plug. socket. AR-16 coils. Plug. socket,
and coil form are available and coilform are available
separately or as complete assembly as listed.
assembly aslisted. Dospe Type Description EACH
No. EA

| A1411 | PB16 |  |
| :--- | :--- | :--- | :--- |
| A14 |  |  |
| A12 | XB16 | Plug.... |
| Socket... |  |  |


| Aitin |  |  |
| :--- | :--- | :--- | :--- |
| A14 13 | $\times 816$ | Socket.......... |
| A14 14 | UR16 | Coil Form |

 A 1500 PB-5 Con Plug only A $1501|\mathrm{XB}-5|$ Coil Socket only...| $\quad: 45$


#### Abstract

NATIONAL SOCKETS UNIVERSAL MOUNTING TYPE Thilu Unusually adaptable socket. May be mounted in several ways by means of stand-off insulator and metal fange supplied. Has rull pin-wiping cermials which cause shorts | No. | Prongs | No. | Prongs |
| :---: | :---: | :---: | :---: |
| A1515 | 4 | A1518 | 7 M |
| A1516 | 5 | A1519 | $75$ |

List Each, ${ }^{40 c}$ 24.


## LOW-LOSS TYPE

Isolantite sockets for use in H.F. receivers and in low power stages of x -mitters. 6 prong socket for National Coils is square; others are as
illustrated.

 No.
1583
1584
1585

Pron
7 M
7 S
80

## TRANSMITTING

## TYPE SOCKETS

A fifty watt socket with glazed ceramic insulation, side-wipe contacts, and bayonet-lock terminals. XM50. NET.
$\$ 1.05$
A1587. XM10. A socket similar in construction to the XM50 above, but designed for cubes using the type UX base. ..................................... Se A 1589 XC-50. All-Steatite. 50 watt socket; provides salety from arc-ovely ConList. $\$ 3.50$.
${ }^{5} 2.10$


ACORN TUBE SOCKETS
At591. For use
with Triodes. securely mounted on Isolantite contact clips ET EACH. A1592. For Pentodes. Has aluminum base with all contacts by-passed to $\$ 1.20$
ground. NET....................

## POWER PENTODE SOCKETS

An efficient large wafer-type Isolantite socket tubes. Has three point mounting and sideAiping contacts.
\$2.16
A 1595 . As above, but less
$\$ 1.80$

## CATHODE-RAY OSCILLOSCOPE

## TYPE CRM

Graphically shows Xrmitter operating conditions through easily read patterns. Requires: 1-913 6XS rectifier. Focus. Brilliancy, Sweep Amplitude controls on front panel. Built-in power circuit; provision for external sweep Size. For 110 V. $50-60$ cycles. Shps. A10317. Less tubes. NET... \$1 1. 10 A10318: R.C.A. Tube Kit.......... $\$ 4.71$

## 4-IN-1 CRYSTAL HOLDER

 New pressure type holder accommodates 4 crystals and has builtin low-capacity switch for selecting frequencies. Holds crystals up to 1 square; especially suitable for que where immediate choice of irequencies is desirable. Has promgs

NATIONAL DIALS

dial, with bracket. NET...

## TYPE "BM" 3"

Smaller than the "B" dial; similar in appearance, but with fixed ratio vernier A1528. Scale $0-100-0,180^{\circ}$. universal A1529. Scale 200-0, 360
clockwise. EACH
${ }^{\text {s }} 1.50$

## TYPE "N"

Precision dials, with machine
divided scales and verniers of solid German Silver. Dial is $4^{\prime \prime}$ tary mechanism; 5 to 1 piane
A 1530 . Scale $0-100,180^{\circ}$.


A1531. Scale $100-0,180^{\circ}$, clockwise A1533, Scale 200-0.360, clock- $\$ 4.05$

TYPE HRO $15 / \mathbf{g}^{\prime \prime}$ DIAL Al534. Neat etched silver dial as used on the HRO receivers. Marked 0-10 over $180^{\circ}$ Shaft
NET

45


TYPE "A" 4" DIAL Smooth "Velvet Vernier" dial, entirely free from backlash. Self-contained mechanism. Ratio 5:1. Black bakelite. A1536, Scale 0-100, $180^{\circ}$ A1537 Scale
A1537. Scale $150-0,270^{\circ}$
Clockwise. $\$ 1.80$


TYPE "O' 31/2" DIAL A1543. Attractive circulargrained German Silver dial. $112^{\prime \prime}$ diam. Reads $0-100$ over $180^{\circ}$ C.C. Large fluted fingergrip knob for easy tuming. Fits all $1 / /^{\prime \prime}$ shafts. 90.

## 'HRK' KNOB

Large, full-grip tuning knob for use with receivers, transmitters etc. $23 / 8^{8}$ in diameter with fluted edge. Easy to nse; non-tizing Fits all $1 / 4^{*}$ shafts.
AI545. NET.
51.


Sturdily constructed, rugged ateel cabinets for housing home-built receivers, special experimental or laboratory equipment, etc. Used PSK. HRO, and NC100 Panelg and sub SRR, are undrilled so that you can punch sub-bases your individual requirements. Bunch holes to four individual requirements. Black crinkle
$\qquad$


## NATIONAL INSULATORS



A1570. TYPE AA-3. Steatite feeder spreaders. $61 / 0^{* \prime}$ long: $3 /{ }^{*}$ dia. diaft compression type strain insulator. 18.

A1572. TYPE AA-6. Steatite. 21.
 extreme efficiency. Make ideal forms for H.F. and U.H.F. chokes Metal mounting feet. Type GS1. .... Se A1574. Flg. A. GS2. $27 / \mathrm{m}^{*}$ high. A1568. FIg. A. GS3. $27 / 8^{\circ}$ high, A1569. FIg. A. GS4. $47 / \mathrm{m}^{*}$ high. 54. 66c 41575 . Fig. B. A Steatite insulator for mounting parts on metal chassis bases. GS5 $10-24$ each end. GS5. $11 / 4^{\prime \prime}$ high. 15 e
A1576. Flg. B. GS6. 2P high. NET. 27 C A 1578 . Fig. C. GS8. A small Steatite insulator for use in Low Loss H.F. circuits for


## H. F. BUSHINGS

Efficient, low-loss Steatite bushings for bring ing H.F. leads through partitions or window-
 A15070: XS2. $11 / 2^{\prime \prime} \times 1 \mathrm{~K}_{1}$. Per Per Pair. . 54 c XS6 H. F. BUSHING
Small Steatite shoulder-type flat bushing. 5/8" diam. $150{ }^{3 / 2}$ thick with $1 /{ }^{*}$. hole.
9.

## NEW SMALL PARTS



A1450. Fig. A. Through Point Bushing. Of molded Victron with threaded shank and .093* conductor in center.
NET, BoX OF 12
45.

A 145 l , Fig. B. FWC Insulators. Molded posts. Fitchassisor panel up to $1 / 4 . .21 \mathrm{C}$ A1452. Fig. C. FWA Binding Post. Jack top for banana plugs; hole for positive clamping Of wire leads ${ }^{\text {N }}$
15.


A1453. Fig. A. FWE Jack. Banana plug type especially suited for use with the FWC insulators listed above. Fit any panel or insulNET EACH ${ }^{\text {ato }} 1 / 2^{*}$
9.

A1454. Flg. B. FWF Plug, Molded R-39 with banana plugs spaced $3 / 4^{\prime \prime}$. Takes leads through top or sides; set screws hold leads Girmly. Use FWE jacks or FWA posts. $\mathbf{N O}_{\mathbf{c}}$
A 1455 . Fig. C. FWD Assembly Consists of FWF plug. two FWE jacks, and two FWC metal parts are insulated for safety.

## AUDIO COUPLER

For coupling output of screen grid detector to grid of audio plate coupling choke, 01 henry ling condenser and . 25 megohm resistor in metal case. A1485. $\mathrm{N} 101 . \$ 3.50$

## The latotion ROTARY BEAM ANIENNAS

## PREMAX BEAM KITS

Rapidly becoming a universal favorite with Amateurs, the Premax Antenna Kit offers unimited possibilities for experimental work with rotary beam antennas. All antenna clements are coated with cadmium plate, and by reason of telescopic construction may be varied from six feet to maximum required length. All rods taper from $1^{\prime \prime}$ to $3 / 4^{\prime \prime}$; cadmium-plated

2 ELEMENT KITS
A1 2490 . 10 METERS. Two double-end $17 / 2$ tit iods. mounting danps, and $\mathbf{7}$ Cions. Shpg. wt. 6 lbs.
s. 7.06

A1 2492. 20 METERS. Four $171 / 2 \mathrm{ft}$. rods, mount
s 14.70

## 3 ELEMENT KITS

A 12491. 10 METERS. Three double-end
 NET........................... 20 METERS. A12489.i. 20 (t intructions. Shpg. wt., 22 lbs. \$22.05

## FRAMEWORK KITS

A 12495 . Complete Rotary Beam Frame Kit. For 2 , element 10 or 20 meter beam, or 10 meter 3 element beam. All wood parts cut and drilled to fit; with all bolts and hard ware and Instructions. Painted
WET 45 lbs. A 12496. Auxiliary Frame Kit. Used with A12495 frame kit above to extend rame for
use with 3 element 20 neter beam. $\$ 2.35$ Shpg. wt., $71 / 2 \mathrm{lbs}$. NET.

## PREMAX ROTOMOUNT


sturdy. wellmade turntable unit for manual
rotation of beam antennas. Heavy gaugesteel
throughout with the rotating platformedges
flanked for strength, and reinforced with channel iron. Revolving platforin is mounted on one-piece shafe turning in double-cone tapered Timken bearings. Has Zerk fating for pubricating bearings. Housing wheel with two small idler pulleys. Repulley wheel with two small idler pulleys. With
volves $13 / 4$ turns in either direction. With stranded copper leads from main pulley; no rope supplied. Platform, $9^{4} \times 12$ A12494

## NET

$\$ 13.23$

## PREMAX VERTICAL TYPE ANTENNAS

Vertical radiators made of heavy steel tubing, heavily cadmium-plated to resist weathering. Telescope to permit accurate
adjustment to transmitting frequency. adjustment to transmitting frequency,
Ouick, positive action clamp holds secQuick, positive action clamp holds sec-
tions rigidly zoget her. Hi-Q type mounts without insulators to chimney or roof parapet. Chimney clamp makes instaluaporting on speclal design base insulators. A12498. Hi-Q Vertical Antenna for 10 meters.
$\$ 10.29$
A1 2499 Chimney Bracket for Hi Q
antenna. $\mathrm{NET} . . . . . . . . . . . . . \$ 3.82$ A 10059 . VR-318. 10 Meter self-supporting vertical. 18 ft., 3 section, with Shpg. we., 12 ibs. NET.
$\$ 7.35$
A. A10058. VR-136. 20 meter self-supN insulator. 29 lbs.
$\$ 16.61$
NOTE: We can supply all Premax products.

## FAMOUS MIMS "SIGNAL-SQUIRTER" ANTENNAS

Throughout the entire world. "Signal-Squirters" are the choice of discriminating Amateurs. Famous for performance and for the ability to "Put your Famous, too, for Mims research and engineering which pioncered the rotary beam antenna and then improved an accepted product to bring it world wide acrlaim as "The Master" of all rotary beams. Mechanically desigiued to stand far more punish ment than will ever be met in actual service. Electrically designed to provide highest possible gain with maximum power transfer efficlency. When you buy a "Signal-Squirter," you get more than just a kit. You'll have one of the finest antennas ever developed, with elements that have been time- and field-tested to stand up even through winds of hurricane velocity. The Defuxe Rotator is the smooth est operating and huskiest piece of mechanicaly perfect equipment you ve ever seen. Even the center section is a masterpiece or wossemble, erect, and a lifetime of service. You can assemble, erect, and structions supplied. All "Signal Squirter" products are shipped FOB factory at Texarkana, Ark.

## COMBINATION 10 AND 20 METER

 3 ELEMENT ANTENNAThe boys who know their "rotaries" say this one is "hot stuff." A dual-band 3 element array using a single feed-line and ind ucto-stub. Actually two antemnas on one center sertion as illustrated at upper right. Consists of all elements, deluxe Rotator. Inducto-stub, centersion indicator and motor control cable.

## A12447.

NET CASH
$\$ 159.00$
$\$ 15.90$ down, $\$ 12.64$ mo. for 12 months.

## STANDARD 10 METER "SIGNAL-SQUIRTER" <br> S11.00 down, 58.75 mo'

For "Signal-Squirter" performance on "Ten" with utmost economy. Similar to Deluxe antenna in Squirters, Less direction indicator. Shipped FOB Terarkana, Ark. A12429. Standarms: $\$ 5.75$ down, $\$ 6.86$ monthly for 8 monetis.

"SIGNAL-SQUIRTER"

## DIRECTION INDICATOR

New. improved model in attractive deak-type metal case. Provides a convenient and practichackians of visualy the "Signal-Squirter" at all times. Dial Compass rose or Azimuthal map. Operates direct relation to rotation of beam. indicating in steps of six degrees. Equipped with ruotor control switch and zero reset for aligning indicator hand with beam. Timer device is built into Rotator unit. Indi-
cator operates from 110 volt $50-60 \mathrm{cycle}$ line. cator operates from
Specify dial desired.
Specify dial desired.
$\mathbf{A} 12432$. For Deluxe Rotator.
A12433 FOr Standard $\$ 24.50$
When purchasing Direction Indicator with
omplete
Deluxe
Signal-Squirter complete Deluxe $\$ 2.45$ to down payment and add $\$ 1.95$ to each monthly payment.

## "SIGNAL-SQUIRTER" ANTENNA ELEMENTS ONLY

The finest rotary bearn antenna elernents available. In use everywhere. Made of finely corrugated, copper-plated tensile steel, tele-scope-taperenel ends sealed. No sag. 20 meter thetic ename ionds sealed. Nom $11 / \mathrm{fl}^{7}$ to $3 / /^{*} 10$ meter rols $81 / 4$ ft. long zaper from $1^{\prime \prime}$ to $7 / 8^{\prime \prime}$. Securely crated, shipped FOB Texarkana. Ark. | A12434. 2-20 Meter Elements. NET. $\$ 6.50$ |
| :--- |
| A12435. $4-20$ Meter Elements. NET 11.50 |
| 17.00 | A12436. 6-20 Meter Elements. NET. A12437. 2-10 Meter Elements. NET. A12438. 4-10 Meter Elements. NET

## CENTER SECTIONS ONLY

Designed for use with "Signal-Squirter" antennas but also suitable for use in construction of any type rotary beam. Tapered ladder-type center box structure for shielding rotator from weather. and adequate bracing against stress or weather. Made of selected wood; finished with three coats best enamel. FOB Texarkana. 0 A12440. 20 Meter 3 Element. NET. $\$ 15.00$
A12441. 20 Meter 2 Element. . NET. 11.50 A12442. 10 Meter 3 Elcment. . NET: $11: 50$
A12443. 10 Meter 2 Element. . NET. $\mathbf{7 . 5 0}$
557.50

"Signal Squirter" Kits contain Rotator. Induc-to-stuents, insulators, and hardware.
A 12425.3 Elernent 20 . $\$ 124.50$
for 12 mos
 A12427. 3 E Element 10 . $\$ 116.50$ $\$ 11.65$ down, $\$ 9.26 \mathrm{mo}$. for 12 mos . A12428. 2 Element 10 \$1 10.00 $5 \pm 1.00$ down, $\$ 8.75 \mathrm{mo}$. f or 12 mos .

## 'SIGNAL-SQUIRTER" DELUXE ROTATOR

Designed for years of service in any rotary
beam installation, the bearm installation, the
Deluxe Rotator is a triurnph of mechanical en-
gineering. Massive construction together with the finest of precisioncut gears and oversize roller bearings assure
absolute trouble-free operation. Inductiontype 110 volt 5060 cy -
 cle motor with high starting and running torque gives positive control of beam even in high winds. Electrically operated brake locks beam rigidly in any positround 21 " hardened steel shaft supported in ground 2/iler bearing with heavy thrust bearings io roller bearings with heavy thrust bearings to
carry load. Base, housing, and top castings of carry oad. Base, housing, and top castings o Illustrated with Inducto-stub assembly which is supplied separately. Shpg. wt., 73 lbs. A 12430 . Deluxe Rotator $\$ 69.50$
only. NET FOB FACTORY... $\$ 6.95$ down, $\$ 8.29 \mathrm{mo}$, for 8 mos. A 12431 Standard Rotator. Husky lightComplete descriptive literature $\$ 35.00$
on request. NET.............

INDUCTO-STUB ASSEMBLY The most practical and efficient method of feeding a rotary beam ever develoned. Permits continuous rotation of beam in either direction, plus ability to feed beam with open wire 465 ohm line. Includes primary and secondary rings and stubs, insulators, adjuster straps, matching
unit, and instructions. Specify if for 10 or 20 unit, and instructions.
meters and if for 2 or 3 elements $\$ 17.50$
A $\mathbf{\$ 2 4 4 4}$. NET..........

## CLAMP-TYPE INSULATORS

Sturdy white glazed-porcelain insulators for mounting "Signal-Squirter" elements, or any rod type elements not exceeding $13 / 8$ diam. porting arm with two bolts. NET $\$ 3.00$ A12445. Per Set of 8. NET
4.50

WE CAN SUPPLY the answer to any question on Mims "Signal-Squirters," ture will be sent promptly on request.

# Yemmarlund precision PRODUCTS 

## HAMMARLUND TRANSMITTER FOUNDATION KITS

## NEW PA-500 AMPLIFIER KIT



signed RF ampli- fier kit of push-pul ty pe for such tubes HK-54, or others with up to 2000 volts on plates. Power output up to 500 watts depending on tubes used. Mounts directly on rack panel. Will opfrom 80 to 10 me ters with proper coils. Uses B-W Standard, Fnd Link, or Variable Link all braclet plate hardwaye. PA-500 Foundation \$255 Rit oaly. NET.

${ }^{5} 2^{55}$
A10672. Complete Kit of Hammarlund S. 4 sockets, $2-\mathrm{N}-10$ condensers. $1-\mathrm{CH}-500$ S. 4 sockets, $2-\mathrm{N}-10$ condensers. $1-\mathrm{CH}-500$
Choke, -T - $55-\mathrm{F}$ and $1-\mathrm{TCD}-165-\mathrm{K}$ tank condensers. Less tubes and coils. $\$ 22$. $\mathbf{N E T}_{2}$

## NEW EU-4 EXCITER UNIT



An easily assembled exciter unit of modern design for those who desire maximum flexibility of operation. Uses 4-6L6's, one as crystal oscillator and three frequency multiplier stages. Operates on $80,40,20$, and 10 meters from 80
meter crystals. Single control bandswitching meter crystals. Single control bandswitching by special rotary switch. Rotary panel switche
also permits complete metering with only one meter. Link output from separate stages for driving medium or high power buffer or ampliher stage. Foundation kit contains all hard-
ware, brackets, chassis, and two special rotary switches. 3 . EU-4 Foundation A10673. NEU A 10674 . Complete Kit of Hammarlund $80,40,20$ and 10 meter fixed tuned coil units 1- $\mathrm{X} \mathrm{S}^{2}-2$ and 10 meter fixed tuned coil units, LET Lubes and crystal. .......................24.00

ED-4 EXCITER-AMPLIFIER UNIT


A compactly designed combination four-band exciter and amplifier unit with power output of up to 100 watts. Basic design is that of the EU-4 Exciter unit above, incorporating
6 L 6 tubes for operation on $80,40,20$, and 10 meters, but with the addition of an RF amplifier stage using either an RK-47 or 814 beam fink colls. An ideal unit for driving a high power RF amplifier such as the PA-500 described above, or for use alone as a compact. high efficition Kit contains punched and drilled aluminum chassis, all brackets, hardware, and instructions. Write for descriptive literature containing complete information,
Al 10675 ED
Kit only. NET. A 10676 . Complete Kit of Hammarlund Parts. Contains: ED-4 Foundation Kit, 1 each coil units, 1 and 10 meter fixed tuned exciter sockets, 6 CHX RF chokes, 1 - S - 5 socket, 1 -MC-100-S and $1-\mathrm{MTC}-100$ B variable condenser, 1 -S-4 socket, 3 SOS 100 standoff insulators, 2 -SOSP insulator hardware kits, 1 -
and crystal.
s31.23

## OD-10 OSCILLATOR-DOUBLER



\section*{| No. | Type | Band | EACH |
| :---: | :---: | :---: | :---: |
|  | A5106 | ETU-10 | 10 Meters |
| A5 107 | ETU-20 | 20 Meters | $\$ 3.30$ |
| A5108 | ETU-40 | 40 Metters |  |
| A5109 | ETU-80 | 80 Meters |  |}

## 'ETU" UNWOUND UNITS

As above, but supplied with unwound internal coil form. Ideal for use in construction of special type exciter units which require "cusquency multiplier stages. Each unitor or frecoil form $2^{\circ}$ long and $7 / 3^{\prime \prime}$ diameter with bank mmf. double-spaced variable condensers, Units tune from top. Fully enclosed in aluminum shield can. Size, $2^{4} \times 4^{n} \times 17 / 10^{\prime \prime} . . . . \$^{2} 40$

NEUTRALIZING

## CONDENSERS

New rounded edge, thick aluminum plate type. Oversized fine thread tuning. Loock nut is provided for permanent set454
 A5426. Type $\mathrm{N}-10,2,1$ NET Size, $25 / 16^{\circ} \times 113 / 16 \times 3^{\circ}$ \$1.80 A5428. Type N-15. Same as above, but
Cap. is 3.2 to 14 mmf .
NET. A5427. Type $\mathrm{N}-20.3 .8$ to $14 \mathrm{mmf}, 1 / \mathrm{m}^{\circ}$ to $2^{\prime \prime}$


### 3.90

## 'HF' MICRO CONDENSERS

A new series of ultrahigh frequency varia-
bles. Very efficient in bles. Very efficient in
tuning or trimming crittuning or trimming crit
ical high frequency cir cuits. Cadmium plated plates. Isolantite insulation. Equipped with ing. *Indicates dualing. *indica

| No. | Type | Plates | Max. Mmf. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A5585 <br> A5586 <br> A5587 <br> A5588 <br> A5589 <br> A5590 A5 591 | HF-15 | 5 | 17.5 | \$0.75 |
|  | HF-35 | 10 | 35 | .90 |
|  | HF-50 | 14 | 50 | 96 |
|  | HF-100 | 27 | 100 | 1.14 |
|  | HF-140 | 37 | 140 | 1.35 |
|  | *HF-15-X | 10 | 15 |  |
|  | *HF-30-X | 20 | 30 | 1.11 |
|  | " HFD " | AL | CROS |  |


| No. | Type | p. per Se | NE |
| :---: | :---: | :---: | :---: |
| A5437 | HFD-50 | 50 | \$ 1 |
| A5438 | HFD-100 | 100 |  |
| 5439 | HFD-140 | 140 |  |
| A5436 | *HFD-15-X | 16 |  |
| A5440 | *HFD-30-X | 28.5 |  |

## I. F. TRANSFORMERS <br> TYPE "T

Specially designed for experimental and replacement purposes. Double-tuned, with mica compression type condensers on Isolantite base. Adjustable from top of can. Coils are litz-wound and wax-im$21 / 8$ dia. $31 \%$ high. Base mounting $21 / 8^{*}$ dia. $31 /{ }^{\circ}$ high. Base mounting
by threaded lugs on $2^{*}$ centers. $\begin{array}{lccc} & & \\ \text { Untapped } & \text { Frequency Center } & \text { Tapped } & \\ \text { A5350 } & 175 & \text { A5 } 52 & \text { EACH } \\ \text { A5351 } & 465 & \text { A5353 } & \text { Oscillator. } \\ \text { A5355 } & 465 & \text { Beat Os }\end{array}$
TYPE "ST" MIDGETS
As above but in compact can, $17 / 16^{\prime \prime}$ square, by Untapped Freq.
A5356
$\begin{array}{llll}\text { A5356 } & 175 & \text { A5358 } & \text { List, } \$ 1.65 .\end{array}$ $\begin{array}{lll}\text { A5357 } & 465 \text { A5359 NET, } \\ \text { A5354 } & 262 \text { (For autosets.) EACH, }\end{array}$

## 'AIR-TUNED' TYPE

For use where absolute stability is necessary. Airtuned. with Litz
coils. Top and bottom trimmer condensers mounted on Isolantite. Provide gain in excess of 200 per stage with unequalled selectiv ity. Designed particularly for Screen Grid type tubes. Beat Oscilnote. All leads RMA color-coded note. All leads RMA color-coded. Untapped Freq. C.T. $\begin{array}{ll}\text { A5361 } & 465 \\ \text { A5 A5364 } \\ \text { A3 } & 465 \text { Beat Oscillator. }\end{array}$
 NET EACH

## "ICT" IRON-CORE I.F. TRANSFORMERS

 A new iron-core I.F. transformer which provides maximum gain per stage, and with extremely sharp selectivity. Core is of high permeability magnesium alloy; rustproof and non-corrosive. Isolantitemounted trimmers. Size, $13 /$. mounted trimmers. Size, $13 / 4$
square. $41 / 6$ high. Mounting censquare, $41 / 0$ high. Mounting cen-
ters $15 / 8^{\prime \prime}$. I. F. frequency $465 \mathrm{~K} . \mathrm{C}$. A5444. Single stage input. A5445. Single stage output. A5446. Two stage input.

# Kammarlund precision PRODUCTS 

HAMMARLUND TRIMMING AND PADDING CONDENSERS


## "EC" EQUALIZERS

 For balancing, neutralizing and trimming purposes. Mica dielectric; bakelite base.$11 / 4^{*} \mathrm{x}^{11} / \mathrm{i}^{7}$. Adjusting screw in center.
 Min. 18 A5375. 25-80 MMF. $24 c$

|  | "MEX' EQUALIZE |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Extremely smal! low-loss |  |  |  |
|  | denser. Screw adjustment. $180-$lantite base, with mica dielectricand phosphor-bronze plates. 3 to |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| TYPE "CTS" <br> Small round type ceramic padding condenser. Finest imported mica insulation; phosphorbronze spring plates. $113 / 16^{4}$ diam. |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| No. | Type | Mmf. | List | NE |
| A5065A5066A5067A5068A5069 |  | 25-100 | 50 c |  |
|  | 160 | 45-260 | 60c |  |
|  | CTS-230 | 65-350 | 60 c | 36 c |
|  | CTS-380 | 175-550 |  |  |
|  | CTS-525 | 230-800 | 80 |  |

(2)

## TYPE "DTS"

Compact, oblong type trimmers with Isolantite base; best implates. For all padder needs.

No. Type Mmf. List NET | A5070 | DTS-50 | $8-90$ | 30 c | 18 c |
| :--- | :--- | ---: | ---: | ---: |
| A5071 | DTS-115 | $30-175$ | 40 c | 24 c |

DUAL TRIMMERS


## TYPE 'MICS'

For I.F tuning, R.F trimming, and for padding or trimening of oscillator and other circuits. $11 / 4^{*}$ mtg. centers.


## VARIABLE COUPLING IF's

Type VT. Permits continuously
variable selectivity from sharp peak to high fidelity; air-trimmed. IF
frequency 465 KC . Size, $2^{*} \times 2^{*} \times 5^{\circ}$ A5 378.
$\$ 3.30$ A5385. Type vTc. Variable Coupl transformers. $\$ 1.50$ A5383. Type VTF. Similar to VT, but with
fixed coupling. For 1 output stage.
A5384, Type VTF-CT. Center-tapped out-
put IF transformer; to diode detector. put IF transformer; to diode detector
A5387. Type VTo. 465 KC . beat oscillator.
For electron-coupled os
\$2.70

FAMOUS HAMMARLUND CONDENSERS MIDGET TYPE


High quality midget
condensers. Insulatcondensers. Insulated with Isolantite,
Brass plates .0225 ; Brass plates $.0225^{\prime \prime}$
thick with an $.0245^{\prime \prime}$ thick with an .0245 lastened wo the $1 / 4$ shaft. Wide bearings vide extra rood convide extra good con-
tion. Shaft extends beyond rear.

| No. | Type | Plates | $\begin{aligned} & \text { Max } \\ & \text { Mmi. } \end{aligned}$ | NET |
| :---: | :---: | :---: | :---: | :---: |
| A5 300* | MC-20-S | 3 | 20 | \$0.84 |
|  | MC-35-S | 5 | 35 | 90 |
| A5302* | MC-50-S | 7 | 50 | 6 |
| A 5298 | MC-50-M | 7 | 50 | . 96 |
| A5303* | MC-75-S | 11 | 80 | 1.20 |
|  | MC-75-M | 11 | 80 | 1.20 |
| $5305 *$ | MC-100-S | 14 | 100 100 | .35 |
| 307 | MC-140-M | 19 | 140 |  |
| $529{ }^{*}$ | MC-140-S | 19 | 140 | 0 |
| 5308 | M C-200-M | 27 | 200 | 5 |
| A5309 | MC-250-M | 34 |  |  |
| A5310 | MC-325-M | 43 | 320 | 2.10 |

DOUBLE-SPACED MIDGETS
Have special bearings and Isolantite insulation. Exceptionally efficient. Air-gap .0715*.


DUAL MIDGET CONDENSERS
Rigid, hish quality twogany midget condensers, designed especially to provide added efficiency at
ultra-high frequencies. ultra-high frequencies.
Plates are $.0225^{\circ}$ brass: Plates are . $0225^{\circ}$ brass:
$.0245^{*}$ air-gap. Overal length behind panel, $31 / 4^{*}$. A5434. MCD-50-5. 50 MMF Mersection. cular Plates. Min. cap. 5.5 mmf .
A5435, MCD-50-M. 50 MMF. Per section. Midline Plates. Min. cap. $\$ 1.80$
5 mmf . NETEACH............ A5311. MC D-100-M. 100 MMF. Per sectlon. Midline Plates. Min. cap. 6 mm .
A5346. MCD-100-S. 100 MMF . Per soctlon. Semi-circular Plates. Min. \$2. 10
cap. 6.5 mmf . NET EACH....... A53 12. MCD-140-M. 140 MMF. Per sec Alon. Midline Plates. Min. cap. 7 mmf .
A5347. MCD-140-S. 140 MMF . Per sectlon. Semi-circular Plate
cad. 8 mmf . NET EACH
. $\$ 2.40$
DOUBLE-SPACED DUAL MIDGETS Similar to above, but have air-gap of .0715 be-
tween rotor and stator plates. Ideal for U.H.F. tween rotor and stator plates. $\mid$ Max. $\mid$ Min. $\mid$ NET



BANDSPREAD MIDGETS
For use as bandspread tuning condensersin short wave receivers and for amateur frequency meters. "Tank" section may
be locked for tuning with be locker for tection.

| $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | Type | $\begin{array}{c}\text { Tank } \\ \text { Cap. }\end{array}$ | $\begin{array}{c}\text { Tuning } \\ \text { Cap. }\end{array}$ | $\begin{array}{c}\text { NET } \\ \text { A5 R1CE }\end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{M C - 1 2 0 - B}$ | $\frac{100}{18}$ | M <br> 1.80 |  |  | | A5313 | MC C-120-B | 100 | 18 | $\$ 1.80$ |
| :--- | :--- | :--- | :--- | :--- |
| A 5314 | $\mathrm{MC}-150-\mathrm{B}$ | 100 | 50 | 1.95 |

## CONDENSER COUPLING

Bakelized canvas insulation; brass bushings. Flexible; for ganging conact shaft alignment. For $1 / /^{\prime \prime}$ shafts. $11 / 2^{n}$ diameter. 36

## TRANSMITTING TYPES


netic rotor shaft; hand-fitted full-floating bearplated; Isolantite insulation.
 polished round edge plates, $.040^{\circ}$ thick
"TCD" DUAL CONDENSERS
Split stator types having all the features of the drilled and tapped for mounting tank coil or neutralizing condensers.


## TYPE "MTC" CONDENSERS

SINGLES
A popular series of ruggedly built condensers for use in low or
moderate power transmitters for tra-high frequen-tra-high frequen Isolantite insula-
plated Beryllium

rotor contact wiper; floating bearings for consistently smooth operation.


> A5640 $5 \mathrm{MTC-350-C} 365$ +Polished round edged plates, $.040^{\circ}$ thick. +Polished round edged plates. $.025^{\circ}$ thick. *Standard type plates, . $025^{\circ}$ thick.
"MTC-D" DUAL CONDENSERS
Split stator condensers with all features of MTC singles above. Connect stators in series for half the capacity at twice the breakdown No. $\qquad$ Type $-\begin{array}{r}\text { Cap } \\ \text { Per } \\ \text { Sec } \\ 20\end{array}$ Cap.
Per.
20
en ap N A564 A564
A564 A5644
A564
A564
*Plain edge plates. Others are rounded edge

## Kammarlund precision PRODUCTS

## FAMOUS "STAR" MIDGET CONDENSERS

Popular low-priced midgets for set builders and experimenters. Sizes for short wave niers, etc. Single hole mount $1 / 4^{* s}$ shaft. Single hole mount, high, and up to $11 /{ }^{\prime \prime}$ deep behind panel, depending on capacity.

| No. | Type | Mmi. | List | NET |
| :---: | :---: | :---: | :---: | :---: |
| A5328 | SM- 15 | 15 | \$0.85 |  |
| A5329 | SM- 25 | 25 | . 85 |  |
| A5330 | SM- 50 | 50 | . 90 | 54 c |
| A5332 | SM-100 | 100 140 | 1.00 1.25 | 60 c |

## DOUBLE-SPACED "STARS"

Similar to standard "STAR" condensers listed above, but with greater air-gap between ad-low-power transmitter circuits. A5333. Max capacity 35 mmf . A5335. Max capacity 50 mmf .


"SWK" S.W. PLUG-IN COILS
Efficient. well-designed S. W. coils. Wound on ow-loss XP-53 forms. High frequency coil secondares have heavy silver-plated wire. Others have heavy enamel
140 mimf. Condense
4 Prong Colls: 17-270 Meters, Kit of 4
two-winding coils.
6 Prong Colls: 17-270 Meters. Kit of 4
A5 368 . List, $\$ 3.75$. NET...... $\$ 2.25$
INDIVIDUAL "SWK" COILS
4 prong coils have two windings; 6 prong have three windings. For 140 mmf . condenser.


| 4Prons | 6 Prong |
| :---: | :---: |
|  | ${ }^{\text {A }}{ }_{\text {A } 53392}$ |
| 60. | 75 c |
| ${ }^{\text {A }}{ }^{53399}{ }^{\text {a }}$ | ${ }_{\text {A }}{ }^{5} 3939$ |
| 45. | 60. |
| ${ }^{\text {A }} 8.56$ | ${ }^{\text {A } 5370}$ |

NEW "SWF" LOW-LOSS COIL FORMS
Rugsed low-loss forms; of XP-53. Ribbed for air-spacing, with flange grips. Have shelf inside for mounting padding condenser. $11 / /^{*}$ dia. $x$

'TCF' X-MITTING COIL FORMS Of low-loss XP-53 dielectric. Ribbed for airspacing; with fange grips. May be base-mountdia. $\times 3 / 6^{\circ}$ lons
${ }^{\mathrm{A} 5379 \text {. } \mathrm{TCF}^{-4} 4 \text { Prong. }}$
EACH.
42.


## CF-M COIL FORM

Isolantite coil forms designed for maximum efficiency at ultra-high irequencies. Forms are ${ }^{1} 1 /{ }^{\prime \prime}$ in di-
anueter, $2^{*}$ Iong exclusive of prongs. ameter.
and have holes drilled to permit al most any type of experimental winding. Made in 5-prons type only. Tof bands.

A OURZPRICE. $\$ 1.00$.
60.

HAMMARLUND CHOKES


For receivers and transmitters. Adaptable to many uses in even the smallest space. Univer-sal-winding. Entirely Impregnated. Center core is of Isolantite. May be mounted by its ohms. 2.1 MH at 125 MA . $11 / 2^{\text {¹ }} \mathrm{x}^{1 / 2^{\prime \prime}}$. A 5344 . List, 60 c . NET............ 36 c

## TYPE CH-8

A low-loss 8 MH R. F. choke ideal for short-wave re-
ceivers and transmitters. Sectionwound on compact


Isolantite spool. $\quad-\quad$ Moisture-proof windings are protected by lacquer and cellophane. Equipped with flexible leads and reversible end brackets for universal mounting. D.C. resistance, 70 ohms. Current


## X-MITTING CHOKE——CH-500

A heavy-duty choke for parallel feed in highpowered transmitters in 20-40-80 and $160-\mathrm{me}$ ter bands. Has universal-wound pies on Isolan8 ohms. 500 M.A. continuous rating. Size $13 / 5^{\circ}$ dia. $\times 21 / 2{ }^{\prime \prime}$ long. NET...... $\$ 1.05$

## SHIELDED <br> CH-10-S

Completely shielded in aluminum shell; especially suited for use in high-gain circuits.
Eliminates circuit inElamility since there is no stray coupling. Has
 three impregnated uni-
versal-wound pies. Di-

$$
\frac{\operatorname{ni} i-}{\mathrm{Di}^{-}}
$$ versal-wound pies. Di- 13 . imductance, 10 mh .; D.C. resistance, 65 ohris. $100 \mathrm{M} . \mathrm{A}$ capacity.

A5 381 . List. $\$ 1.00$ NET........ 60 c

## RFC-85 CHOKE

High inductance choke for use in plate circuits of all B.C. and S.W. receivers. Specially wound and impregnated; extremely low distributed capacity for maximum efficien-
cy . Inductance, 85 mh ; D.C.
 cy. Inductance, 85 mh ; D.C.

resistance, 215 ohms. Max. current rating, $60 \mathrm{M} . \mathrm{A}$. Bakelite case is $113 / \mathrm{st}^{\circ}$ | high and $15 / 5$ " $^{" 1}$ in dia. |
| :--- |
| A5 |

$\$ 1.20$

## STANDARD <br> SOCKETS

Low-loss Isolantite sockets. Have long leakage
paths. With positive rust-
 proof side-gripping con tacts. With mounting pillars. Glazed top and A5339. 4 prong. A5339: 4 prong.
A5340. 5 prong.
A5342: 7 prong (Medium)
A5 5437 : 8 prong (Small).
EACH

## ACORN

## TUBE SOCKET

For RCA 955, 956, and 954
Acorn type tubes. Low-
bass. Gilver-plated bronze
base. silier-plated bronze
spring clips. $17 / \mathbf{s}^{\circ}$ dia. with

A5338. List, \$1.50. NET
90.

## NEW XS-2 <br> CRYSTAL SOCKET

Mounts inside the SWF coil forms at left. for Crystal Ostages of Tritet Oscillato lantite; two special rein-
orced contact clips. $13 / 8^{*}$ diam. Fits all pluscrystal holders with ${ }^{15 / 1 / 10^{\prime}}$ pin centers. $30_{\text {c }}$

ISOLANTITE INSULATORS
A new line of standoff type insulattors of typical Hammarlund quality Made of pure glazed Isolantite, these heavy-duty insulators will not chip or crack. Accurately cut threads prevent annoying thread strippins when end screws are tightened. All SOS types are $1 / 2^{*}$ diameter; all SOL types are $3 / /^{\prime \prime}$ diameter. Threaded top and bottom for machine screws Highest quality insulators.

| No. | Type | Length | NET |
| :---: | :---: | :---: | :---: |
| A5050 | SOS-75 | $3 / 4 *$ | 9 C |
| A5051 | SOS-100 |  | 12 c |
| A5053 | SOS-150 | 1 $\mathbf{2}_{1 / 2}{ }^{\prime \prime}$ | 15 c |
| A5054 | SOL-100 | $1^{1 / 2}$ | 18 c |
| A5055 | SOL-150 | $11 / 2^{\prime \prime}$ | 24 c |
| A 5056 | SOL-200 | $2^{\prime \prime}$ | 30 c |
| A 5057 | SOL-350 | $31 / 2^{\prime \prime}$ | 42 c |

## INSULATOR HARDWARE

For SOS and SOL insulators above. SOSP and SOLP are plain tip with cadmium-plated lug. screws, lock-washers, cork washer, and mountbut bave jack top L include all hardware

| No. | Type | NET |
| :---: | :---: | :---: |
| A5058 | SOSP for SOS uni |  |
| A5060 | SOLP for SOL units. | c |
| A5061 | SOSJ for SOS units. |  |

## 'CS-3" COIL SHIELD

Very effective as a general purpose shield. Made of heavy aluminum and slotted to afford easy handing. Comes in 2 pieces, top and bottom. Can be used for coils and condensers. etc. Diameter is 3 , A5425. NET
30.

## NEW PTS POWER TUBE SHIELDS

Designed to provide proper shielding for screen grid, pentode, and similar type transmitting fubed back from R circuit stability and reduces eed back from RF circuits. PTS is for 807 , RK814, etc.; $21 / 4^{\prime \prime}$ dia. $3^{\circ}$ high. PTSH is for RK-20 A5596. PTS Shleld NET
24.

A5597. PTSH Shleld. NET.........24c

## TS-50' ALUMINUM

 TUBE SHIELDComplete isolation is afforded by this 17 slicld for the new high-gain RF pening between tod neek completes shieldSpecial design affords maximum cooling, $45 / 8^{\prime \prime}$ high, $15 / 8^{\prime \prime}$ diameter With cooling. mounting centers,

## VARIABLE CRYSTAL FILTER

NEW TYPE XU-455 Identically the same as
the crystal filter unit used in the famous Hammarlund HQ-120X receiver. This unit enables the Amateur or Experimenter to add "full range selectiving this feature. Six selectivity positions: three for 'phone and three for CW

reception, controlled by
front panel switch. Equipped with high quality having 45 KKC IF by adjusting iF any receiver to crystal frequency. Completely enclosed. Panel control of selectivity and crystal phasing. Size, $21 / 3^{\prime \prime}$ wide, $3^{\prime \prime}$ deep, $5^{\prime \prime}$ high.
A5598. Complete with crys- $\$ 18.00$

## HAMMARLUND S.W. MANUAL

A 32 page book containing up-to-the-minute constructional data on Short- and Ultra ShortWave receivers. power supplies, transmittcrs. and Short-Wave Station niudes tuning hints and Short-Wave Station List. Profusely illusrnthusiost and beginer Amater. A5386.
NET
10

## Transmitting Equipment



## TYPE T21

A Beam-Power tetrode by Taylor for all classes of RF service. Husky construction throughout. For use as pentode or Irr-Tet oscillator, buter, requency malantite base; 6 prong. 21 W . amp. Isolantite base, 6 prong. 21 W . Plate, 400 V. at 95 M. A1120.
${ }^{\mathrm{s} 1.95}$

## TYPE T20

A general-purpose triode especially suited to all low-power transmitter circuits. Will furnish efficient performance as RF amplifier at all frequencies up to 56 A.; Plate, 750 volts max. for Class C service; Max. D C. plate curA 1100.
s2.25

## TYPE TZ20

A high-mu triode for Zero Bias Class B Audio operation, and for efficient frequency multiply ing. Same general characteristics as T20 but has amplification factor of 62 . Class B audio output. 70 W. per pair.
52.25


## TYPE 866

The world's most famous 866 half-wave mercury vapor rectifier, now in greatly improved form. Features a new heavy-duty, fully shielded filament and ceramic protection for top plate lead.
Fil., 2.5 V . at 5 A . Peak inverse voltage, 10,000 volts. For use in any power supply circuit designed A1109.
$\$ 1.50$

## (0)

TRANSMITTING TUBES

## TYPE 866 Jr.

A half-wave mercury vapor rectifier for all medium and low-voltage requirements. Fil., 2.5 , at 2.5 A. Max. RMS A.C. volts, 1250 . Max D.C. current per pair with choke inceramic base. Filament is multistrand type. A1 $\mathbf{1 0 8}$. NET. $\qquad$


## TYPE TW-150

NEW. Thin-wall carbon anode. $.015{ }^{\prime \prime}$ thick. 150 W . plate diss. Fil. 10 V at 4.1 A. Plate, 3000 V. at mmf. Grid drive, 20 W. max. Amplification factor 35 . Enclosed ty pe anode; visible operating temperaA1 121
${ }^{\text {s }} 15.00$


| Type | No. | Plate | Class of Service | NET |
| :---: | :---: | :---: | :---: | :---: |
| 203A | A1116 | 100 W | B-C | \$10.00 |
| 805 | A1147 | 125 W. | B-C |  |
| 814 | A1106 | 200 W | B-C |  |
| 822 | A1119 | 200 W . | B-C |  |
| $8415 W$ | A1111 | 50 W. | C |  |
| T200 | A1105 | 200 W. |  |  |
| HD203A | A1118 | 150 W . | B-C | 14.50 |

WRITE FOR COMPLETE TAYLOR TUBE MANUAL GIVING FULL TUBE DETAILS, SENT FREE ON REQUEST.

## BLILEY MOUNTED CRYSTALS



TYPE LD2
A high activity crystal with frequency drift of less chan cycles ( $( \pm)$ per megacycle per
degree $\mathbf{C}$. Will operate withis $.03 \%$ of specified frequency in standard os cillator circuits at calibration temperature. Specify frequency when ordering
FREQUENCY WITHIN 5 KC.

| No. | Band MC |
| :---: | :---: |
| A25ETEACH |  |
| A2516 | $3.5-4.0$ |
| A 25 | $\$ 4.80$ |


| EXACT FREQUENCY |  |  |
| :--- | :--- | :--- |
| No. | Band MC | NET EACH |
| A2519 | $3.5-4.0$ | $\$ 5.90$ |

TYPE BC3
Accurately calibrated crystal mounted in a molded bakelite holder with heat dissipating stainless steel caver plate. Pugs into 5 prong tube socket. Specify frequency when ordering.

| STOCK <br> NO. | Frequency <br> Within | Band <br> MC | NET <br> EACH |
| :---: | :---: | :---: | :---: |
| A2525 | $\pm 5 \mathrm{KC}$ | $7.0-7.3$ |  |
| A2526 | $\pm 5 \mathrm{KC}$ | $3.5-4.0$ |  |
| A2611 | $\pm 10 \mathrm{KC}$ | $1.7-2.035$ |  |
| A2623 | $\pm 25 \mathrm{KC}$ | $7.3-7.5$ |  |
| A2527 | EXACT | $7.0-7.3$ |  |
| A2528 | EXACT | $3.5-4.0$ |  |
| A2518 | $\pm 5 \mathrm{KC}$ | $7.3-7.5$ | 4.95 |

## TYPE CFI CRYSTAL FILTER

For crystal filter circuits in Single Signal recelvers. Vertical mounting Steatite holder; pins fit 5 prong socket. Holder size, $11 / 4 \times 11 / 4 \times^{7 / 150}$ A2529. 456 KC .
A2609:
A2610.
65 KC
EACH
$\$ 5.50$


## BLILEY CRYSTAL HOLDERS

Molded bakelite holders for inch square crystals. Threaded screw Mounts in any positlon. Best quality at low cost.
A2532: $20-40$ meter A $20-160$ meter. EACH

## TYPE B5

Superior 20 and 40 meter crystals. Less than 4 cycles of low-loss material. 7 MC
 units have high activity and increased output.


## TYPE HF2

High frequency "C" cut crystals with drift of only $20 \mathrm{C} / \mathrm{MC} /{ }^{\circ} \mathrm{C}\left(\mathrm{A} 2621\right.$ is $43 \mathrm{C} / \mathrm{MC} /{ }^{\circ} \mathrm{C}$ );
mounted between stainless steel electrodes. No. Frequencies Within EACH
 A2621 $\frac{188}{28}$ to $30 \mathrm{MC} / 50 \mathrm{KC}$ l $\quad 15.75$

## VF-1 VARIABLE

## FREQUENCY UNIT

## Easily adjusted variable fre

 quency crystals. Fundamenta frequency variation up to 6 KC on 7 MC units. Drift less than$4 \mathrm{C} / \mathrm{MC} /{ }^{\circ} \mathrm{C}$. Plug-in socket. A2530. $3.5 \mathrm{MC} \pm 5 \mathrm{KC}$ of specified minimum frequency.
A25 14 . $7 \mathrm{MC} \pm 15 \mathrm{KC}$ of speci-
 fied mimimu frequency NET \$ 6.00 A2531. 3.5 MC. Exact specified frequency. A25 $55,7 \mathrm{MC} \pm 5 \mathrm{KC}$ of speci- $\$ 8.80$

## BLILEY CRYSTAL

 HANDBOOKA complete handbook on frequency control with quartz crystas, which every Amateur
should have. Twenty-eight pages explaining theory use, apes explaining theory, usc, and care of crystals. A2624.
$10 c$


Billey Cataloy G11 on Pollice, Broadcast and General Communication Crystal: sent on request.

## TYPE T55

A medium-power triode capable Aigh efficiency at all frequencies Mpax. RF output per tube, 168 W . Plate, 1500 V . at $150 \mathrm{M} . \mathrm{A}$. max. Fil., 7.5 V . at 3.0 A . Ampl. factor, 20. Requires a minimum of driving power for maximum output. Floating carbon anode. Alio2.

s6.00

## TYPE T40

"The Wonder Tube." Plate diss, $40 \mathrm{~W} . \mathrm{Max}$ RF output, 86 W ., ample to drive a 1 KW
amplifier. Fil. 7.5 V . at 2.5 A . Plate, 1000 V . amplifier. Fil., 7.5 V . at 2.5 A . Plate, 1000 V Needs only 5 W. . grid driv
$\$ 3.50$

## TYPE TZ40

A zero bias triode. General characteristics same as T40, but ampl. factor of 62 . For use as frequency multiplier or Class $\mathbf{B}$ modulators. Class B audio output. 175 W . per pair with only 3 W. grid drive.
A1 149 . NET.
$\$ 3.50$

## TYPE $203 Z$

An improved zero bias version of the alwayspopular 203 A , intender for Class B audio service. Will deliver 300 W . of audio with only 8 V. at 175 M . Me Metal plate, 65 W diss. Also for RF use up to 15 M.C.

## TYPE T125

A husky triode with carbon anode and patent accelerating fin for higher efficiency. Plate diss., 4.5 A. Plate, 2000 V. D.C. at 200 M.A. RF output, Class C 300W. Ampl. factor, 25. Plate to AIIO3. NET
13.50

## BLILEY 100-1000 KC UNIT

A special dual frequency crys-
tal sealed in special holder ready for mounting. For use in frequency standards or calibration oscillators; wir provide accurate 100 and 1000 KC signal when adjusted to quency transmissions from WWV. Engineering Butletin $\mathbf{E - 7}$ containing full data will be sent ree on request. $\$ 75$ A2534. Type SMC-100. NET. 7.75

## KNIGHT UNMOUNTED TRANSMITTER CRYSTALS

High quality, inexpensive, unmounted X-cutt crystal. Accurately ground from the finest quartz available. Calibration will be within $1 \%$ of operating frequency under normal conditions. dependent on type of mountand closest stock unit will and closest stock unit will
be shipped. Not available for frequencies outside of the Amateur 1.7. 3.5, and 7 MC bands.

| No, | Frequency Kilocycles | NET |
| :---: | :---: | :---: |
| A2510. | 7000-7300 |  |
| A2511. | 3500-4000 |  |
| A2512. | 1715-2000 |  |

## KELYIN MULTIPLE CRYSTAL HOLDER <br> Simplifies the prob lem of mounting several crystals in quick frequency change exciters. Either typerequires only single

 hole panel mount With knob and switch plate.A2596. Type P8. Holds eight unmounted Crystals is square or smaller.
5.25

A2595. Type B6. Holds six plug-in type mounted crystals.
$\$ 3.60$

# Transmitting Equipment 



TYPE RK49
A beam-power tetrode similar to the 6L6. buthaving a sixprong Isolantite base. An ideal crystal oscil-
lator, frequency multiplicr, or neulator, frequency multipicr, or neu-
tralized RF amplifier. It may be trather plate or screen modulated. Fil.. 6.3 V. at 9 A . Plate, 400 V at 95 M.A. max. Power output, 25 at 21 W dissipation. Requires only 0.2 Watt grid driving power in R. A amplifier service.

## TYPE RK43

A dual-triode for use as oscillator or amplifier in portable equipment with dry-cell filament $14 \mathrm{MA}$. . A671. NET

TYPE RK34
A twin-triode for use as audio amplifier. Class C oscillator. frequency multlplier. or R.F. am


## TYPE RK47

An aligned-grid beam-power tetrode with R.F. output of 120 W , with only 1.5 W . grid 1250 V , at $138 \mathrm{M} . \mathrm{A}$. $\$ 17.50$ A681. NET

## TYPE RK48

A high-power aligned-grid tetrode with 100 W plate dissipation; 250 W power output. Fil. 10 V . at 5 A . Plate, 2000 V . at $180 \mathrm{M} . \mathrm{A}$. Driv-
ing power required. $1.0-1.6 \mathrm{~W}$. 527 . 50 A682. NEt
$\$ 27.50$

## TYPE RK39

A low-power aligned-grid beam-power tetrode with max. R.F. power output of 36 W . Fil. 6.3 V . at .9 A . Plate. 600 V at 93 M.A. R.F


## RAYTHEON

TRANSMITTING TUBES

## TYPE RK60

A full-wave rectifier for use in low vol tage power packs. Fil. 5 V. at 3 A . Max. output current. 250 . M. A. High vacuum type, 4 prong base. A651.
s2.75
TYPE RK56
Beam type RF tetrode. Heater, 6.3 V . at .55 A Plate, 300 V. at 62 M.A. max. Driving power. A. W. 5 prong base
A652. NET.....
s3.00

## TYPE RK57

Triode with thoriated filament. for RF or Class $" \mathrm{~B} "$ audio service. Fil. 10 V at 3.25 A . Plate. 50 W . base
13.50 A654. NET $\qquad$

## TYPE RK59

A twin-triode for use as RF oscillator or ampli fier or Class B audio tube. Fil., 6.3 V . at 1 A A 684.
$\$ 4.50$
TYPE RK62
A gas-triode for use as detector-thyratron. Fil. prong base.
A640. NET.
$\$ 3.50$
$\qquad$

## TYPE RK64

A low-power RF pentode. Fil., 6.3 V . at .5 A . Plate. 300 V. at $35 \mathrm{M} . \mathrm{A}$. Power output, 10 W A64 í . .......................... $\$ 3.50$

## TYPE RKII

A medlum-power triode with an output of 55 W . requiring only 3.2 W. grid driving power. For use as R.F. amplifer Fil multiplier, of A. Piate 750 V at 105 M a 3. Plate dissipation 25 w.A. Hax thoriated tungsten filament as Isolantite base. Plate $\$>50$ connection at top cap.

## TYPE RK12



Similar to RK-11 above, but zero-bias Class B tube RF power output. 55 W . Class B audio A646, 100 W. per pair.
$\$ 2.50$

## TYPE RK63

A low-C triode for general R.F. use. Fil. 5 V at 10 A. Plate, 3000 V. at 233 M.A. max. Tantalum plate and grid. Plate dissipation, A683. NET
$\$ 22.00$ TYPE 866
Fil., 2.5 V. at 5 A . Inverse peák, 7500 V ., peak Alate curr ${ }^{1}$ A.; D.C.. 5 A. ..... $\$ 1.50$ A686. Type 866A. NET 2.50 PENTODES

| Type | No. | Plate Diss. | Service | NET |
| :---: | :---: | :---: | :---: | :---: |
| RK20 | A 6 | 40W |  |  |
| RK23 | A656 | 10w | C |  |
| RK25 | $\begin{aligned} & A 658 \\ & 4660 \end{aligned}$ | 125w | C | 28 |



## BARKER-WILLIAMSON AIR INDUCTORS

Accurately designed and carefully asscmbled to provide maximum plate or grid current efficiency. Eliminate bulky homemade coils with high $R$. Fith power loss. Get. coils. All Standard coils center-tapped. Power ratings are: B, BL and BVL series, 100 W . HDVLeries, 250 W , and TL series, 500 W HDVL series, 1 KW . In ordering BL series desired. Equipped for plug-in with banana plugs. *Capacity to resonate at banana quency end of band. These B-W Air Induc tors are quality-designed and quality-built


"B" SERIES-STANDARD COIL

"BL" SERIES-LINKED TYPE COIL
 series coils. NET
"T" SERIES-STANDARD COIL


"TL" SERIES-LINKED TYPE COIL | A 12820 | 160 TL | 115 | 12 | $5^{\prime \prime}$ | $\$ 2.85$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A 12821 | 80 TL | 60 | 12 | $31 /{ }^{\prime \prime}$ | 2.65 |
| A 12822 | 40 TL | 38 | 12 | $21 / 2^{\prime \prime}$ | 2.40 |
| A 12823 | 20 TL | 30 | 12 | $21 / 2^{\prime \prime}$ | 2.15 |
| A12824 | 10TL | 25 | 12 | $2^{\prime \prime}$ | 2.10 | A 12852 . Jack Bar for "T" and "TL",

series coils. NET............... 1.25

MODEL " $B$ ' TURRET SWITCH "Provides quick bandswitching for any three switch; Alsimag 196 jack bars. $\$ 7.50$
A1 1259 . Less coils. NET...... $\$ 7.50$

Cat. No. $\mid$ Type $\left\lvert\, \begin{gathered}\text { Cap. } \\ \text { Mmf. } \\ \text { Wize }\end{gathered}\right.$ Dia. $\mid$ NET "BVL"SERIES-SWINGINGLINK COIL

 \begin{tabular}{lll|l|l}
A 12846 \& 40 BVL \& 40 \& 14 \& $21 / 2$ <br>
A 12847 \& 20 BVL \& 40 \& 1.65 <br>
A 12848 \& 10 BVL \& 35 \& 14 \& $21 / 2$ <br>
\hline

 

A12848 \& 10BVL \& 35 \& 8 \& $21 / 2^{\prime \prime}$ \& 1.40 <br>
A 12849 \& $5 B V L$ \& 25 \& 8 \& $21 / 2^{\prime \prime}$ \& 1.35

 A12857. BVL Coil mounting assembly with swinging link. NET ............. $\$ 2.50$ 

"TVL"SERIES SWINGING LINKCOIL <br>
A1 2839 <br>
\hline
\end{tabular}

 | $A 12842$ | 20 TVL | 28 | 12 | $21 / 2^{\prime \prime}$ | 1.65 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A1 2843 | 10 TVL | 22 | 6 | $21 / 16^{\prime \prime}$ | 1.60 | A12894. TVL Coil mounting assembly with

"HDVL"SERIES-SWINGING LINKCOIL \begin{tabular}{c|c|c|c|c|c|}
A 12835 \& $80 H D V L$ \& 44 \& 10 \& $31 /{ }^{\prime \prime}$ \& $\$ 4.50$ <br>
A 12836 \& 40 HDVL \& 28 \& 8 \& $31 / 2$ \& 4.00

 

A 12837 \& $20 H D V L$ \& 25 \& 8 \& $31 / 2$ \& 3.75 <br>
A 12838 \& 10HDVL \& 25 \& 4 \& $25 /{ }^{2}$ \& 3.25
\end{tabular} A 12855 , HDVL Coil mounting assembly with swinging link. NET

SWITCH
MODEL 2A BANDSWITCH
A small, compact coil and band-
switch assembly for use in low power exciter stages. 10 perates
on $160,80,40.20$ and 10 meters. Dn 16.8 , 20 and 10 meters. 807. RK-39. T-21, and similar tubes in capacity coupled stages. deal for Exciter units or por


B-W "BABY" PLUG-IN AIR INDUCTORS



## B-W "BABY" FIVE-BAND COIL TURRET ASSEMBLIES

Complete five-band coil and switch turret assemblies, designed for use in low power transmitter stages. Will handle up to 35 watts. Consist of five coils mounted on bandswitch and equipped single-hole panel mounting Operate on $160,80,40,20$
and 10 meters.
and 10 meters. All coils tune with single secdenser of 200 mmf , per section. Type BTM is untapped without link coupling, for capacity coupled stages. BTCT is center tapped, nolink BTEL is untapped with end link for interstage coupling. BTCL is center tapped with center link for balanced output stages.
A 128888 . BTM. NET A1 2890 : BTEL. NETH... $\$ 8.50$

# Frausmitting Equipresnt 

OHMITE VOLTAGE DIVIDERS


Ideal for transmitter power supplies. Have sliding con-
tacts. 100 watt size is $61 / 2^{\circ}$ long; 200 watt, $101 / 2^{\prime \prime}$ long. Hollow ceramic core prevents overheating; has baked enamel coating.

50 WATTS

| No. | Ohms | M. A. | $\begin{aligned} & \text { NET } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| A8359 | 250 | 447 |  |
| A8360 | 500 750 | 316 258 |  |
| A8362 | 1000 | 224 |  |
| A8363 | 1500 | 183 |  |
| A8364 | 2000 | 158 |  |
| A8365 | 2500 5000 | 142 |  |
| A836 | 10000 | 70 |  |
| A8368 | 15000 | 57 | 8 |
| A8369 | 20000 | 48 | 8 |
| A8370 | 25000 | 43 |  |
| A8371 | 30000 | 45 | \$1.00 |
| 48373 | 50000 | 25 | \$1.00 |
| A8374 | 100000 | 12 | 1.18 |
| A8399 | EXTRA | SLIDER | .1. $6.6 c$ |
| 100 WATTS |  |  |  |
| A8375 | 1000 5000 | 316 141 | \$1.18 |
| A837\% | 10000 | 100 |  |
| A8378 | 15000 | 81 70 | 132 |
| A8379 | 20000 25000 | 70 56 |  |
| A838 | 30000 | 51 |  |
| A8382 | 40000 | 38 | 1.47 |
| A8383 | 50000 75000 | 16 | 1.62 |
| A8385 | 100000 | 14 | 1.62 |
| A8386 | EXTRA | Slide? | c |
| 200 WATTS |  |  |  |
| 48387 | 1000 5000 | 447 200 |  |
| A83889 | 5000 10000 | 141 | \$1.76 |
| A8390 | 15000 | 115 |  |
| A8391 | 20000 25000 | 100 89 |  |
| A8393 | 350000 | 81 |  |
| A8394 | 40000 | 63 |  |
| A8395 | 50000 | 49 |  |
| A83967 | 100000 | 30 |  |
| A8398 | EXTRA | SLIDER |  |



OHMITE R.F. PLATE CHOKES
For all transmitter circuits. Ceramic core Rated at 1000 MA .
A8250. TYPE Z1. For the 5 meter band. ${ }^{2} 5 \mathrm{Luctance}$. 5.4 microhenries. D.C. resistance, NET ohms. $13 / 4^{*}$ long. Pigtail leads. 48251 TYPE Z2, For 10 and 20 Uc 35 microhenries. Resistance, 2 ohms. Length. $3^{\prime \prime}$ NE diam. $9 / 6^{\circ}$. With mtg. brackets. 4. 4 c A8252 TYPE 23. For 20 and 40 meters. 95 microherries. Resistance, 5 ohms. Length ${ }^{6^{\prime \prime}} \mathrm{NET}$ dam. $9 / 16^{\prime \prime}$. With mtg. brackets. 65 e A8253. TYPE Z4, For 20, 40, 80,160 meters. 220 microhenries. Resistance, 9 ohms Size, $61 / 2 \times 3 / 4^{\prime \prime}$. With brackets.

88


## OHMITE D-100

## DUMMY ANTENNA

Designed to take the guesswork out of transmitter tuning. Special fort watt resistor maintains conhigh Radio Frenuencies; glass-enclosed and plugs into standard 4 prong socket. Used with R.F. ammeter, it permits accurate checking of output stages. Write for descriptive bulletin No. 111 . A8350. $\mathrm{D}-100.73 \mathrm{hm}$. ABETEACH. 800 ohm .

$\qquad$ 33.23

## OHMITE PARASITIC

 SUPPRESSOR High efficiency combinationof choke and vitreous en ameled resistor. Prevents parasitics in grid leads of RF stages.Size: $13 / 4^{\prime \prime}$
A8353. Type P-300. NET

RCA TRANSMITTING TYPE TUBES


TYPE 807 An exceptionally eftransmitting tube especially designed for use in oscillator, frequency multiplier, buffer, or R.F. amplifier stakes. Requires only 0.22 watts grid driving power for maximum output. Fil. 6.3 V .
at 0.9 A . Plate, 600 V at 100 M . at 0.9 A. Plate, 600 V at
Plate dissipation, 25 W . A312.

## TYPE 809

Low-power triode having power output of 55 W. with grid drive of 2.5 W . Fil., 6.3 V . at 2.5
A . Plate, 750 V . at 100 M . A. max. Plate dissipation, 25 W . Will deliver 100 W . audio per A362. NET
$\$ 2.50$
TYPE 810
A new high-power output triode; $1 / 2 \mathrm{KW}$ plate input. 1 KW for two in PP. For Class Plate, 2000 V . at 250 MA . max. Plate diss. 125 W. Grid driving power required, only ${ }^{24} \mathrm{~W}$. per pair. Nutp

TYPE 813
High-power "beam" tube, with 260 W . output with only $1 / 2 \mathrm{~W}$. grid drive. For Class
service up to 30 MC . Fil., 10 V . at 5 A . Plate, 2000V. at 180 MA . maz. \$28. $\$ 20$
A316. NET. 4010 . Socket for above. NET.....73c TYPE 954
Acorn-type pentode for use in U. H. F. re-
ceivers or transmitters. Fil. 6.3 V . at 0.15 A . ceivers or transmitters. Fil. 6.3 V at 0.15 A .
Plate, 250 V . Especially fine for use in receivers Plate, 250 V . Especially fine for use in receivers
at frequences above $56 \mathrm{M} . \mathrm{C} . \ldots . . \$ 5.00$
A354. NET...............

## TYPE 955

The original "Acorn" triode. For detector in 6.3V.at 0.15 A. Plate $250 \mathrm{~V} . \max . \$ 3.00$
A355. NET.


## COTO LO-LOSS INDUCTORS

Designed for maximum efficiency in either high or low power
transmitters. Less bulky than copper tubing coils and renuire transmitters. Less bulky than copper tubing coils and require smaller space for mounting. Rigid construction with low di-electric losses. Wire protected ith oxidith with baked enamel. Equipped, with plug-in base with banana plugs. "BTL" and "BTVL" coils handle up to 300 watts input. Recommended max. tuning condenser capacity is 75 mmf . for 160 meters, 35 mmf . for all other bands.

| No. | Type | $\begin{aligned} & \text { Wire } \\ & \text { Size } \\ & \hline \end{aligned}$ | No. Turns | Dlam. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A2228 | 160 T | 12 | 42 | 5 \% | \$2.29 |
| A2229 | 80 T | 10 | 30 | 4 " | 1.94 |
| A2230 | 40 T | 10 | 20 | 3 * |  |
| A2231 | ${ }_{10 \mathrm{~T}}^{20 \mathrm{~T}}$ | 10 10 | 10 |  |  |
| A2232 | 10 T | 10 | 6 | 23/4 | 1.29 |
| "TL" | SERIES | (WITH FIXED |  |  | LINK) |
| A2210 | 160 TL | 12 | 42 | 5** | $\begin{array}{r} \$ 3.23 \\ 2.88 \\ 2.65 \\ 2.29 \\ 2.23 \\ \hline \end{array}$ |
| A2211 | 80TL | 10 | 30 | ${ }^{\prime \prime}$ |  |
| A2212 | 40 TL | 10 | 20 |  |  |
| A2213 | 20 TL | 10 | 10 | 3*** |  |
| A2214 | 10 TL | 10 | 6 | 23/4" |  |
| "TVL" | SERIES | (WITH YARIABLE LINK) |  |  |  |
| A2216 | 160 TVL | 12 | 42 | $5{ }^{\prime \prime}$ | $\begin{array}{r} \$ 3.82 \\ 3.47 \\ 3.23 \\ 2.88 \\ 2.82 \\ \hline \end{array}$ |
| A2227 | 80 TVL | 10 | 30 |  |  |
| A2218 | 40TVL | 10 | 20 | ${ }^{3}$ |  |
| A2219 | 20 TVL | 10 | 10 |  |  |
| A2220. | 10TVL | 10 | 6 | 23/4" |  |
| 'BTL | $\cdots$ SERIES (WITH FIXED LINK) |  |  |  |  |
| A2245 | 160BTL | 14 | 36 |  | $\begin{array}{r} \$ 2.70 \\ 2.62 \\ 2.35 \\ 2.15 \\ 2.09 \\ \hline \end{array}$ |
| A2246 | 80BTL | 14 | 34 | $23 / 4$ " |  |
| A2247 | 40BTL | 14 | 22 | $23 / 4$ " |  |
| A2248 | 20BTL | 14 | 10 |  |  |
| A2249 | 10BTL | 14 | 6 | 23/4" |  |
| "BTVL" SERIES (WITH VARIABLE LINK) |  | (WITH VARIABLE LINK) |  |  |  |
| A2222 | 160BTVL | 14 | 36 |  | $\begin{array}{r} \$ 3.29 \\ 3.20 \\ 2.94 \\ 2.73 \\ 2.68 \end{array}$ |
| A2223 | 80BTVL | 14 | 34 |  |  |
| A2224 | 40BTVL | 14 | 22 |  |  |
| A2225 | 20BTVL | 14 | 10 |  |  |
| A2226 | 10BTVL | 14 | 6 |  |  |

## STEATITE MOUNTING BASES

Convenient jack assembly for Coto Inductors. Bar and insulators of Steatite with end mounting holes. Jacks fit bar and plug mountings on No. Type $\mid$ For $\mid$ Jacks $\mid$ NET A2150 CI-8TM $\frac{\text { T }}{\frac{J}{3}} \frac{\text { NE }}{\$ 1.12}$ | A 2151 |  |  |  |
| :--- | :--- | :--- | :--- |
| A CI -8TLM TL, TVL | CI-6BTLM, BTL, BTVL | 5 | 1.18 |



COTO R.F. CHOKES


## MIDGET TYPE

C1-11. Inductance, $2.5 \mathrm{mh} .: .125 \mathrm{amp}$. D.C. re sistance. 40 ohms; tapered; nickel-plated end
caps with pigtails $11 / 2^{\times 1 / 2 .}$. 29 e
C1-12. Similar to C1-11. 250 MAD.C. 2.2 mh 18.5 ohms D.C. Fresistance, $11 / 2^{*} x^{s / / 2}$. 35 e
A2159. NET..................

## HEAVY-DUTY TYPE

C1-20. For 160, 80 and 40 meter bands. $1 / 2^{n}$
 A2stance. ${ }^{11} \mathrm{NETm}$.
C1-21. Maximum impedance on 80,40 and 20 meter bands. Honey comb wound; Steatite core.


## Transmitting <br> TRANSFORMERS

STANCOR AMATEUR TRANSFORMERS


## THE NEW "THOROBREDS"

New-modern-and safe! The only transformer series of its kind, incorporating the very latest high-voltage terminals for greater safety. Modern streamlined case permits close mounting of Thorobred units to conserve space; new vertical type terminal strips permit wiring from bottom, side. or end. Terminala set In extra heavy porcelain strips parent Pyroxlin cover. Fuickly removable, transcareful workmanslipe. are apparent throughout. Fully impregnated and compound-sealed coils provide complete insulation breakdown protection and prevent annoying vibration hum. Heavy cast iron cases with molded hand-holds, finished in grey enamel
"THOROBRED" PLATE TRANSFORMERS

| No. | Type | D.C. Volts | D.C. M.A. | W't. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14420 | P-8000 | $400-500$ | 200 | 20 lbs . | \$8.09 |
| A14421 | P-8001 | $450.600$ $750-1000$ | 300 |  |  |
| A14422 | P-8002* | 1000-1250 | 300 | 45 lbs . | 16.17 |
| A14423 | P-8003* | 1000-1250 | 500 | 65 lbs. | 24.99 |
| A14424 | P-8004* | 1250-1500 | 350 | 501 bs . | 17.94 |
| A14425 | P-8005* | 1500-2000 | 500 | 85 lbs. | 33.52 |
| A14426 | P-8006* | 1750-2000 | 300 | 60 lbs . | 22.93 |
| A14427 | P-8007* | 2500-3000 | 500 | 110 lbs . | 44.10 |

"THOROBRED" SWINGING CHOKES

| No. | Type | Henrics | M.A. | Res. | Insul | Wt. | de |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A14430 | $\mathrm{C}^{2310}$ | 8. 30 | 200 | 100 | 3000 V . | $51 / 3 \mathrm{lbs}$ | 4.41 |
| A14431 | $\mathrm{C}^{2} 2311$ | 8 -25 | 300 | 80 | 5000 V . | 15 lbs. |  |
| A14432. | $\mathrm{C}^{2} 312$ | 5.25 | 400 | 60 | 5000 V . | 25 lbs | 6.47 |
| A14433 | C2313 | 5-20 | 500 | 65 | 5000 V . | 30 lbs . | 10.58 |

## "THOROBRED" SMOOTHING CHOKES

| A14435 | C 2320 | 15 | 200 | 100 | 3000 V. | $51 / 2 \mathrm{lbs}$. | $\$ 4.41$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| A14436 | $\mathrm{C}_{2321}$ | 12 | 300 | 80 | 5000 V. | 151 bs | 5.59 |
| A14437 | C 2322 | 10 | 400 | 60 | 500 V. | 251 bs. | 6.47 |
| A14438 | C 2323 | 8 | 500 | 65 | 5000 V. | 30 lbs. | 10.58 |

## "THOROBRED" FILAMENT TRANSFORMERS

Incorporate all the distinctive features of "Thorobred" design and construction. P-8021 and P-8022 are multi-secondary units for universal transmitter applications. Secondaries can be connected in series, parallel, or series-parallel. Primaries for $105-115 \mathrm{~V}$. $50-60$ cycles. A14440, P-8021. Secondaries: 2.5 CT, 2.5 CT, 2.5, 2.5 , allat 4 A .2500 V . insul. Wt., $51 / 2 \mathrm{lbs}$. NET......
3.56



## "THOROBRED" DRIVER TRANSFORMERS

Poly-Pedance type units having a large number of usable primary to secondary ratios. Provide accurate impedance match between combinations of driver and modulator tube applications.

| No. | Type | Cap. Watts. | $\begin{array}{\|l\|} \hline \text { Pri. M.A. } \\ \text { Per Side } \end{array}$ | $\begin{aligned} & \text { Ratio } \\ & \text { Pri. to } 1 / 2 \text { See. } \end{aligned}$ | Wt. Ibs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A14445 }}$ | A-8500 | 15 | 60 | 1.25:1,1.4:1,1.6:1 |  |  |
| A1 | A-8501. | 15 | 60 | $1.8: 1,2: 1.2 .2: 1,2.4: 1$ $2.6: 1,3: 1,3.2: 1,3,4: 1$, | 5 | \$4.56 |
|  |  |  |  | 4:1,4.5:1,5:1 75 :1 | 4.5 | 4.41 |
| A14447 | A-8502 | 30 | 120 |  |  |  |
| A14448 | A-8503 | 30 | 100 | 1.5:1,2:1,2.5:1,3:1,3.5:1 | 6 | 6.32 |

"THOROBRED" MODULATION TRANSFORMERS Poly-Pedance types offering correct plate load to the maximum possible number of different modulator tubes. Send for FREE Stancor Catalog containing charts for uses of THOROBRED Driver and Modulation Transformers.

| No. | Type | Cap. Watts | $\begin{aligned} & \text { Pri. M.A. } \\ & \text { Per Side } \\ & \hline \end{aligned}$ | Secondary | $\begin{aligned} & \text { M.A. } \\ & \text { Par. } \\ & \hline \end{aligned}$ | Wt | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A14450 | A-8000 | 15 | 45 | 45 | 90 | $31 / 2$ | 3.53 |
| A14451 | A-8001 | 30 | 80 | 80 | 160 | 9 | 5.00 |
| A14452 | A-8002 | 60 | 125 | 125 | 250 | 10 | 6.91 |
| A14453 | A-8003 | 125 | 200 | 150 | 300 | 22 | 10.88 |
| A14454 | A-8004 | 300 | 260 | 260 | 520 | 50 | 20.58 |
| A14455 | A-8005 | 600 | 350 | 350 | 700 | 95 | 39.40 |

## SPECIAL DRIVER TRANSFORMERS

Well-designed and efficiently made driver transformers for specific tube applications. Many other typeṣ also available: send for Stancor catalog with complet

| No. | Type | Pri. | Sec. | Class | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A14460 | A-4721 | $1-2 \mathrm{~A} 3,6 \mathrm{~A} 3$ | $1-19,79$ | B |  | 51.41 |
| A14461 | A-4404 | PP2A3,6A3. | PP-10,35T. |  |  | \$1.41 |
| A1 | A | 59,6L. $1-2 \mathrm{~A}, 6 \mathrm{~F} 6$. | TZ40,203A | B | $31 / 2$ | . 44 |
| A14462 | A | $42.89,6 \mathrm{~F}$, | PPP Par.6i. 6 | $\begin{aligned} & \mathrm{AB}-2 \\ & \mathrm{AB}-1 \end{aligned}$ | 3 | 1.94 |
| A14463 | A-4703 | $\mathrm{PP}-2 \mathrm{~A} 5.42$ 6F6.89 | P.P. Par. $6 \mathrm{~L} 6$ | AB-2 | 4 | 2.35 |

FREEISTANCOR CATALOG AND TRANSFORMER GUIDE, Contains data on matched power supplies, driver and moditlator STANCOR "HAMANUAL", 40 pages of circuits, kits, charts, formulae STANCOR"HAMANUAL"'s 40 pages of circuits, kits, charts, formulae

## KENYON "'T" LINE TRANSFORMERS

## FAMOUS FOR QUALITY

Representing the most advanced features in design and quality, KENYON T-Line units are first choice of many top-notch manufacturers of Amateur Transmitters and Communications Receivers. Extensively employed by U. S. Military and Naval seryices, outstanding expeditions, airlines, communications systems, broadcast stations, and discriminating Amateurs. All T-Line units are housed in one uniform style casing. shielding and commerclal appearance in any installation. All units are
 heat-vacuum varnish-treated and hermetically sealed for reliable performance under all climatic extremes. Universal mounting style permits
installation with terminals through chassis for absolute safety. installation with terminals through chassis for absolute safety.

## STANDARD AMATEUR PLATE TRANSFORMERS

| Cat. No. | Type | D.C. Volts | D.C. M.A. | Wit. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14350 | T-668 | $500-750$ | 300 | $121 / 2$ | $\$ 5.85$ |
| A14351 | T-669 | $1000-1250$ | 300 | 20 | 300 |
| A14352 | T-670 | $1500-1750-2000$ | 300 | $361 / 2$ | 12.60 |
| A14353 | T-671 | $1000-1250$ | 500 | 40 | 12.90 |

## HEAVY-DUTY PLATE TRANSFORMERS

Current ratings given are for Amateur or intermittent service; but units are designed and built for continuous service at current ratings only
$20 \%$ lower. Uniform T-Line case mounts with terminals up, or for maximum safety can be inverted with all high voltage wiring below chassis.

| A14355 | T-664 | 600 | 200 | 101/4 | \$4.50 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14356 | T-655* | 450-350 | 325 | 12 | 4.80 |
| A14357 | T-656† | 750-600 | 400 | 161/2 | 6.60 |
| A14358 | T-657* | 1000-750 | 250 | 231/2 | 13.80 |
| A14362 | I-665* | 1250-1000 | 300 | 28 | 12.00 |
| A14363 | T-666 | 1250 | 400 | 36 | 14.40 |
| A14364 | T-667 | 1250 | 600 | 50 | 18.00 |
| A14365 | T-660 $\dagger$ | 1250-500 | 600-400 | 50 | 21.00 |
| A14366 | T-661 | 1750 | 250 | 28 | 12.00 |
| A14367 | T-652* | 1750-1500 | 550 | 52 | 22.80 |
| A14368 | T-651* | 1750-1500 | 350 | 46 | 18.00 |
| A14369 | T-6.53 | 2000 | 350 | 50 | 19.20 |

*Tapped primary. \&Designed for double rectifiers, secondary voltagessup-
plied simultaneously. \$ Secondary in series supplies 2000 V . at 200 M . A. SMOOTHING CHOKES

| Cat. No. | Type | Henries | M.A. | Res. | Insul. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A14373 | T-153 | 30 | 90 | 350 | 1000 | $23 / 4$ | \$1.80 |
| A14374 | T-152 | 10 | 200 | 100 | 1000 | $31 / 2$ | 2.10 |
| A14375 | T-166 | 11 | 300 | 125 | 1500 | 93/4 | 4.20 |
| A14376 | T-167 | 11 | 400 | 80 | 3000 | 16 | 5.70 |
| A14377 | T-177 | 12 | 500 | 95 | 5000 | $221 / 2$ | 9.00 |
| SWINGING CHOKES |  |  |  |  |  |  |  |
| A14380 | T-517 | 15-45 | 90-20 | 350 | 1000 | 3 |  |
| A14381 | T-506 | 5-20 | 200-30 | 100 | 1010 | $31 / 2$ | 2.10 |
| A14382 | T-510 | 6-19 | 300-30 | 125 | 1500 | $93 / 4$ | 4.20 |
| A14383 | T-516 | $5-20$ | 400-50 | 80 | 3000 | $161 / 2$ | 5.70 |
| A14384 | T-521 | 6-21 | 500-60 | 95 | 5000 | 22 | 9.00 |

## FILAMENT TRANSFORMERS

| Cat. No. | Type | V.C.T. | Amps. | Insul. | We. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A14388 | T-360 | 2.5 | 10 | 5000 | 3 | 52.70 |
| A14389 | T-354 |  | 3 | 2000 | $21 / 4$ | 1.95 |
| A14390 | T-357 | 5.25 | 12 | 2000 | 53/4 | 3.30 |
| A14391 | T-358 | 5. 25 | 20 | 2000 | $91 / 4$ | 3.90 |
| A14392 | T-351 | 6.3 | 3 | 2000 |  | 1.80 |
| A14393 | T-353 | 7.5 |  | 2000 | 21/4 | 1.95 |
| A14394 | T-359 | 7.5 | 8 | 2000 | $53 / 4$ | 3.00 |
| A14395 | T-365 | 10 | 4 | 5000 | $31 / 4$ | 2.70 |
| A14396 | T-361 | $10^{\circ}$ | 8 | 5000 | 6 | 3.60 |
| A14397 | T-368 | 6.3 | 4 | 2000 | 51/4 | 3.00 |
| A14398 | T-366 | 2.5 | 10 |  |  |  |
|  |  | 2.5 | 10 | 5000 | 51/2 | 3.90 |
| A14399 | T-363 | 10 | 6.5 3.25 | 5000 | 9 | 4.50 |

KEN-O-DRIVE UNIVERSAL DRIVER TRANSFORMERS Unusually fiexible design permits using these unitsin transmitters having a wide range of driver-modulator tube combinations. T-261 and T-262 are designed with tapped primary and secondary to couple a 500 ohtm
line to any push-pull Class B grids. T-264 and T- 263 are designed to , or any single or push-puli driver plates, to any Class AB or Class B grids

| Cat. No. | Type | Watts | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A14400 | T-261 |  | 1 | \$3.30 |
| A14401 | T-262 | 18 | $43 / 4$ | 3.90 |
| A14402 | T-264 | 18 | $51 / 2$ | 3.30 4.50 |

KEN-O.TAP UNIVERSAL MOD. TRANSFORMER
Completely flexible and adaptable to every transmitter modulator reguirement. Tapped primaries and secondaries provide for accurate
matching of any combination of modulator tubes and Class C RF load Don't llmit your modulation transformer to one or two tube types; select. one of correct audio capacity and use any tube combination you want.

| Cat. No. | Type | $\begin{aligned} & \text { Pri. } \\ & \text { Watts } \end{aligned}$ | Class C Load Watts | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A14409 | T-489 | 15 | 30 |  | \$2.40 |
| A14405 | T-493 | 40 | 80 | 53/4 | 3.60 |
| A14406 | T-494 | 75 | 150 | 10 | 5.40 |
| A14407 | T-495 | 125 | 250 | 21 | 12.00 |
| A14408 | T-496 | 300 | 600 | 34 | 18.00 |

FREE: Complete KENYON T-Line Catalog. Contains detailed data on all T-Line components for Amateur, Public Address, Television, Experimental Laboratories, and Industrial applications.

# Transmitting TRANSFORMERS 

THORDARSON CH T MULTI-VOLT SERIES
Englneered and constructed for maximum efficiency under continuous load. All units fully shielded. Mounting templates furnished.

MULTI-VOLT PLATE TRANSFORMERS

| No. | Type | D.C | Volts | M.A. | Wt. | NET |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12664 | T15P11 |  | 0-500 | 200 | 16 |  |  |
| A12665 | T15P12 |  | 0-650 | 200 | 19 |  |  |
| A12666 | T15P13 |  | 0-750 | 300 | 31 | 11.76 |  |
| A12667 | T15P14 |  | 0-1000 | 300 | 41 |  |  |
| A12668 | T15P15 | 5100 | -1250 | 300 | 51 |  |  |
| A12669 | T15P16 | 6100 | 0-1250 | 500 | 81 | 26.46 |  |
| A 12670 | T15P17 | 7125 | 0-1500 | 300 | 55 | 19.1135.28 |  |
| A12671 | T15P18 | 8150 | -1750 | 500 | 96 |  |  |
| A12672 | T15P19 | 9200 | -2500 | 300 | 85 |  | . 40 |
| A12673 | T15P20 | 0 200 | 0-2500 | 650 | 140 | 49.98 |  |
| C. H. T. INPUT CHOKES |  |  |  |  |  |  |  |
| No. | Type ${ }^{\text {H }}$ | Henrles | M. A. | Insul. | . 10 hm | NET |  |
| A12702 | T15C36 | 5-25 | 200-20 | 4000 | - 105 | \$ | $\begin{aligned} & 4.70 \\ & 5.88 \\ & 7.06 \\ & 2.94 \\ & 5.58 \\ & \hline \end{aligned}$ |
| A12703 | T15C37 | 5-25 | 300-30 | 4000 | -78 |  |  |
| A12704 | T15C38 | 5-25 | 400-30 | 4000 | - 95 |  |  |
| A12705, | T15C39 | 5-25 | 500-30 | 10000 | - 86 |  |  |
| A12706' | T15C41 | 5-25 | 650-50 | 10000 | - 46 |  |  |
|  | C. H. T. SMOOTHING CHOKES |  |  |  |  |  |  |
| No. | Type. | Henrles | M. A. | Insul. | Ohms | NET |  |
| A12693 | T15C45 | 12 | 200 | 4000 | 105 |  | $\begin{aligned} & 4.70 \\ & 5.88 \\ & 7.06 \\ & 2.94 \\ & 5.58 \end{aligned}$ |
| A12694 | T15C46 | 12 | 300 | 4000 | 78 |  |  |
| A12695 | T15C47 | 12 | 400 | 4000 | 95 |  |  |
| A12696 | T15C48 | 12 | 500 | 10000 | 86 |  |  |
| A12697 | T15C50 | 15 | 650 | 10000 | 46 |  |  |
| MULTI-VOLT FILAMENT TRANSFORMERS |  |  |  |  |  |  |  |
| No. | Type | Volts |  | Amps. | Insul. | Wt. | NET |
| A12685 | T11F50 | $7.5 \text { tap at } 6.3 .$ |  | 65 | 2000 | 6 | \$5.29 |
| A12686 | T11F51 | $\begin{aligned} & 10 \text { tap at } 7.5 \\ & 6.3 \mathrm{C} . \mathrm{T} \end{aligned}$ |  |  | 2000 | 6 | 5.59 |
|  |  |  |  | 8 | 2000 | 8 |  |
| A12687 | T11F52 | 11 tap at 10. |  |  |  |  | 7.79 |
| A12742 | T11F53 |  |  | 10 | 2000 7500 | 6 |  |
| A12688 | T11F54 | $5 \mathrm{C} . \mathrm{T}$ |  | 20 | 10000 | 16 | 4.70 9.41 |
| A12689 | T11F55 | 6.3 C.T. |  | 22 | 2000 |  | 6.76 |
| A12690 | T11F56 |  | 2.5 C.T. | ${ }_{3}{ }^{3} 5$ |  |  |  |
|  |  | 5 C.T. |  | 3.5 | 2000 | 6 | 4.56 |

THORDARSON TRANSMITTER MANUAL
A 52 page book, completely revised. Contains transmitter schematic diagrams, parts lists, modulation tables, coll data, power supply circuits Al1206. NET
9.
NOTE: WE CAN SUPPLY ALI, THORDARSON TRANSMIT TING TRANSFORMERS AND CHOKES EITHER SIAN ing modulation and driver transformer tables sent FREE to any Amateur immediately on request.

## SPECIAL VALUE KNIGHT TRANSFORMERS



UNIVERSAL PLATE TYPES
TYPE A. For those low voltage buffer or R.F. stages for small modulators, in fact for most any low-voltage built. heavily-insulated, and rated at 750 volts AC each side of center tap at $200 \mathrm{M} . \mathrm{A}$. Uncased; with volts, $50-60 \mathrm{cycles}$. Shipping weight 8 lbs A1 1007 . NET

TYPE B. Similar to the A11007 unit directly above. Secondary rated at 1000-750-500 volts A.C. each side of center tap at 300 M. A. Primary A1 1008 . NET.
\$5.45


## FILAMENT TRANSFORMERS

A 11011 . Uncased, upright mounting type, with solder lug terminals. 2.5 Volts at 10 A., for $2-866^{\prime}$ s or several 2.5 volt tubes. 5000 volt insulation. Size: $21 / 4 \mathrm{x}$
$21 / 2^{\times 3} 3^{*}$. Wt., $21 / 2 \mathrm{lbs}$. A 11012 . 7.5 Volts at 4 A . and 2.5 Volts at 5 Ideal for use in low power multi-stage rigs. S ${ }^{21 / 2 x^{3}}{ }^{3}$. Shpg. wt., $31 / 2$ lbs.
$\$ 1.25$



## KNIGHT FILTER CHOKES

A11009. Swinging Choke. Capacity, 200 M.A.; inductance swing, 8-30 henries. Fully cased; upright mounting style. Fiexible insulated wire leads at bottom.
Size: $38 / /^{\prime \prime} \times 31 / 4^{\prime \prime} \times 41 / 8^{\prime \prime}$. Shpg. wt., $6 \mathrm{lbs} . \$ 2.21$

A11010. Smoothing Choke, Capacity, 200 M.A. Inductance. 20 henries; 70 ohm D.C. resistance. Fully cased ; upright mounting style. Flexible insulated wire leads at bottom. Size: $35 / \mathrm{m}^{\prime \prime} \times 31 / /^{*} \times 41 / \mathrm{g}^{\prime \prime}$. Highest quality at an exception-
ally low price. Wt., 6 lbs .
NETEACH.

THORDARSON TRANSFORMERS \& CHOKES 1motine
An extremely popular line offering all necessary transformer equipment for dependable service in Amateur Short-Wave equipment. All primaries are for 110 volt $50-60$ cycles. Other voltages on special order

PLATE TRANSFORMERS

| No. | Type | D. C. Volts | D.C.M.A. | Fig. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12600 | T19P55* | 500-400 | 250 | 2 G | 8 | \$4.41 |
| A12601 | T19P56 | 750-600 | 225 | 2 G | 9 | 8 |
| A12602 | T19P57 | 1000-400t | 125-150 | 2 G | 9 | 8 |
| A12603 | T19P58 | 1000-750 | 150-200 | ${ }_{2} \mathbf{K}$ | 17 | . 64 |
| A12604 | T19P59 | 1000-1250 | 300 | 2K | 26 | 48 |
| A12605 | T19P60 | 1250-1500 | 300 | 2K | 29 | 10.88 |
| A12606 | T19P61 | 1500-1750 | 300 | 2K | 31 | 6 |
| A12607 | T19P62 | 1750-2000 | 300 | 2K | 34 | 23 |
| A12608 | T19P63 | 1000-1250 | 500 | 2K | 36 |  |
| A12609 | T19P64 | 1250-1500 | 500 | 2K | 42 | 6.76 |
| A12610 | T19P65 | 2000-2500 | 300 | 2K | 42 | 17.35 |
| A12611 | T19P66 | 1500-1750 | 500 | 2K | 50 | 20.58 |
| A12612 | T19P67 | 1750-2000 | 500 | 2K | 56 | 24.99 |
| A12613 | T19P68 | 2000-2500 | 500 | 2K | 62 | 29.40 | *Bias tap at 25 volts. tDesigned for double rectifiers; supply both secondary voltages simultaneously

FILAMENT TRANSFORMERS

| No. | Type | Voits | Amps. | Insul. | F19. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12614 | T50F61 | 2.5 CT | 3.5 | 1600 | 2 B |  | 0.88 |
| A12615 | T19F88 | 2.5 CT | 5.25 | 1600 | ${ }^{3} \mathrm{C}$ | $11 / 4$ | 1.03 |
| A12616 | T19F89 | 2.5 CT | 10 | 1600 | 3 C |  | 1.32 |
| A12617 | T19F90 | 2.5 CT | 10 | 7500 | 3 C | 21/4 | 6 |
| A12618 | T64F33* | 2.5 CT | 10 | 7500 | 2 N | $41 / 2$ | 2.65 |
| A12619 | T63F99 | 5 CT | 4 | 1600 | 2 D | 21/4 |  |
| A12620 | T19F91 | 5.25 CT | 4 | 1600 | $3 \mathrm{3C}$ | $21 / 4$ | 1.32 |
| A12621 | T19F92 | 5.25 CT | 13 | 1600 | 3 C |  | 1. |
| A12622 | T74F23* | 5.25 CT | 13 | 1600 | 2 D | $41 / 4$ |  |
| A12623 | T74F24* | 5.25 CT | 21 | 1600 | 2 D | $51 / 4$ | 4. |
| A12624 | T19F97 | 6.3 CT /5 | 3 | 1600 | 2 B | $11 / 3$ | 1. |
| A12625 | T61F85 | $6.3,5,2.5$ | 2.5 | 1600 | 2 E | $11 / 2$ | 1.18 |
| A12626 | T73F60* | 6.3 CT | 5 | 1600 | 2 D | $31 / 4$ | 2.20 |
| A12627 | T19F98 | 6.3 CT | 6 | 1600 | ${ }_{3 C}$ | $23 / 4$ | 1.62 |
| A12628 | T19F99 | 6.3 CT | 10 | 1600 | 3 C |  | 2.06 |
| A12629 | T19F93 | 7.5 CT | 4 | 1600 | 3 C | 21/4 | 1 |
| A12630 | T19F94 | 7.5 CT | 8 | 1600 | 3 C |  | 1.76 |
| A12631 | T92F20 | 7.5 CT | 8 | 1600 | $2{ }^{\text {2 }}$ | $43 / 4$ | 2.79 |
| A12632 | T19F95 | 10 CT | 4 | 1600 | 3 C | 23/4 | 1.62 |
| A12633 | T19F96 | 10 CT | 8 | 1600 | 3 C |  | 2.06 |
| A12634 | T64F14* | 10 CT | 8 | 1600 | 2 D | 5 | . 79 |
| A12635 | T79F84 | $\begin{aligned} & 2.5 \mathrm{CT} \\ & 5.6 .3 \mathrm{CT} \end{aligned}$ | 3.5 3.3 | 1600 | 2G | $43 / 4$ | 2.79 |

*Primary taps at 105, 110 , and 115 volts.
SWINGING CHOKES

| No. | Type | Henrles | M. A. | Res. | Insul. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12636 | T19C35 | $5-20$ | 200 | 130 | 3000 | 5 | $\$ 2.35$ |
| A12637 | T19C36 | 520 | 300 | 105 | 5000 | 10 | 3.82 |
| A12638 | T19C37 | $5-20$ | 400 | 90 | 5000 | 17 | 5.88 |
| A12639 | T19C38 | $5-20$ | 500 | 75 | 5000 | 26 | 8.23 |


| SMOOTHING CHOKES |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12640 | T19C42 | 12 | 200 | 130 | 3000 | 5 | \$2.35 |
| A12641 | T19C43 | 12 | 300 | 105 | 5000 | 10 | 3.82 |
| A12642 | T19C44 | 12 | 400 | 90 | 5000 | 18 | 5.88 |
| A12643 | T19C45 | 12 | 500 | 75 | 5000 | 26 | 8.23 |
| STANDARD |  | MODULATION |  | TRANSFORMERS |  |  |  |


| No. | Type | Primary | Secondary | Audlo | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A12654 }}$ | T67M69 | 1-19 | 2700 | 10 W . | 11/2 | \$1.62 |
| A12655 | T17M59 | 1-6A6 | 3000, 3750, 4500 | 10 W. | 2 | 1.7 |
| A12656 | T64 M26 | 2-46. 59 | 5000, 10000 | 40 W. | 5 | 3 |
| A12657 | T19 M21 T19 M 22 | ${ }_{\text {2-TZ20 }}^{2-809}$ | 3750,6600 5000,7850 | 75 W. | 5 |  |
| A12658 | T19 M122 | ${ }^{2-809} \mathbf{2 - 3 5}$ T, 6L6 | 5000,7850 $2500,5000,7500$ | 100 W. | 15 |  |
| A12659 | T84M70 | ${ }_{\text {2-TZ4, }}^{2-350}$ | 2850, 4500, 6500 | 175 W. | 20 |  |
| A12661 | T82 M25 | 2-805, 822 | 4000. 6000.8000 | 650 W. | 47 | 23.52 |


| Cat. No. | Type | Cap. | PrI.M.A. Per Side | Sec. Ser. | M. A. Par. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12908 | T11M74 | 40 | 100 | 80 | 160 | 8 | \$ 5.29 |
| A12909 | T11M75 | 75 | 145 | 145 | 290 | 9 | .7.35 |
| A12910 | T11 M76 | 125 | 210 | 160 | 320 | 18 | 1.47 |
| A12911 | T11 M77 | 300 | 250 | 250 | 500 | 30 | 7.64 |
| A12912 | T11M78 | 500 | 320 | 320 | 640 | 51 | 35.28 |

## MULTI-MATCH DRIVER TRANSFORMER

Have plug-in terminal boards for matching various driver tube combina tions. Recessed sub-base lugs permit single hole wiring

| Cat. No. | Type | Cap. Watts | Prl. M. A. Per Side | Ratlo <br> Pri. to $1 / 2$ Sec. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A12900 | T15D76* | 15 | 60 | $1: 1,1.2: 1,1,4: 1$ | $71 / 2$ | \$4.85 |
| A12901 | T15 D77* | 15 | 60 | $\begin{gathered} 2: 1,2.2: 1,2.4: 1 \\ 2.6: 1,2.8: 1 \end{gathered}$ | 6 | 4.85 |
| A12902 | T15 D78* | 15 | 60 | $\begin{aligned} & 3: 1,3.2: 1,3.4: 1 \\ & 3.6: 1,3.8: 1 \end{aligned}$ | 6 | 4.85 |
| A12913 | T15079* | 15 | 60 | $4: 1,4.5: 1,5: 1$ | 6 | 4.85 |
| A12905 | T15082 $\dagger$ | 15 | $\begin{aligned} & 1: 2.5 . \\ & 1: 1.4, \\ & 1: \end{aligned}$ | $\begin{aligned} & 1.3 .15, \\ & 2.25,1: 2,1: 1.75, \\ & 1.25,1: 85,1: .75 \end{aligned}$ | $53 / 4$ | 4.85 |

*P. P. 45 or 2 A3's. $\$ 500$ ohm primary.

# Tramsmitting Equipment 

## AEROVOX TRANSMITTING CONDENSERS

 ated voltages. High tension pillar terminals th lock-nuts and solder lug

| Cat. No. | Type | Mfd. | Whg.V. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13462 | 609 | 1 | 600 | \$2.06 |
| A13463 | 609 | 2 | 600 | 2.50 |
| A13464 | 609 | 4 | 600 | 3.23 |
| A13465 | 1009 | 1 | 1000 | 2.20 |
| A13466 | 1009 | 2 | 1000 | 2.94 |
| A13467 | 1009 | 4 | 1000 | 3.67 |
| A13468 | 1509 | 1 | 1500 | 2.65 |
| A13469 | 1509 | 2 | 1500 | 3.67 |
| A13470 | 1509 | 4 | 1500 | 5.00 |
| A13471 | 2009 | 1 | 2000 | 3.23 |
| A13472 | 2009 | 2 | 2000 | 3.82 |
| A13473 | 2009 | 4 | 2000 | 5.29 |
| A13474 | 2509 | 1 | 2500 | 4.70 |
| A13475 | 2509 | 2 | 2500 | 7.64 |
| A13476 | 3009 | 1 | 3000 | 7.06 |
| A13477 | 3009 | 2 | 3000 | 8.82 |



TYPE 1650-1000 VOLTS

| Cat. No. | Cap. | NET | Cat. No. | Cap. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A13525 | .00005 |  | A13530 | . 001 | 35 c |
| A13526 | . 0001 |  | A13531 | . 006 | 59 c |
| A13527 | . 00015 | 35 c | A13532 | . 01 | 82c |
| A13528 | .0025 |  | A13533 | . 02 | \$1.09 |
| A13529 | . 0005 |  | A13534 | . 05 | 2.26 |

TYPE 1651-2500 VOLTS

 | A13536. 00025 |
| :--- |
| A13537. | A13537.0005

TYPE 1652-5000 VOLTS
 A1554 .0001 A13546.0005


Accepted by Amateurs everywhere for all types of transmitter and receiver circuits. Ideal for use as by-pass condensers, in R.F. circuits, as ruby mica dielectric. Accurate to within $10 \%$

1000 V. DC TEST 2500 V. DC TEST

| No. Mfd. NET | No. Mfd. NET |
| :---: | :---: |

A7650 .00005 $\$ 0.24$ A7651 . 0001 $\begin{array}{ll}\text { A7652 } & .00015\end{array}$ A7653 . 00025 A7656 . 00025 A7658 . 001 $\begin{array}{ll}\text { A7658 } & .001 \\ \text { A7659 } & .0015\end{array}$ $\begin{array}{ll}\text { A7660 } & .002\end{array}$ A7661 . 003 A7662 . 004 A7663.005 A7664.006 A7665 . 008 A7667. 01 A7668 . 015 A7666 . 02 A7669 . 025 A7655 . 03 A7671. Net, per palr cilps.

## HYYOL "09" SERIES

Hermetically sealed in welded steel can; equipped with uniright or inverted mounting. Dielectric is selected paper oil-impregnated with vol. the new super-dielectric heavy-duty requirements or for continuous service. Compact in size; conservatively rated for continuous service at

## SANGAMO MICA TRANSMITTING CONDENSERS

HYVOL "05" SERIES
Increasingly popular for all transmitter requirements. These units lave pure linen paper dielectric, mpl miled and hive with Hy conservative for continuous operation. Hermetically sealed in opera aluminum containers. Terminals equipped with lock nuts and solder lugs are adequately insulated by means of high-tension pillars Mounts upright or inverted. An exceptionally high-grade transmitting condenser. With ring mount.


| Cat. No. | Type | Mfd. | Wkg. V. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13510 | 605 | 1 | 600 | \$1.47 |
| A13511 | 605 | 2 | 600 | 1.91 |
| A13512 | 605 | 4 | 600 | 2.65 |
| A13513 | 1005 | 1 | 1000 | 1.62 |
| A13514 | 1005 | 2 | 1000 | 2.20 |
| A13515 | 1005 | 4 | 1000 | 2.79 |
| A13516 | 1505 | 1 | 1500 | 2.06 |
| A13517 | 1505 | 2 | 1500 | 2.79 |
| A13518 | 1505 | 4 | 1500 | 3.53 |
| A13519 | 2005 | 1 | 2000 | 2.65 |
| A13520 | 2005 | 2 | 2000 | 2.94 |
| A13521 | 2505 | 1 | 2500 | 3.53 |
| A13522 | 2505 | 2 | 2500 | 5.88 |
| A13523 | 3005 | 1 | 3000 | 5.29 |

## SPRAGUE OIL-FILLED X-MITTING CONDENSERS

## WITH "LIFEGUARDS

New oil-impregnated and oilfilled transmitting type filter condensers with "Lifeguard" terminal caps for safety. Her-
metically sealed metal conmetically sealed metal containers with universal type
clamps to permit either upclamps to permit either up-
right or inverted mounting. $\stackrel{\text { right or inverted mounting }}{\text { Sclected }}$
 Spracol, thus providing conser Spracol, thus pror tension type porcelain stand-off terminals equipped with "Lifeguard" rubber protectors.

| t. | Type | Mfd. | Wkg. V. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13333 | CR-16 | 1 | 600 | \$2.06 |
| A13334 | CR-26 | 2 | 600 |  |
| A13 | CR-46 | 4 | 600 |  |
| 3 | CR-11 | 1 | 1000 |  |
| 13337 | CR-21 | 2 | 1000 |  |
| 339 | CR-41 | ${ }_{1}^{4}$ | 1500 |  |
| 334 | CR-215 | 2 | 1500 |  |
| 3 | CR-415 | 4 | 1500 |  |
|  | CR-12 | 1 | 2000 |  |
| 3343 | CR-22 |  | 2000 |  |
| 3344 | CR-42 | 4 | 2000 |  |
| 3345 | CR-125 | 1 | 2500 2500 |  |
| A13347 | CR-13 |  | 3000 |  |
| A13348 | CR-23 |  | 3000 | . |

## 'LIFEGUARDS'" ONLY

Available separately for use on high voltage terninals on filter condensers, transformer taps, etc Made of high-voltage insulation
slotted to fit over lugs, connectors feed-thru and standof insulators. etc. Here's your chance to cover up those ex posed high voltage points for maximum safety.
A13349. ${ }^{\prime}$ NETR
15.

## LOW-COST KNIGHT OIL-IMPREGNATED CONDENSERS

These hermetically sealed,oilThese hermetically sealed, oilare a real "buy" for any Amateur. No effort has been spared to include every detail of adrials, and careful assembly. Built for naximum service
$\qquad$ A7673 0001 50.41 A7674 . 0002 A7676 00025
47677 .0001
A7678 . 002 A7679 . 004 $\begin{array}{llr}\text { A7680 } & .005 & \mathbf{1 . 9 1} \\ \text { A7681 } & .006 & 1.03\end{array}$ $\begin{array}{ll}\text { A7682 . } 008 & 1.32\end{array}$ 5000 V. DC TEST A7975 .00005 50.53 A7976 . 0001 $\begin{array}{ll}\text { A7977 } & .00015 \\ \text { A7978 } & .00025\end{array}$ $\begin{array}{ll}\text { A7978 } & .00025 \\ \text { A7979 } & .0005\end{array}$ $\begin{array}{ll}\text { A7980 } & .001\end{array}$ $\begin{array}{ll}\text { A7981 } \\ \text { A7982 } & 002\end{array}$ $\begin{array}{ll}\text { A7982 } & .003 \\ \text { A7983 } & .005\end{array}$ A7984 .01

We can also supply 2500 and 5000 Volt Sangide, suitable for panel mounting ats on one tional cost. Specify when ordering.

## CORNELL-DUBILIER

## "TJU" SERIES FILTER

## CONDENSERS

Always a favorite with build ers of transmitting equipinent crs of transmitting equipinent,
these new "TJU' units reprethese new increased value ats repre tra cost. Hermetically graled in non-corroslve steel contain ers. Selected dielectric imprep
nated in Dykanal Voltage ratines are scrvative Universal bracket supplied for up right or inverted mounting

| Cat. No. | Mid. | Wkg. Volts | NET |
| :---: | :---: | :---: | :---: |
| A13555 | 1 | 600 | \$2.06 |
| A13556 | 2 | 600 | 2.50 |
| A13557 | 4 | 600 | 3.23 |
| A13558 | 1 | 1000 | 2.20 |
| A13559 | 2 | 1000 | 2.94 |
| A13560 | 4 | 1000 | 3.67 |
| A13561 | 1 | 1500 | 2.65 |
| A13562 | 2 | 1500 | 3.67 |
| A13563 | 4 | 1500 | 5.00 |
| A13564 | 1 | 2000 | 3.23 |
| A13565 | 2 | 2000 | 3.82 |
| A13566 | 4 | 2000 | 5.29 |
| A13567 | $\frac{1}{2}$ | 2500 | 4.70 |
| A13568 | 2 | 2500 | 7.64 |
| A13569 | 1 | 3000 | 7.06 |
| A13570 | 2 | 3000 | 8.82 |

## 'TLA" SERIES

Especially designed for heavy-duty service in transmitter or power audio ampliner power supplies. Hermetically sealed in inverted type round aluminum containers; ideal for use where space is limited. Diameter of can is only $11 / 2^{\circ}$. Dielectric is se-
lected paper, impregnated and filled ected paper. impregnated and niled
with Dykanol. Single hole mount with stud and lock nut. Center lead insulated terminal type; metal can is negative connection; insulated SUPPLY all c-D transmitting condensers not listed here, on specfal order. Write for complete
C-D catalog.

| Cat. No. | Mfd. | Volts | NET |
| :---: | :---: | :---: | :---: |
| A13575 | 2 | 600 | S 1.62 |
| A13576 | 3 | 600 | 1.91 |
| A13577 | 4 | 600 | 2.20 |
| A13578 | 1 | 1000 | 1.47 |
| A13579 | 2 | 1000 | 1.91 |
| A13580 | 1.5 | 1500 | 1.76 |
| A 13581 | 1 | 1500 | 1.91 |

## FAMOUS GENERAL ELECTRIC PYRANOL

## CAPACITORS

Attractive, durable transmitting condensers of the best quality. These condensers will give excep tional service and long life. Filled and treated With Pyranol, a non-in-
flammable, non-explosive fammable, non-explosive substance of unusual die lectric qualities. Hermet
ically sealed, with por
Equipped with mounting flanges for easy up right mounting

| No. | Model | Mfd. | Volts | NET |
| :---: | :---: | :---: | :---: | :---: |
| A5400 | 23 F 1 | 1 | 600 | \$ 2.06 |
| A5401 | 23F2 |  | 600 | 2.50 |
| A5402 | 23F4 | 4 | 600 | 3.23 |
| A5403 | 23F10 | 1 | 1000 | 2.20 |
| A5404 | 23F11 | 2 | 1000 | 2.94 |
| A5405 | 23F13 | 4 | 1000 | 3.67 |
| A5406 | 23 F 20 | 1 | 1500 | 2.65 |
| A5407 | 23F21 | 2 | 1500 | 3.67 |
| A5408 | 23 F 23 | 4 | 1500 | 5.00 |
| A5409 | 23F30 | 1 | 2000 | 3.23 |
| A5410 | 23F31 | 2 | 2000 | 3.82 |
| A5411 | 23F33 | 4 | 2000 | 5.29 |
| A5 112 | 23F39 | 1 | 2500 | 4.70 |
| A5413 | 23F40 | 2 | 2500 | 7.64 |
| A5414 | 23F41 | 4 | 2500 | 10.58 |

G. E. Pyranol Transmitting Capacitors are available in voltage ratings up to 5000 volts

# Transmitting Equipment 

FAMOUS CARDWELL TRANSMITTING CONDENSERS

' X " LINE DUALS


AIRGAP VOLTAGES: 1000 V . for $.030^{\circ}$ gap; 3500 V . for $.070^{\prime \prime}$ gap; 4000 V for $.084^{\prime \prime}$ gap;
4250 V for $.100^{\prime \prime}$ gap; 4750 V . for $.125^{\prime \prime}$ gap; 4250 V. for $.100^{\prime \prime} \mathrm{gap} ; 4750 \mathrm{~V}$. for $.125^{\prime \prime}$ gap
5250 V . for $.171^{\prime \prime}$ gap; 6000 V . for $.200^{\prime \prime}$ gap 5250 V. for $171^{\prime \prime}$ gap; 6000 V .
6750 V . for $230^{\prime \prime}$ gap.

"T" LINE SINGLES Accurately built heavy-
duty condensers for highduty condensers for high-
power transmitting purpower transmitting pur plates (rounded edges for minimum loss and maximum peak voltage). $3 / 8^{\prime \prime}$ shafts, and built in mounting feet.

| Cat. No. | Type No. | $\begin{array}{c}\text { Cap. } \\ \text { Mmf. }\end{array}$ | $\begin{array}{c}\text { Air } \\ \text { Gap }\end{array}$ | NET |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | $\begin{array}{lllllll}13656 & \text { TI-315US } & 315 & & .168^{\prime \prime} & \$ 19.20 \\ \text { A13661 } & \text { TL-80US } & 80 & .294^{\prime \prime} & 13.20 \\ \text { A13663 } & \text { TL-160US } & 160 & .294^{\prime \prime} & 18.00 \\ \text { A13665 TZ-40RS } & 40 & .500^{\prime \prime} & 14.40\end{array}$ | A 13665 TZ-40RS | 40 | $.500^{\circ}$ | 14.40 |
| :--- | :--- | :--- | :--- | :--- |
| A 13666. TZ-80RS | 80 | $.500^{\circ}$ | 19.20 |

"T" LINE DUALS

| Cat. No. | Type No. | Mrnf. per Sec. | Air Gap | NET |
| :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A13673 }}$ | TL-50UD | 45 | .2947 | \$15.00 |
| A13674 | TL-70UD | 70 | . $2944^{\prime \prime}$ | 17.40 |
| A13675 | TI-100UD | 94 | . $294^{*}$ | 20.70 |
| A13677 | TKD-100UD | 110 | . $350{ }^{*}$ | 26.40 |
| A13678 | TZ-40RD | 40 | ${ }^{.} 500^{\prime \prime}$ | 21.60 |

 diameter. NET ments. Positive and dependable.
AI 3698 . NET

MIDWAY SINGLES
 Sturdily built. com pact, variable condensers for receivers and low-power X'mitters. frames are carefally machined and finished. Mycalex insulation. Double bearings assure perfect alignment.
Shaft. $1 / 4 \times 1^{*}$. Mounting space. $3 \times 21 / 8$.


## MIDWAY DUALS

Similar to above. For receivers and X'mitters.

| Cat. No. | Type No. | $\begin{gathered} \mathbf{M m f} \\ \text { per } \\ \text { Sec. } \end{gathered}$ | Air Gap | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13615 | MR-25BD | 25 | .030 | \$2.61 |
| A13616 | MR-50BD | 50 | . $030{ }^{\circ}$ | 2.82 |
| A13617 | MR-70BD | 70 | .030* | 2.94 |
| A13618 | MR-150BD | 150 | 030 | 3.18 |
| A13619 | MR-100BD | 100 | . $030{ }^{\circ}$ | 3.06 |
| A13620 | MR-260BD | 260 | .030* | - |
| A13621 | MT-20GD | 20 | $070^{\prime \prime}$ |  |
| A13622 | MT-35GD | 35 | 070* | 3.60 |
| A13623* | MT-50GD | 50 | $070^{*}$ | 3.8 |
| A13624* | MT-70GD | 70 | .070 | 4.20 |
| A13625* | MT-100GD | 100 | .070 | 4.80 |
| A13626* | MO-180B D | 180 | .050" | 4.80 |
| *Rounded Plate Edges. |  |  |  |  |
| AIRGAP VOLTAGES: 1000 V . for $.030^{\circ}$ gap; 1500 V . for $.050^{\circ} \mathrm{gap} ; 3000 \mathrm{~V}$. for $.070^{\prime \prime}$ gap. |  |  |  |  |
| DISC TYPE NEUTRALIZING |  |  |  |  |
| CONDENSERS |  |  |  |  |
|  | TYPE ADN. For low capacity tubes such as 808, 834, RK-30, T-55, etc. With $1 / 2^{*}$ Alsimag pillars. Cap range: |  |  |  | A13681.

1.80

TYPE B DN. Cap range: 2-12 Mmf. For such Alsimag pillars. Similar to Type ADN but


## HIGH FREQUENCY NEUTRALIZING CONDENSERS



Especially designed for new
low capacity tubes. Mycalex

TRIM-AIR MIDGETS
For all uses where high-qual ty midgets are required. Ri sembly assures greatest stability and minimum losses. Universal mounting facilities. Can be used as midget tuming condenser or for low power neutralization. Can easily be ganged

| Cat. No. | Type No. | Cap. <br> Minf | Air | Gap |
| :---: | :---: | :---: | :---: | ---: | NET

Double-bearing; two end plates.
$\dagger 2$ segment stator for 5 meter circuits.
A13742. Mounting Bracket. NET..... 6 C A13743. Mounting Posts, per pair. NET. 8 C

DUAL TRIM-AIRS
For use in low and medium power transmitter stages, receivers, portable equipment,
etc. Small and compact, requiring minimum space
mounting. All units with insulated coupling particularly suited for use as neutralizing condensers for push-pull RF stages.

| Cat. No. | Type No. | Mmf. per Section | Air | NET |
| :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { A13641 }}$ | EU-75AD | 75 | .020* | \$1.98 |
| A13642 | EU-100AD | 100 | . $020^{\circ}$ |  |
| A13643 | EU-140AD | 140 | .020" |  |
| A13644 | ER-10AD | 10 | . $030{ }^{*}$ |  |
| A13645 | ER-15AD | 15 | . $030^{\prime \prime}$ |  |
| A13646 | ER-25AD | 25 | . $030^{\prime \prime}$ |  |
| A13647 | ER-35AD | 35 | . $030^{\circ}$ |  |
| A13648 | ER-50AD | 50 | . $030^{\circ}$ |  |
| A13649 | ET-15AD | 15 | .070 ${ }^{\circ}$ |  |
| A13654 | ET-15ADI | Coup. |  |  |
| A13650 | ET-30AD |  | $070^{\circ}$ |  |
| A13651 | ET-30ADI | Insul. Coup. |  |  |
| A13652 | ES-4SD |  | $140^{\prime \prime}$ |  |
| A13653 | ES-4SDI | Insul. Coup. |  |  |
| A13655 | ES-7SDI | Insul. Coup |  | 2. |

## U.H.F. DUALS Ultra high-frequency. low-loss dual condensers low-loss dual condensers for 5 and 10 meter Xmitters and for us diathermy machines. <br> | Cat. No. | Type No. | Cap. | Mirf. | Gap |
| :---: | :---: | :---: | :---: | :---: |
| M13 | NET |  |  |  |
| A13 | NE5 | NP-35ND | 35 | $.084^{n}$ |
| A13738 | NP-35DD | $35^{*}$ | $.084^{\prime \prime}$ | 3.60 |
| A13739 | NT-50GD | 50 | $.070^{\circ}$ | 3.60 |

AIRGAP VOLTAGES: 5500 V . for $168^{\prime \prime}$ gap; 6000 V. for $.200^{\prime \prime}$ gap; 8000 V . for $.294^{\prime \prime}$ gap;
9000 V . for $.350^{\prime \prime}$ gap; $12,500 \mathrm{~V}$. for $.500^{\prime \prime}$ gap.

## FLEXIBLE COUPLINGS

TYPE A. Small but efficient coupling. Fits $1 / 4^{\prime \prime}$ shafts. No back-lash
Isolantite insulated. $11 / 2^{\prime \prime}$ diameter. AET 1383.

36 TYPE C. Heavy-duty unit, $15,000 \mathrm{~V}$. Peak inser TYPE E. Similar to Type C but smaller. 11/2"

TYPE ARL ROTOR LOCK
For use with any condenser having $1 / 4^{\prime \prime}$ shaft where dial or knob ad justment from front of panel
is not required. Perinits locking condensers rigidly in position after making circuit adjust
36. insulated. Have bracket for panel mounting; slotted shaft for screwdriver adjustment
and locking device on rotor. Heavy buffed plates with rounded edges.

Cat. No. $|$| Type No. | Mmp. | Gir | Gap |
| :--- | :--- | :--- | :--- |

 *Ganged neutralizer with insulated coupling; data given is per section.

$\left\{^{9}{ }^{9}\right.$
TYPE "M" BRACKET Originally designed for use in condensers. but also suited for use mounting to chassis. 12.

We can supply the complete line of Card well condensers for recelving or transmityou requirements. if the particular us the Cardwell type number or give us specifications, and we shall be glad to quote prices promptly for urits desired.

## TYPE "J" PLUG-IN CONDENSERS

Plug-in type fixed capacity condencapacity for operation on low-frequency bands. Ideal for tank capacity loading in 10 and 20 meter igs for operation on 80 and 160 meters. Type JR-750-OS eapecially suited for loading capacity in grid circuit of high-stability electron coupled oscillators. All fit jack base listed below

| No. | o. | Cap. | Gap. | N |
| :---: | :---: | :---: | :---: | :---: |
| 3 | JCO-50-OS | 50 | . $250{ }^{\circ}$ | \$3.3 |
| A13692 | JCO-25-OS | 25 | 250 ${ }^{\circ}$ |  |
| A13693 | JD-80-OS | 80 | .125" |  |
| 4 | JD-50-OS | 50 | .125" |  |
|  | D-25-OS | 25 | .125" |  |
| 6 | R-750-OS | 750 | . $030 \times$ |  |

## JACK BASE FOR "J" UNITS

For mounting all $J$ units listed directly above. Alsimag 196 base $23 /$ " $^{\text {s }}$ square with four jacks for quick insertion or removal of "J" ware.
A13697. NET


y UET.

# Transmitting Equipment 

FAMOUS E. F. JOHNSON TRANSMITTING PRODUCTS

## 

## STANDOFF INSULATORS

Made of a superior grade of low absorption high glaze porcelain. Heavy breakage-resistant bases. All hardware is of nickel-plated brass. Finish is white glaze. " $J$ " indicates jack type.

| cat. <br> No. | Type | Fig. | Body Hgt. | Hardware | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A13750 | 20 | A | 1\%** | 10.32 | 8 c |
| A13751 | 20 J | ${ }^{\text {B }}$ | 19/6" | 743 | 10 c |
| A13752 |  | A |  | $8-32$ 745 |  |
| A13753 | 22 J | ${ }_{\text {B }}^{\text {B }}$ | 15. | 74 J 6.32 | 71/2c |
| A13754 | 24 60 | ${ }_{\text {A }}^{\text {A }}$ | 4/\%" | - 6 | 4.1. ${ }^{\text {c }}$ c |
| A13755 | 62 | C | 23). | - | 21c |
| A13757 | 65 | D | 13/8. | 10-32 | 12 c |
| A13758 | 653 | D | 13/8. | 74 J | 15 c |
| A13759 | 66 |  |  |  | 21 c |
| A13760 | ${ }_{67} 6 \mathbf{J}$ | D | 23, ${ }^{\circ}{ }^{\circ}$ | ${ }^{761}$ | 29 c 32 c |
| A13761 | 67 | D | 41/2: | 1/4-20 | 32 c |
| A13762 | 67 J | D | $41 / 2^{\circ}$ | 76J | 41 c |



## PORCELAIN

 CONESMade of high-grade, white glaze, low absorption porcewith Furnished screws, top and bottom, and with cushion washer. Deeply threaded for maximum strength. Require only one hole for mounting. Of exceptional quality.

| Cat. No. | Type | Fig. | Body $\mathbf{H g t} \text {. }$ | Thread | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A13765 | 600 | A | 5/80 | 6.32 | 7 c |
| A13766 | 601 | A | 1 1. | 8-32 | $81 / 2 \mathrm{c}$ |
| A13767 | 601 J | B |  | 743 | 111/2c |
| A13768 | 602 | A | $11 / 2{ }^{\prime \prime}$ | 8-32 | 11 c |
| A13769 | 602J | B | $11 /{ }^{*}$ | 74 J | 14 c |
| A13770 | 603 | A |  | 10-32 | 15 c |
| A13771 | 603J | B | ${ }^{2}$ * | 74J | 18 c |
| A13772 | 604 | A | 3. | 10.32 | 21 c |
| A13773 | 604J | B | 3* | 76 J | 29 c |

## ALSIMAG 196 CONES

Similar to porcelain cones above but of Alsimag 196 for use at high frequencies. With machine screw top and bottom and cork washer.

| Cat. No. | Type | Fig. | Body Hgt. | Thread | NE |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A13775 | 500 | A | 5/8' | 6-32 | 12c |
| A13776 | 501 | A | $1{ }^{\circ}$ | 8 8-32 | 18 c |
| A13777 | 502 | A | 11/2" | 8-32 | 24 c |
| A13778 | 503 | A |  | 10.32 | 29 c |
| A13779 | 504 | A | 3 | 10-32 | 47 c |



## THRU-PANEL INSULATORS

Have high mechanical strength with long leak age paths. Made of white glaze porcelain. Flat mounting surface and cushion washers.

| Cat. Ne. | Type | Fig. | Top Hgt. | Panel Hole | Hard ware | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A13780 | 40 | A | 11/4. | 1/2' | 10-32 | $15 c$ |
| A13781 | 40 J | B | 1/4. | $1 / 2$ | 74 J | 18 e |
| A13782 | 42 | A | 7/8* | 7/16" | 10-32 | 12c |
| A13783 | 42 J | B | 7/8" | 710\% | 74 J | 15 c |
| A13784 | 44 | A |  | 5/10* | 6-32 | 10c |
| A13785 | 45 | C | $13 \%$ | $9{ }^{\circ}$ | 10-32 | 21 c |
| A13786 | 45J | C | $13 / 8{ }^{\prime \prime}$ | , | 74 J | 24 c |
| A13787 | 4576J | C | $13 / 8{ }^{\prime}$ |  | $76 \mathrm{~A}-\mathrm{J}$ | 32 c |
| A13788 | 46 | A | 23/4* | 3 " | $1 / 4-20$ | 38 c |
| A13789 | 46 J | A | 23/4, | 3/4. | 76 J | 47 c |
| A13790 | 47 | A | $41 /{ }^{\prime}$ | 1118" | $1 / 4-20$ | 56 c |
| A13791 | 47 J | A | 4/1/2 | 11/16* | 761 | 65 c |

## THREADED BRASS ROD

For use with standoff insulators, through-panel and lead-in bushings. Nickeled; thread $1 / 4-20$. A13802. Type 240. $8^{\circ}$ long. NET. 15 c A13803. Type 241. 10" long. NET.. 18 c


## LEAD-IN BUSHINGS

Have many applications in transmitter and antenna installations. Type 55 is Alsimag 196 others are white glaze porcelain. Types 50,51 52 and 55 have nickeled brass rod and nuts.

| Cat. No. | Type | Fig | Hgt. | Dia. | Panel Hole | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A13793 | 50 | D | $1 / 3$ " | $3 / 4$. | \%' | 12c |
| A13794 | 51 | D | ${ }^{13 / 16}{ }^{\text {a }}$ 。 | $11 / 7^{\circ}$ | $1{ }^{1}$. | 21 c |
| A13795 | 52 | D | $11 / 8$. | 13, ${ }^{1,}$ | 11\%: | 29 c 18 c |
| A13796 | 53 54 | ${ }_{\text {A }}$ | 4 ${ }^{1 / 4}$ | $31 / 2{ }^{\circ}$ | 23\% | 18 c 41 c |
| A13798 | 55 | C | 1/4. | 3/4. | 1/2. | 18 c |


| MOUNTING FLANGES |  |  |  |
| :---: | :---: | :---: | :---: |
| No, | Type | For Bushing | NET |
| Nor |  |  |  |
| A13800 | 90 | Type 53 | 15 c |
| A13801 | 91 | Type 54 | 29 c |
|  |  |  |  |

## ANTENNA INSULATORS

High-grade, wet process, white glazed porce-
lain. Low moisture absorpton; long leakage path. 1 " diameter; famous for quality. A 13805 . Type 107. $7^{\prime}$, long. NET. 41 c A1 $3806{ }^{\circ}$. Type 112. $12^{\prime}$. long. NET. 53 c

## STRAIN INSULATORS

White glaze low absorption porcelain. ype 32 is for wires or receiving Jonmson antennas. Type 38 signed for R.F. use.
Cat. No. Type Fig. Lyth. EACH 10 for
 A13809


## FEEDER

## SPREADERS

For use in all types of feeder lines, either transposed or non-transposed. Made of low absorption
Type 31 (Fig. B) prevents twisting. Others are $3 / 8^{\circ} x^{1 / 2}$ " bars. Used by Amateurs everywhere. Cat. No. Type Fig. Length NET


JOHNSON JACKS \& PLUGS



A complete line of highest quality jacks and plugs. Banana type plugs have nickel silver springs; spring sleeve type lacke are nickeled brass with phosphor bronze springs. 77A and
73 A plugs have long screw for mounting on ceramic coil forms.

| Cat. No. | Type | Length | Thread | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13815 | 74 | 11/16" | 1/4-20 | 4 c |
| A13816 | 75 | 3/4" | 6-32 | $41 / 2 \mathrm{c}$ |
| A13817 | 75A | $1{ }^{3 / 4}$ | $6-32$ $6-32$ | ${ }_{5}^{41 / 2}$ |
| A13818 ${ }^{\text {A13819 }}$ | ${ }_{76}^{75}$ | $13 /$ | 6-32 | -5c |
| A13819 | 77 | 13/8; | 3/6-24 | 15 c 12 c |
| A13822 | 77A | $11 / 8{ }^{\circ}$ | 10-32 | 15 c |
| A13823 | 70 | $11 / 2^{\circ}$ | 1/4-20 | 21 c |
| A13824 | 71 | 11/8* | 1/7-28 | $81 / 2 \mathrm{c}$ |
| A13837 | 72 | $11 / 8{ }^{\prime}$ | 10-32 | 15 c |
| A13838 | 73 |  | 10-32 | $41 / 2 \mathrm{c}$ |
| A13839 | 73A | 1 . | 10-32 | $41 / 2 \mathrm{c}$ |

TYPE "N" NEUTRALIZING CONDENSERS
Developed for use with low C tubes Plates are polished aluminum cyl inders with high maximum to mini mum capacity ratio. Have micro meter adjust ment; airgap remains con stant. Alsimag 196 Insulation. Mount je
vertically or horizontally. vertically or horlzontally.

| Cat. No. | Type | Capacity |  | Air Gap | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Max. | Min. |  |  |
| A13840 | N125 | 12 | 2.5 | .125* | \$2.6 |
| A13841 | N250 | 12 | 3 | .250* | 2.8 |
| A13842 | N375 | 12.75 | 3.5 | . $375^{*}$ | 3.5 |

" $\mathrm{G}^{\prime \prime}$ CONDENSERS Designed to provide lowest possible minimum capacity, these condensers are suitable for use with
most low C tubes. Plates mose polished aluminum with buffed and rounded edges. End plate is of Alsimag 196. With locking device

| Cat. No. | Type | Capacity |  | Air Gap | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Max. | MIn. |  |  |
| A13843 | 50G20 | 52 | 5 | .045" | \$1.65 |
| A13844 | 25 G 20 | 27 | 3.5 | . $045^{\circ}$ | 1.47 |
| A13845 | 23G45 | 23 | 6.3 | . $125^{\prime \prime}$ | 1.65 |
| A13846 | 13 G 45 | 13 | 4.3 | .125** | 1.47 |
| A13847 | 8 G 45 | 7.5 | 3 | .125** | 1.34 |
| A13848 | 12G70 | 12 | 5.3 | 225* | 2.20 |
| A13849 | 6G70 | 5.5 | 3 | .225* | 1.76 |

## SHAFT COUPLINGS

Flexible insulated shaft coupling with phosphor-bronze springs and absolute freedom from backlash Insulated with Alsimag 196. Maxifrom flashover.


| Cat. No. | Type | Shaft | Diam. | NET |
| :---: | :---: | :---: | :---: | :---: |
| A13825 | 250 | $1 / 4 x^{1 / 4}$ | 13/8" | 47 c |
| A13826 | 251A | 1/9x1/4 | 21/4. | 82 c |
| A13827 | 251 B | 1/8×3/8 | $21 \%$. | 82 c |
| A13828 | 251 | $3 / 8 x^{3 / 8}$ | 21/* | 82 c |



Solid shaft couplings for use where extension shaft is necessary without flexibility. Type 252 is insulated with Alslmag 196; leakage path $11 / 0^{\circ}$. Type 258 is cadmium-plated.
A1,3830 "Type 252. Overall length $13 / 3 z^{\prime \prime}$. NET....... For $1 / 4^{*}$ shaft.
44.

A 13831. Type 258 . Compression type ©
coupling for $1 / 4$ shaft. NET............

## FLEXIBLE SHAFTS

Non-rusting phosphor-
bronze fexible shafts with $1 / 4^{\circ}$ hubs. Perm control of condensers. etc.. offset or at angles up to 90 degrees. Hubs will not loosen.
A13832. Type 253. 3* length. NET. 21 c


PANEL BEARING \& EXTENSION
For use with rigid or flexible shaft couplings. bushing only. Of cadmium-plated brass. Cat. No. Type Shaft Length NET A13834
A13835
A13835
A13836
$\begin{array}{ll}256 & 3^{\prime} \\ 257 & 6^{\prime}\end{array}$
$18 c$
$24 c$

## JOHNSON

 SOCKETSA6140. UX BASE.
For type 10 , or similar ain insulation; heavy spring contacts. List, 85 c


A6141,50 Watt socket. Porcelain base springs. Cadmium plated
List, \$1.25. NET

FAMOUS "MAC-KEYS"
 DELUXE MAC-KEY
The finest of the Mac-Keys Mac-k eys.
Huge cast base Huge cast base with black
marble finish. Metal part
ished. Has patented dot stabilizer; 3/s silver contacts; circuit closing switch. Built for smooth, non-tiring operation at any speed.

s9.50

## STANDARD MAC.KEY

Heavy cast base anchors key firmly to table. Contact points perfectly alignable. Vibration less and stutter-proof. Non-tiring. A7968. NET
\$7.50

## MAC STRAIGHT KEY

A well-balanced, sturdily constructed straight key for use in all types of radio or wire transmission circuits. Perfectly balanced arm with less. Will not slide around
${ }^{\text {s }} 1.50$


## THE MAC

 OSCILLATORAn efficient audio os cillator for learning code. In bakelite case. Tone adjustable at cycles. Ideal for beginners who find it hard to learn to receive code signals over the air. Also Supplied Wt., 2 lbs. For 110 V., A.C. or D.
A7970. NET
\$5.95

## MAC HUMMER

A simple but entirely efficient mechanical audio oscillator, desisned for self-instruction in the Morse and Telegraph codes. Will produce a 1000 cycle note as clear as a bell. Requires a words per minute A 7971 . NET.
${ }^{\$} 1.50$

## MAC PRACTICE SET



A combination of A7969 and A7971 "Straight Key" and mechanical "Hummer on one huge base. Excellent fo
the code. A useful practice set A7972. NET
s2.95
CODEPRACTICE SET


A Signal key and adjustable buzzer on a wood base. Produceshighpitched code signals. An excellent
code instruction. A fine value A7703. NET.
s2.00


NAVY KEY KNOBS
Molded of black insuloid For easy keying. $5 / /^{\prime \prime}$ high; $19 / 16$ dia. of lower skirt.
$8-32$ screw. Relieves finger ,atasue A5730. NET

## GORDON DX WORLD CLOCK



A modernistically declally developed for the Amateur and Short-Wave DX fan. Has multiple colored dials which tell the time accurately in GMT and Standard time in any
part of the world. Selfpart of the world. Self-
starting genuine $W$ altham movement for $110 \mathrm{~V} ., 60$ cycles Alo133. NET.
s8.82

## SPEED-X KEYS

NO. 300 Well-made low-cost practice key for beginners. Base is
 walnut finish. Ali machine parts finished in nickel; contacts are coin silver. Easy action arm with tension and contact space adjustments. A7960. NET
$88 c$

## NO. 310

## STANDARD

Skeleton frame
 wrinkle finish base; other parts nickel plated. $1 / \mathbf{s}^{\prime \prime}$ pure silver contacts, Dual adjustments for tension and lever action. \$1,47 A7963. NET
1.47

## NO. 301 AMATEUR'S KEY

Sturdily constructed standard key lite base. All meta parts nickel plated. to arm; no current through bearings. Contacts are of coin silver.

${ }^{5} 1.26$

## NO. 320 HEAVY-DUTY KEY

Has $1 / 4$ inch solid coin silver contacts. Well insulated. Black base. All A7962. NET. $\qquad$ s. 1.91

## 501 HI-SPEED AUTOMATIC

A professional key
fromy 8 adjustable minute to as higt as desired. Wil all speeds. $1 /{ }^{\prime \prime}$ coin
silver contacts. Has silver contacts. Has
adjustable double finger-paddles. Equipped with cord and shorting switch for use in land wire service.
$\$ 10.29$

## NO. 515 AMATEUR KEY

A durable, heavy-duty Speed Key. Statuary bronze moving parts. Base and casting are covered with brown wrlnkle to perfectly match other, parts. Other features same as Hi-speed shorting switch. $\$ 5,4$ A>967. NET
5.44

## SPEED-X BUZZER

A professional constant frequency buzzer. Will hold its adWorks on 2 dry cells, or 1 " C " battery.
 A7966. NET
73.

## RALSTON CODE RECORDS

A complete Radio Code instruction course on three double-side $10^{\prime \prime}$ phonograph records. Makes the Radio Code; helps the Amateur to increase his code receiving speed. Play on any phonograph and regulate the turntable to vary the transmitted code speed to fit your ability to copy
A9992. Complete Record Set $\$ 7.50$
with instructions. NET......... $\$ 7.50$
WORLD TIME CHART
\& S. W. STATION LIST
Indicates time in 122 countries instantly. Lists
111 Short Wave stations. Valuable for the Amateur Valuable for the Amateur and SW listener. ${ }^{\text {A5235. NET. }}$

## JAMES MILLEN GEAR

Watch for the new line of Amateur Equipment pro-
duced by James Millen


## STACO ANTENNA RELAYS

Radio-frequency type antenna change-over relays for use in any antenna system for receiving or transmitting pur-
poses. Will handle 4 A. poses. Will handle 4 A.
through pure silver contacts. through pure silver contacts. all-bearing pive. Core finest Swedish iron. All DPDT types, $31 /{ }^{\prime \prime}$ a molder insulation and base; AMA and AMD have Mycalex insulation and base. No chatter in AC types
$A 13855 . A B A-110 V . A C$
$A 13856 . A B D-6 V . D C$. NETEACH
${ }^{s} 2.55$
A13857. AMA-110 V. AC
Ate tech
s3.45

## BASSETT CONCENTRIC LINE

The simplest and easiest of all transmission lines to install. Completely weatherproof; extremely flexible. Attenuation only. $0008 \mathrm{DB} / \mathrm{Ft} . / \mathrm{MC}$ in any kind of weather. 64 ohm cable
for doublets. stubs, etc., 34 ohm cable for verticals.
A2486. BCF-64-200. Per foot. NET. 5C A2485. BCF-13-1000. Per foot. NET, 7c A 2483 . BCF-64-500. Perfoot. NET. 12 c A2474. BCF-28-1000. Per foot. NET. 11 C A2 484. BCF-34-1000. Per foot. NET. 13 C A2 482. BCF-64-1000. Per loot. NET. 1 FC Stock lengths of Concentric line with weatherproof molded rubber end seal attached.

 \begin{tabular}{l|l|l|l|l|l}
\& BCF-64-200 \& A13887 \& $\mathbf{\$}$ \& 4.00 \& A13892 <br>
BCF-13-1000 \& A13888 \& $\mathbf{5 . 0 0}$ \& A13893 \& $\mathbf{6 . 7 5}$

 

\hline BCF-13-1000 \& A13888 \& 5.00 \& A13893 \& 6.75 <br>
\hline BCF-64-500 \& A13890 \& $\mathbf{7 . 5 0}$ \& A13896 \& $\mathbf{1 0 . 5 0}$ <br>
\hline

 

\hline BCF-28-1000 \& A13886 \& 7.00 \& A138944 \& 9.75 <br>
BCF-34-1000 \& A13889 \& 8.00 \& A13895 \& 11.25
\end{tabular} BCF-64-1000 A13891 $10.00 \mid$ A13897| 14.25 A 13885 . ANTENNA RELAY. Mycalex intype of Bassett Concentric line for switching anterna to receive or transınit. For 110 Volt 60 Cycles A.C. NET.................. $\$ 5.75$

NOTE: We can supply on special order any desired length of any Bassett line with molded rubber end seal at $\$ 1.50$ net extra.

## HYTRON TUBES

Type HY-25. Plate dissipation, Filament, 7.5 V , at 2.25 A. GenOral purpose triode suitable for B Modulator.
A 1240 . NET..... $\$ 1.45$
Type HY-40, Plate dissipation, 40 W . Plate voltage, 1000 V . Filament 7.5 V . at 2.25 A. Triode plifier or Class B Modulator. A124 1
s2.75


Type HY-40Z. Similar to HY-40 but Zero bias triode. For use as R.F. Amplifier or Cla
TYPE HY-615. Ultra-high-frequency type triode for operation up to 300 MC as Os6.3 V . at . 15 A . Plate, 300 V . at 20 MA . max. Plate and grid leads at top.
$\$ 2.00$

| Type | No. | Plate Diss. | NET |
| :---: | :---: | :---: | :---: |
| HY-51A | A1242 | 65 W . | \$3.95 |
| HY-518 | A1243 | 65 W | 3.95 |
| HY-512 | A1237 | 65 W | 3.95 |
| HY-60 | A1245 | 15 W . | 2.50 |
| HY-61 | A1246 | 25 W . | 3.00 |
| 6L6GX | A1238 | 25 W . | 1.25 |
| 866 Jr. | A1247 | Rectifier | 1.05 |
| 866 | A1236 | Rectifier | 1.50 |

GUARDIAN RELAYS
MODEL B-100
For use in break-in circuits, D. P. D. T. type. Will provide
rapid switching from receiving to trans mitting. Heavy mag nets and springs for clean-speed break. Heavy silver con tacts.
s 4.41
A7570. NET
MODEL K100. S.P.S.T. type. Pure silver con tacts break clean. Operates irom 5 to A7571. NET
3.23 MODEL R100. For R.F. circuits up to 1 KK type. For 110 V. 60 cycles. $\mathbf{A} 572$. NET................... MODEL R-100-C. Same as R-100 above, but A곡․ . NET.
\$1.94
MODEL L-250. Overload relay for use in plate M. current circuits. Opens primary circuit 25 reset feature.
s 4.41
MODEL L-500. Same as L-250 but maximum current is $500 \mathrm{M} . \mathrm{A}$. before pri opened. Push-button reset
$\$ 4.41$
MODEL L-750. High power type overload re lay. Opens primary circuit when maximum A 7576 . NET.
$\$ 4.41$
MODEL X-100. Adjustable type overload relay. Can be set to open primary circuit at any Panel type push-button reset. $\$ 5.88$
A7577. NET.............. 8.8 A7577. NET
MODEL A-100. Antenna relays insulated with Alsimag 196. Also for heavy duty primary keying or control. Heavy silver contacts handle up type. For 110 V. 50-60 cycles.
\$3.50 A7553. NET. MODEL A-100-C. Same as A-100 above but A7554, NET
${ }^{\text {s }} 1.94$
MODEL U-100. Sensitive, adjustable type underload relay. Dust-proof housing; quick ad100 to 200 MA . Will brealue. Adjustable from ply delivering up to 500 W ., affording complete protection for Class B modulator stage. A ${ }^{5}{ }^{5} 55$.
${ }^{5} 5.00$
M ODEL U-200. Same as U-100 above, but ad justable over a range of 200 to 400 MA . Highes quality construction.
5.00

Send for complete descriptive literature.



## DUNCO RELAYS

Small, efficient relays for use in all types of remote control circuits. solated contacts provide suitable breakdown gap or use at high voltages. Exfollow semi-automatic keying without splutter or break A7550. Model RA-1. 2.5 volt 60 cycle coil. nay be used as plate circuit relay in exciter A 7551 . Model RA-3. 6.3 volt 60 cycle coil Also suitable for all purposes but especially aperated from tube flament supply.
A7552. Model RD-1. 5 to 6 volt
For use in all types of battery-powered mobile or portable equipment.
$\$ 2.00$


GORDON R. F.

## RELAY

For antenna change-over, multi-band tank switching. or power supply control ciring silver contacts with $1 / 2^{\prime \prime}$ spacing; handles 1 KW eastant action. All RF parts insulated with Alsi mag 196. D.P.D.T. type; no hum or chatter. Operates from $110 \mathrm{~V} .50-60$ cycle A.C. Shpg
wt. 4 lbs . 8.82 A2890. NET

164

## EIMAC TUBES

Designed for heavy-duty service and long life. Plates and grids of tantalum; envelopes of hard No-
TYPE 35 T . A semeral-purpose triode ideally suited for use as oscillator, buffer, or frequency muliplier. Fil., 5 V. at 4 A. Plate, 500 2000 V . Max. plate dissipation. 225 w. per tube. A1130. NET
s. 6.00


TYPE 75T. Low-C, low voltage tube with all typical Eimac features. plus heat-shielded plate
lead. Fij., 5 V . at 6.5 A . Plate, 1500 V . at 175 MA max. Class C power output A1128.
TYPE 100TL A medium-power high-mu. triode for use at any frequency up to 40 MC . Fil.,
5 V . at 6.5 A . Plate, 1000 V . to 3000 V . Max. nower Class C. 300 W. TYPE 100 TH. General-purpose triode. Same as 100 TL, but requires less driving power and lower bias. For diathermy or h.f. \$ 13.50
A1132. NET............... TYPE 250TL. Plate dissipa
p to 750 W . on 250 watts. Class Coutput
A1133. NET AYPE 250TH.
$\qquad$ 24.50 less driving power and lower bias. $\$ 24,50$ A1134. NET TYPE KY21. A mercury vapor rectifier with a control grid for keying.
A 1129. NET......... $\stackrel{\text { rectifier with }}{10.00}$

## SPECIAL TUBE CONNECTORS

Special air-cooled type connectors for plate and grid leads of Eimac and HK tubes. Type R-62 fits grid of $75 \mathrm{~T}, 100 \mathrm{~T}$ and 250 T and plate HK . R-35'5 fits plate cap of 100T, 807, etc
A1136. Type R-62.
$25 c$
A1139. Type R-355. EACH...

## EIMAC VACUUM

 TANK CONDENSERSA new type of vacuum sealed tank condenser for any power from 50 W . to 1 KW. Provides optimum circuit effi ciency at an 000 V . With peak only $61 / 2^{\circ}$ long, $21 \%^{\circ}$ diam. Use in an single-ended or push-pull amplifier for 'Phone. End caps fit standard 60 A. fuse clips A1209. VC6. 6 Mmf . For high $\mathrm{L} / \mathrm{C}$ ratio circuits on 7. 14, and 28 MC . $\$ 7$. $\begin{array}{llll}\text { A } 1210 . & \text { VC12. } 12 \mathrm{Mmf} \text { NET. } & 8.50 \\ \text { A1211: VC25. } 25 \mathrm{Mmf.} \text { NET. } & 10.50 \\ \text { A1212. VC50. } 50 \mathrm{Mmf.} \text { NET. } & 12.50\end{array}$
INSULATED GRID CAPS
A6331. Standard size for recelv


A9971. Table Model in $\$ 3244$ Terms: $\$ 4.83$ down, $\$ 4.84$ mo. for 6 mos A9972. Relay Rack Panel Model with $101 / 2$ x19" black wrinkle steel panel. $\$ 35.00$ Terms; $\$ 4.95$ down, $\$ 4.96$ mo. for 6 mos.

## TRIPLETT AMATEUR <br> TYPE WATTMETER

Provides direct reading of power input to final amplifier stage in A real necessity in rigs running over 900 Watts input. Dyna

 | No. | Watts | Volts | M.A. | NET |
| :---: | :--- | :--- | :--- | :--- |
| A9120 | $0-250$ | 1000 | 250 | $\$ 12.25$ |
| A9121 | $0-500$ | 1500 | 350 | 17.74 |
| A9122 | $0-750$ | 2000 | 350 | 13.72 |
| A9123 | $0-1000$ | 3000 | 350 | 16.66 |
| A9124 | $0-1000$ | 2500 | 400 | 16.01 |

## CENTRALAB SWITCHES

New transmitter switches
with Isolantite insulation for circuit stability and high efficiency
Ideal as crystal selector, in-
 terstage inductance switch, All hava counling switch, etc antenna coupling switch, etc. An have four po
sitions, $90^{\circ}$ apart, and adjustable stop. For any circuit up to 100 watts at potentials up to 1000 V. D.C.

| No. | Gangs | Poles | Positions | NET |
| :---: | :---: | :---: | :---: | :---: |
| A1990 | 1 | 1 | 4 | \$1.00 |
| A1991 | 2 | 2 | 4 | 1.59 |
| A1992 | 3 | 3 | 4 | 2.29 |
| A1993 | 4 | 4 | 4 | 2.88 |
| A1994 | 5 | 5 | 14 | 3.59 |

A1995. Special Dial Plate. Type K-162. For
any of the above switches. NET......... 12 c

ing tubes. B
A6333. Larte size for transmit ting tubes such as 866, etc.

## KNIGHT R.F. CHOKES

## MIDGET TYPE

Very popular with the Amateur and ductance, $21 / 2 \mathrm{M}$. H.; D.C. resistanc Capacity 125 M.A. Universal wind ing in five sections on ceramic core. 13 e
A2163.10 FOR $\$ 1.15$. EACH......


## HEAVY-DUTY TYPES

A2 165 . 5 MH at $500 \mathrm{M} . \mathrm{A}$. Five universal wound section
Res. 12 ohms.
A2166. 2.8 MH at 1000 M . A. Five tapered size universal-wound sections. Ceramic core
Res. 5 ohms. NET:..... 88 c

$$
\text { A } 2167.5 .3 \text { MH at } 500 \text { M.A. Same as }
$$

$$
\begin{aligned}
& \text { but resiatane is } 12.5 \text { ohms. } \\
& \text { NET..................... }
\end{aligned}
$$

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## Trausmitting Eruipment



## TRANSMITTING

 COIL FORMSAn ideal inductance form for other uses. Bakelite body. 21/4* diameter, $31 / z^{2}$ long, with molded finger grip rim. Winding space, $31 / 1^{\circ}$ Ribs extending $1 / 4^{\circ}$ insure
low-loss air-core winding. Grooved forms are threaded 12 turns per inch.


## KNIGHT CERAMIC COIL FORMS

Plug-in coil forms of low-loss ceramic for use in receivers or lowpower stages of transmitters. Rib-
bed type with side slot and holes bed type with side slot and holes
for easy winding. $11 / 2$ diameter.
A2655. 4 Prong. NET 32C A2656: 5 Prong. NET. 35 c


## COIL FORMS

Low-loss coll forms of Insulex. Particularly adapted for high-irequency operation. Threaded for No. 10 wire with plenty of holes for wire and supports. 20 and 40 meter coil forms $21 / 2^{\prime \prime} \mathrm{x} 5^{\circ}$. 80 and 160 meter coil forms $4^{\circ} \times 61 / 2^{\circ}$
45696. Less supporting legs........ $\$ 0.70$ A5697: With supporting legs
.95
FOR 80 AND 160 METERS
A5698. Less supporting legs.
A5699. With supporting legs.
$\$ 1.18$

## FLEXIBLE SHAFT COUPLINGS



For use with any condenser having $1 / 4$ shaft. Flexible phosphor bronze springs. 1 diamete
A6115. Bakelite Type 22c 6116. Cerannic Type. 27 c

## MALLORY-YAXLEY PANEL BUSHING

For use with brass or fibre shafting,


## BUTTON-TYPE FEED-THRU BUSHING

For use wherever it is necessary to pass voltage or R.F. current through metal panels or chassis Low-loss ceramic. $5 / 8^{8}$ diam., with center hole for $6-32$ screw, Fits $7 / 16^{\circ}$ hole.
$20 c$


## TRANSMITTING

 CONNECTORSA6146. JACK. $11 / /^{\prime \prime}$ high. MET
EACH
11.

A6147. PLUG. Fits above jack. $1 / 4$ diameter with $10-32$ $1 / \mathrm{i}^{\circ}$ copper tubing. $3^{\mathrm{c}}$

## STRAIN INSULATOR

A husky, brown porcelain insulator for breaking up antenna guy wires or $21 / 4{ }^{\text {sing }}$ long. $11 / 2^{\prime \prime}$ diam. $21 / 4{ }^{\text {long. }} 11 /{ }^{2}$ diam.
A6 195.10 for 54 c ; EACH. Gc

## LEAD.IN INSULATORS




## MIDGET STAND-OFF

 INSULATORSSmall glazed porcelain units. Inexpensive and efficient insulators or multi-stage rigs. A6142. 2 inches hlgh. Body brass hardware. 6 c A6 $143.13 / 8^{\circ}$ high. Body $1^{\prime \prime}$ with $8-32$ nickel plated brass hardware. 5c
A6144. $13 / 6^{\prime \prime}$ high. Body $1 / 2^{\circ}$ with $6-32$ hardware. A tiny unit. $4 c$


## JACK TYPE

An assembly of $2^{\prime}$ stand-off insulator and light duty jack. For low-power use. Inexpensive and efficient.

## FEED-THRU STAND. OFF INSULATORS

The ideal method of bringing leads theideal method of bringing leads through chassis bases, or through
sub-panels. Sturdy insulators of sub-panels. Sturdy insulators ola accepted for transmitter use.

76
A6 111 1. $7 /$ " high $^{3} 3 / 4^{\circ}$ dla. base. $10 c$
A6 110 11/4' high, $1 / \mathrm{B}^{\circ}$ dia. base.
13.

## JACK TYPE FEED-THRU



Same units as listed above, but fitted with built-in jack on top. Jack fits standard GR plug. fits $7 / 6^{\circ}$ hole $17 c$
A6114.7 c fits ${ }^{7 / 6^{\circ}}{ }^{\circ}$ bole. 13.


## KNIGHT GIANT PANEL FEED-THRU INSULATOR

Made of low-loss ceramic material. Can be used for high voltage feed-t hru, standoff for "tank", circuits, antenna A6 118 . With $1 / 4{ }^{\circ}-20$ screw $2 ?$ A6 117 . As above but with wing nut .35 C

## CARDWELL COAXIAL BEADS

For constructing $3 / 8^{*}$ copper or brass concentric line. Alsimag $196^{\circ}$ beads $.295^{\circ}$ diam. for No. 12 wire. Enough for 50 feet of line A13 $\mathbf{N} \mathbf{H}$ 40. Package of 250 . $\$ 1.38$

## FEEDER

For correct spacing of parallel antenna feeders of the 600 ohms or open wire type. Glazed white porcelain. $1 / 2^{*}$ wide by $1 / 1$ "thick $^{\prime}$ A6218: $331 \circ^{\circ}$ long. NETEACH. $3 c$
$14 c$

## ANTENNA INSULATORS

Made of strong white porcelain. Low capacity and long leakage path. All $1^{\prime}$ diameter
A34 15 . 7 Inches long.
NET EACH
20.

 $39 c$


# JOHNSON "Q" ANTENNAS 



The favorite antenna of leading Amatcurs Provides a considerable increase in radiated power over conventional doublet or Zepp antennas. Accurate matching of line and antenna impedance is provided by use of quarter-wave matching section of aluminum tubing. Can fed in open wire system up severn antenna feet in ength. Includes hard-drawn antenna tubing, " Q " section spacers, and insulators. A 13850.100 .10 Meter Kit. NET. $\$ 4.62$ A13851.200. 20 Meter Kit. NET. 7.20 A1 3853.800 .80 Meter Kit. NET. 24.70 A13854: 5Q. 5 Meter Kit. NET: $4: 12$

## COPPERWELD SOLID

ENAMELED ANTENNA WIRE
Steel core with welded copper covering. High conductivity; no corrosion. Available in con tinuous lengths up to 1500 feet.

| Gauge | 100 Ft. | NET | 200 Ft. | NET |
| :---: | :---: | ---: | :---: | :---: |
| 14 | A13864 | $\$ 0.73$ | A13865 | $\$ 1.45$ |
| 12 | A13867 | 1.12 | A13868 | 22 |
| 10 | A13870 | 1.62 | A13871 | 3.20 |

HARD-DRAWN SOLID
ENAMELED WIRE

| Gauge | 100 Ft | NET | 200 Ft. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 14 | A3455 | 35 c | A3456 | $\mathbf{5 0 . 6 8}$ |
| 12 | A3453 | 53 c | A3454 | .99 |
| 10 | A3450 | 90 C | A3451 | 1.73 |

SOLID TINNED COPPER WIRE

Medium hard-drawn copper wire with heavy tinned coating. Ideal for use in R.F. circuits | Cat. No. | Gauge | 25 Ft | 50 Ft. | $\mathbf{1 0 0} \mathrm{Ft}$. |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{y} 2345$ | 14 | $\frac{13 \mathrm{c}}{}$ | -26 c | 50.50 |

| A2345 | 14 | 13 c | 26 c | 50.50 |
| :--- | :--- | :--- | :--- | ---: |
| A2346 | 12 | 19 c | 38 c | .75 |
| A 2347 | 10 | 25 c | 50 c | 1.00 |

EO-1 TYPE CABLE
Designed to handle any power output up to 2000 watts, 72 ohm surge impedance. Two No. 12 solid copper conductors, cellulose and rub12 solid copper conductors, cellulose and rub-ber-insulated, with overall weatherproof braid. $\begin{array}{llll}\text { No. } & \text { Perfoot } & 100 \mathrm{Feet} & 250 \text { eet } \\ \text { A23 } & 31 / 2 \mathrm{c} & \$ 2.94 & \$ 6.99\end{array}$

## SOFT-DRAWN

## COPPER

TUBING

Made of seamless soft drawn copper, annealed Bends easlly. Maximum lengths, 25 feet. \begin{tabular}{cc|ccc|}
Stock Outside Per \& Stock Outside Per <br>
No. Diam. Foot

 

No. \& Diam. Foot \& No. \& Diam. \& Foot <br>
A2475 \& $1 / 8$ \& 4 c \& A2478 \& $5 / 46$ \& 8 c <br>
\hline 2476 \& $3 / 16$ \& 5 c \& A2479 \& $3 / 8$ \& 9 c
\end{tabular} A2476

A2477

## PYREX INSULATORS

Strong, genuine Pyrex glass insulators for ali types of antenna installations. axtremely low surface conductivity A $3750.35 /{ }^{\circ}$ long. For R.F. use up to 250 watts. NET.
A $3751.71 / 2=$ long. For R.F. 7 e
BEE-HIVE INSULATOR
For supporting coils, condensers, high voltage leads, etc. Made diam $21 / 4$ gigh Extra-strong: veatherproofed for outdoor use A6190.
10 for 84 C . EACH $\qquad$
STAND-OFF INSULATOR
Highest quality porcelain; $4^{\circ} \mathrm{htgh}$. ole at top for supporting or hold
A6 191.
A6 for 95 c. EACH
10.

## BUD DELUXE STEEL CABINETS


$\begin{array}{cl}\text { Cat. } & \text { Panel } \\ \text { No. } & \text { Space } \\ \text { A14700 } & 42{ }^{\circ} \\ \text { A14701 } & 611 / 4^{\prime} \\ \text { A14702 } & 77\end{array}$

Attractive, modern stream-
lined design with rounded corners and chromlum trim top and bottom. Recessed front so panels fit fush with no protruding edges. Constructed of heavy stecl; holds any type of radio equipment. Drilling is uni-
versal for all $19^{\prime \prime}$ rack panels versal for all $19^{\prime \prime}$ rack panels
with either Amateur or with either Amateur or
Western Electric notching. Western Electric notching.
Fuli length removable hinged door at rear, held in hinged door at rear, held in closed position by two nick-
eled snap catches with proeled snap catches with pro-
vision for installing type Sision or installing type switch listed below. Inside depth. 16'. Width overall, 22 . Available in Black or Grey wriakle-finish; Black is suppled uniess Grey is down with all hardware.
Overall Height
$47^{\circ}$

Shpg.
Wt.
100 lbs.
NET
NET
$\$ 27.05$ $\begin{array}{llr}661 / 2 & 140 \text { lbs. } & 30.87 \\ 82^{\prime 2} & 165 \text { lbs. } & 36.75\end{array}$ 36.75

BUD RACK \& CABINET DOLLIES


For use with relay rack or cabinet type equipdismantling. Frames of heavy steel finlshed in black wrinkle; high-grade composition wheels will not scratch polished foors. RD-505 and RD- 506 are light-duty units for cabinets hav-
ing base size from $14^{\prime \prime} \times 17^{*}$ to $17 \times 21^{\prime \prime}$. RD-507 and RD-508 are heavy-duty units and fit cab inets having base slze from $15^{\circ} \times 20^{\circ}$ to $18^{\circ} x$ $221 / 2^{*}$. Ideal for use in the Ham Shack for heavy transmitters. Sturdily-built to give long and dependable service.

| No. | Type | Wheels | NET |
| :---: | :---: | :---: | ---: |
| A14703 | RD-505 | $1^{\circ} 1 / 2^{\circ}$ | 53.38 |
| A14704 | RD-506 | $2^{\circ}$ | 5.15 |
| A14705 | RD-507 | $112^{\circ}$ | 3.97 |
| A14706 | RD-508 | $2^{\circ}$ | 5.73 |

We can supply all types of steel cabinets, racks and panels, mounting equipment, etc., for any tails of your needs and we shallquote promptly.

## RELAY RACKS AND PANELS

Designed for Transmitters or Public Address Systems. Heavy sures keeps all units in alignment Heavy wrought steel base is drilled for floor mounting. Ac curately drilled for mounting screws every $13 / 4$ inches. Stand ard size to accommodate 19 inch pamels with holes spaced $183 / 8^{\prime \prime}$ Shipped in knock-down form Complete with necessary muts and bolts for mounting. Wil make professional-appearing Transmitter

381/2 INCH RACK
A 14720 . Shipped knocked-down. Complete with hardware. Weight, 26 lbs. \$ \& . . . . . . . . . . . . . . . . . .

## $731 / 2$ INCH RACK

A14721. Shipped knocked-down. Complete With

## PANELS FOR RELAY RACKS

 All $19^{\circ}$ wide, $1 / 4^{\circ}$ thlck. Drilled at multiples of $134^{\circ}$. Fit racks or cabinets above.| $\begin{aligned} & \text { Slze } \\ & \text { He. } \end{aligned}$ | Black Wrinkle Steel |  | Black Wrlnkle Electralloy |  | Grey Wrinkle Steel |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A1472 |  | A14731 |  | A147 |  |
|  | A1472 | . 46 | A14732 | . 93 | A14741 |  |
|  | A1472 | . 50 | A14733 | 1.27 | A14742 |  |
|  | A14725 | . 55 | A14734 | 1.55 | A14743 |  |
|  | A14726 | . 59 | A14735 | 1.83 | A1474 |  |
|  | A14727 | . 73 | A14736 | 2.11 | A1474 | 1.0 |
|  | A14728 | 82 | A14737 | 2.46 | A | 1. |
|  | A14729 | . 95 | A14738 | 2.73 | A14747 | 1.3 |
| 153/4 | A14730 | 1.1 | A14739 |  |  |  |

## RELAY RACK BRACKETS

Provides easy mounting of chassis bases and sub-panels to relay rack panels. Made of sturdy auto body steel with black crystalline lacquer
finish. Will absolutely prevent sagsing of shelves. finish. Wil absolutely prevent sagging of shelves. A14750, 5' $^{\circ}$, Base. PER PAIR....38c A 14752 : $11^{\prime \prime}$ Base. PER PAIR. 75 c

## METER PANELS

Heavy steel, black crystalline meter panels. Slotted to fit standard relay racks. $51 / 4{ }^{\circ} \pi 19^{\prime}$ Cat. No. No. of Holes Meter
A14753 Size NET A14753 A14755 A14756

BUD REMOVABLE TOP CHASSIS
A new type of deally suited for use by Amateurs and Experimenters. Made of dur-

able auto body
risidly constructed channel type frame with removable flat top. With these chassis bases in your transmitter you won't have to junk a chassis and buy a new one every time you make changes in circuit or layout. Removable top also makes it easy to cut holes for sockets, transformers, etc. Also permits close wiring of all components mounted underneath the top of the base without sides interfering with use of tools. Finished in black crackle. Replacement tops are listed below. Use these fine chassis bases and save money in the long rin.
No. Size
NET

| A14707 | $10^{\prime \prime} \times 17^{\circ} \times 3^{\prime \prime}$ | NET |
| :--- | :--- | ---: |
| A14708 | $10^{\prime} \times 17^{\circ} \times 4^{\circ}$ | $\$ 1.18$ |
| A14709 | $13^{\circ} \times 17^{\circ} \times 3^{\prime}$ | 1.59 |
| A14710 | $13^{\circ} \times 17^{\circ} \times 4^{\prime \prime}$ | 1.76 |
|  |  | 2.21 |

A14710

## REPLACEMENT TOP PLATES

For use with removable top chassis bases listed above; provides a new chassis at less than half A14711 $10^{\circ} \times 17^{\circ} 59 \mathrm{C}$ A 14712
$10^{\circ} \times 17^{\circ}$
$13^{\prime} \times 17^{\circ}$

## BUD DELUXE TABLE CABINETS

 Modern streamalined design with rounded of heavy steel of heavy steel. Built good appearance Ideal for use by Amateurs, Experimenters or anyone using rack panel type equip ment. Panels fit flush with front. All have
covers; A14715. A14716, and A14717 also have hinged doors at rear. Drilled to take any 19; rack panel with Amateur or Western Electric notching. Chromium trim top and bottom. Extremely sturdy; welded throughout and shipped completely assembled. Inside depth is $14 / 4$. overall width, 22. Available in Black Gr Grey crackle finish; Black Is supplied unless

No. Panel Space Overall Ht. NET
A14713
A14714
A14715
A14716
$83 / 4^{\circ}$
$121 /{ }^{\prime}$
$171 / 2$
$261 / 4^{\prime}$
$35{ }^{\circ}$
$103 / 4$
$141 / 4$
$191 / 2$
$281 / 4$
37
7.35
8.82
$\begin{array}{llll}\text { A1414 } & 266,4 & 281 / 4 & 13.76 \\ \text { A14717 } & 35^{\circ} & 37 & 14.70\end{array}$

## JOHNSON INDICATORS

Attractive tuning indicators which give that much desired Commercial appearance to Amateur transmitters. Handle molded of oneand siver etched meta., with zero at left. Fit any $1 / 4^{\prime \prime}$ shaft; Type 206 also fits $3 / \beta^{2}$ shaft.
A 13860 . Type 204 "Indicator
with 4 "diam. scale. NET.......
A13861. Type 206.
Indicator with $6^{\circ}$ diam. scale. NET.... 76

## COTO CONTROL WHEEL

Combines polnter and dial in a single attracmolded black bakelite fitted with aluminum pointer. Fits $1 / 4^{\prime}$ shaft. Dial scale is black-fin-
ished aluminum with polished aluminum markings. Two pins attach nameplate.
 Gives professional appearance. Nameplates available as follows: Oscillator; Osc. Plate; Buffer; Buffer Plate; Doubler; Doubler Plate; Bufr. Dblr. Plate; Grid; Plate; Tank; Neutralize; Pwr. Amp. Grid, Plate desired when ordering.
A2665. $31 / 4$ " Control Wheel. $\$ 1.18$
With name plate. NET........... A2666. $31 / 4^{\prime}$ Wheel only. . WET..................... 88 e A2667. $21 / /^{*}$ Wheel. With name plate. NET........... \$1 00 A2668. ${ }^{21 / 1 / 4}$ Whecl Only. $\quad$ W6c

## ILLUMINATED CALL LETTER

 PLATE EMBLEM

Dress up your Ham Stathis gadget. Polished black background and translucent green call letters illuminated from rear. Two complete alphabet sets supplied; letters in any combination of four or five quickly inserted. With
reflector box and sockets wired for 110 when Less bulls.
A2887. NET.
$\$ 2.35$

## METAL NAME PLATES

## OSCILLATOR

## (Illustration Is Actual Size)

 High quality name plates designed to give your brass with characters and borders chromiumplated backgrounds are etched dull black. Available in 104 different markings, among which are the following: Microphone, Phono, Power Armp. Plate, Antenna, Plate Voltage, Filament Voltage, Key, Rectifier, A.C. Input, Modulator Plate, Gain Control, Input, etc. available. Standard size plate is $11 / 2 x^{3 / 2}$ inches. Test Equipment. Furnished complete with selfTest Equipment. Furnished complete with selfING DESIRED WHEN ORDERING. A2 $28{ }^{\circ} 5^{\circ} \mathrm{CH}$6. 

## DELUXE SIZE

Similar to above but larger; $21 / 2 x^{1 / 2}$. Especially COMPLETE LIST OF PLATES. 10 A2888. NET EACH..........

10c


ALUMINUM CALLLETTER PLATES
call-letter plates with black crackle finish background. Mount on front of transmitter panel $7^{7}$ means of two machine screws at rear. Size delivery. Spectiy call letters. $\$ 1.47$
A2886. NET EACH.........

## KNIGHTT Bweld Youn Oar XTITS

NEW KNIGHT METAL TUBE 'OCEAN HOPPER"


An extremely efficient, easy-to-build receiver of modern design. Uses two metal tubes, $1-617$ and $1-6 \mathrm{C} 5$. Features full bandspread tuning; electron-coupled detector; shielded chassis construction; regeneration control. May be operated from dry batteries or from special volts at 6 A ., 90 to 135 volts for plate supply. Volts contains; punched and drilled metal chassis base and panel, sockets, condensers, resistors, wiring diagram, etc. Coils, power supply, tubes, and headphones, are extra-see below A9844. Complete Kit of Parts. ©9844PROMp

5 $5^{95}$
A9845. Coil Kit. Set of 4 coils for kit
above. Tune 16 to 195 meters. $\$ 5$. above. Tune 16 to 195 meters
\$1.25
A5690. Broadcast Coil Kit. 2 Coils cover NETGE from 190 to $\mathbf{5 5 0}$ meters.

65 .
A9846. A.C. Power Supply Kit. Contains punched and drilled chassis base, transformer, (net ind luded). $\$ 4.90$

A9847, 3 Watt Utility Amplifier and Pover Supply kit. Uses 1-6F5, 1-6F6, and 1-524. Supplies field excitation for 2500 ohm and 250 volts D.C. for tuner unit. vess A.C. and speaker.
\$4.45

## 1940 SUPER-GAINER

 SHORT.WAVE KIT

An extremely efficient, easy-to-bulld four tube short-wave receiver capable of seven tube performance. Rexenerative first and second detecors provide high degree of selectivity and sensitivity. Features: Bandspread tuning, dual-reshielding, operation either from batteries or A.C power pack Properly handled this little set will provide knifelike tuning of CW signals.

## USES METAL TUBES

Complete klt includes punched and drilled chassis base and panel, all resistors, condensers, sockets, and instructions. Requires $1-6 \mathrm{~L} 7$, A9829. Complete Kit.
WET
$\$ 765$
A9835. Set of 8 Coils, Cover the $10,20,40$ and 160 meter bands with adequate overlap for NET.
-40 to cover the 540 to 1500 KC Broadcast band.
$\$ 1.70$
A9837. A.C. Power Supply Kit. Output, 240 V . D.C. and 6.3 V . at 1.6 A . Includes punched chassis base, chokes, transformer, con-


A wide range of new easy-to-build kits for the beginner as well as for the advanced experimenter. All KNIGHT kits can be assembled in a minimum amount of time Chassis bases are punched and drilled; only the simplest tools are required for assembly Even the radio novice can build these sets successfuliy. We can also supply matched parts lists for any set featured in con struction articles in any radio publication

## BUILDER'S HANDBOOK



A useful new manual prepared by ALLIED's engincers to aid the experimenter and builder Tells how to select suit-
able circuits, read diaabrems, lay-out and punch chassis bases and panels, chassis bases and panels, correctly place and wire
radio parts, and effiradio parts, and efficeivers and transmitters. includes socket layout information, coil-winding data, and other valuable charts. Shows schematic and pictorial diagrams of beginner and advanced sets, transmitters, fence controls, photo electric relays, etc. $8^{1 / 2}{ }^{\prime \prime} \times 11^{\prime \prime}$. 175 . NET..........................

## "BUILD-YOUR-OWN" WIRING DIAGRAMS



Clear, easy-to-read diagrams with complete matched parts lists. Enables you to build your own re ceivers, transmitters, supplies and gadgets, using the latest using the latest type efficient circuits Carefully designed for 'factory-built" performance.

A1758. Tube DX'
Al 759.2 Tube "Ocean Hopper."
A1760. 4 Tube A.C.Broadcast TRF.
Al 761.4 Tube A.C.-D.C. Broadcast TR
1762.4 Metal Tube "Super-Gainer."
1776.4 Tube 1.4 Volt Portable.
1763.5 Tube A.C. Broadcast Super.
1763.5 Tube A.C. Broadcast Super.
1764.5 Tube Skip-Band A.C. Super.
1765 Tube A.C. Broadcast TRF.
1765.5 Tube A.C. Broadcast TRF.
766.6 Tube Broadcast Battery Super.
$1767: 6$ Tube All-Wave Super.
$781: 6$ Tube 6 Volt Skip Band Super.

1781 . 6 Tube 6 Volt Skip Band Super.
A4442. Experimenters Kit and 1
A4443. Beat Oscillator Kit.
Aireless Phono Oscillator
A4444. Wireless Phono Oscillator.
A4445. T Tube Pocket Se
A4449. Junior Receiver X-mitter
A1777. $21 / 2$ Meter Transcelver.
A4448. Volume Expander for Radio or P.A
A17770. Crystal Set.
4 Watt AC-DC Amplifier
1 Tube Phono-Amplifier. 5 Tube 2 Band A.C.-D.C. TRF. 6 Tube 2 Band A.C Photo-Electric Cell Unit. 7752. Photo-Electr

A17 78 . Coil Winding Data.
YOUR PRICE
EACH DIAGRAM
To cover handling and mailing)
5

Schools-colleges-radio clubs. Write for our attractive quantity prices for viring diagrams.

## I-TUBE PHONO-AMPLIFIER KIT



An efficiently engineered kit designed duction of all phonoduction of all phonograph records when
used with any highimpedance magnetic or crystal pickup and or crystal pickup and Operates from A.C. or D.C. Includes 5 $^{\text {P }}$ ploys new 70L7GT tube, a dual-purpose rectifier and Beam Power amplitier. Develops output of 6 watt. Has volume control. Kit includes punclued and drilled chassis lase and all nec. essary parts (less tube). Wt., 71 lss .

## A ${ }^{\text {Al }}{ }^{8}$

A900. Raytheon 70L7GT tube.

1940 2-TUBE DX-ER KIT
The very newest version of the most popular low-priced $k$ it for the
short-wave be short-wave be-
ginner, experginner, experradio student. ${ }^{\text {radio }}$ student. economical 1.4 (1 H5 and 1 N 5 ) in an advanced
 ing high-gain regenerative detector and resist-ance-coupled audio stage. Has regeneration control and on-off switch on front panel, Operates from a single dry cell and two " $\mathrm{B}^{2}$ batteries. Kit contains all parts, including
drilled panel and baseboard. Coils and accessories listed below are extra. Shpg.
A 9880 . NET


A9881. Tube and Battery Kit. 1-1H5 and 1-1N5 tubes, $1-11 / 2$ volt dry cell, and 245 volt ' ${ }^{\text {BET }}{ }^{\prime}$ batteries. Shpg. wt., 20 lbs. $\$ 3.65$ A2908. Brandes 2400 ohm headphones. A5565. Coil Kit. Set of four coils covering
16 to 217 meters. Wt., 2 lbs. NET..... 85c

## AUDIO AMPLIFIER KIT

A9840. For use with 2-Tube DX-ER. Uses a type 33 tube (not supplied). Will operate smal magnetic speaker. Inciudes al parts
required. Shpg. wt., 3 lbs.
NET
A9841. Tube and Battory Kit for Audio Amplifier, Contalns $1-33$ tube, $1-221 / 2$ volt "Ct., 13 and 1 bs. NET................... $\$ 2.10$

4-TUBE $11 / 2$ VOLT PORTABLE KIT Now you can build your own Portable Battery Radio ical 1.4 volt tubes. Here's a set you can carry and play type aerial is built into carrying case; no ground wire is needed. Employs tubes in an efficient


1-1A5G, 1-1N5G, 1-1H5G, 1-1C5G. Operates from economical AB A Power Pack, A drain only .25 amps., " $B$ " drain only 10 M . A. Tunes standard broadcast band. Features include luggage-cloth carrying case, supplied with kit has protective lid and convenient carrying handle. Size: $9^{*} \times 9^{*} \times 7^{*}$. Complete kit includes drilled chassis base, speaker, carrying case, diagrams, and all parts, except tubes and power pack. Shpg. wt.,
A 9870 lims.
including Carrying Case. NET. A9871. Tube Kit. Includes $1-1 \mathrm{~A} 5 \mathrm{G}, 1$.
1N5G, $1-1 \mathrm{H} 5 \mathrm{G}, 1-1 \mathrm{C} G \mathrm{G}$. NET..... $\$ 2.70$ A 10001 . Burgess 150 hour "AB" Power
Pack. Wt., 51 bs. NET................ $\$ 2.36$

## "TINY KNIGHT" 4-TUBE A.C.-D.C. TRF KIT

Here is a kit for an extremely compact, sensitive set. Uses
high-gain coils high-gain coils
tuning from 175 to 560 meters Circuit design and chassis lay reyenerative action for maxi-
 and selectivity
Has a 2 gang condenser, volume control with A.C. switch, and built-in antenna. Supplied complete less only tubes and cabinet. Includes a punched and drilled chassis base. A good quality kit. Shpg. wt., 5 lbs.
A95 88.
A9589. Plastic walnut finish cabinet Size, $7^{\circ} \times 5^{\circ} \times 41 / 2^{\circ}$. Wt., 1 lb . NET. 6 79C A 9587 . Tube Kit. $6 \mathrm{K7GT}, 6 \mathrm{G7GT}, 25 L 6 \mathrm{GT}$
and 2526 GT tubes. NET.............. $\$ 2.05$

# LATEST "Build Your Own" KITS 



## KNIGHT CRYSTAL SET KIT

Here is a new and modern crystal set that every boy can build. Supplied in easy-to-assemble kit form using the best quality parts obtainable Will provide unusually fine recention of local broadcast stations. Kit contains basebrard, completely wound coil assembly, highable crystal condenser, open type adjustconnectors, color-coded point-to-point wiring instruetions, and schematic diagram. 35 A9867. NET

35
A2806. Headset. NET............... 97 C A3485. Aerlal Kit. You will obtain the best results with this acrial. NET


## KNIGHT ONE TUBE

 ALL-WAVE BATTERY KITCompact and simple to build. A one-tube battery-operated receiver which brings in police distant stations. All terminals are color coded and no wiring diagram is necessary. Has wood base. Uses a type 30 low drain tube. Complete kit includes all parts, base, hardware wire 2 coils for 190 to 550 meters, earphone and clear instructions. Less tube and batteries. Wt., 4 lbs.
A9830. Complete kit.
A9831. Tube and Battery Kit: Consists of ${ }_{1}-30$ tube. Wt., 15 ibs. NET........ $\$ 1.70$ A5565. Short-Wave Coil Kit. 4 coils cover 16-217 meter range. NET.

## AUDIO AMPLIFIER KIT

A9832. A two-stage audio amplifier. Will produce more than enough volume for magnetic speaker. Uses $2-30$ tubes. Complete kit less NET ....................... $\mathbf{4 5}$ A9833. Tube and Battery Kit. Contains 230 tubes, and $1-45 \mathrm{~V}$. B " Battery. Wit., 11


## KNIGHT EXPERIMENTERS'

KIT AND ONE TUBE RADIO Learn radio fundamentals with this "101 Experlments" kit. Consists essentially of a high and two test meters. Instructions supplied teli how to measure voltage and current, adiust an oscillating circuit test for shorts and open circuits, and perform numerous other interesting experiments. Makes it easy to learn radio principles and construction work. 75 A9596. Complete with tube and $\$ \mathbf{7 5}$ A9834. R.F. Unit. Easily connected to selectivity. With 01A tube. NET., \$1.85 TOOL KIT
Essential tools for radio building. Includes E 517 iron, solder paste, screw driver, pliers. A5517. NET

## KNIGHT WIRELESS PHONO. OSCILLATOR KIT

This inexpensive. easy-to-build kit play phonograph music and to make your own broadcasts through any radio set without direct connection to the set. Operates over distances up to 25 feet from the
radio. Uses type
6 A8 tube as osc.-mod. and 2525 tube as rectifer. Drilled chassis, $51 / 2^{\prime} \times 4^{\prime} \times 11 / 2^{\prime}$. Supplied complete less tubes, phono pickup, and microp hone, For $115 \mathrm{~V} . \mathrm{AC}$ or D,C Shpg. wt., 4 lbs .
A9165. NET PRICE 6 A8 and $1-25 Z 5$. NET............ $\$ 1.05$

## 10e "BUILD.YOUR-OWN" RADIO PROJECTS

 Complete construction informa.tion on 50 most popular S.W. tion on 50 most popular S.W.
receivers and transmitters featured recently in "Radio and Television." Average size, $11^{\prime \prime} \times 17^{\prime}$. Each project includes wiring diagram,
illustrations, and Ilst of parts.
A4350. Switch-Band- 2 Receiver
A4 351 . Beginner's 2 Tube Receiver.
A4 352. Portable Superhet Four.
A4 353. 4 Band, 3 Tube Superhet.
A4 355. 5 Tube Superhet for Ham and Fan.
A4 358 : Regenerative 2 Tuber.
44359 . S.W. \& T. Communications Set.
A4 360. Band Switching 2 Volt Set.
A4 361. Multi-Band 2 Receiver.
A4 463 . Beginner's 2 Tube Super.
A4 466 . $^{\circ}$ Inexpensive "Forty-Niner."
A4 369 : High Gain, Metal-Tube Set.
A4 370. World-Wide 10-Meter Converter
A4371: DeLuxe 3 Tuber.
A4 376. H-G-M Mobile Station.
A4 377: 806 All-Band Transmer Transmitter
A4 378: 25-Watt Modulator Using 35T's
A4 379. C-O-M 150 Watt Transmitter.
A4 380 : I-Meter Receiver and Transmitter
A4 381 : 200 W. X mitter. Pen-Tet Exciter.
A4 382. ${ }^{10}$ and 20 Meter Transmitter.
A4 384 : "Oscillodyae" 1 -Tube Transmitter.
A4 384. "Oscillodyne" 1 -Tube Wonder Set.
A4 386. Improved 3-Tube Doerle Set.
A4 388 . 1-Tube Electric "Oscillodyne
A $489: 2$ to 5 Meter. 2Tube Speaker Set.
A 490 . 3 -Tube Battery S W. Set.
A4 391 . Brief-Case S.W. Receiver
A4 392 . Pocket Short-wave Receiver
A4394. "Dual Wave" S.W. Battery Set
A4395. 1-Tube " 53 "" Twinplex Receiver.
A4 396. Portable Minidyne S.W. Set.
A4 398. Duo-Amplidyne 1-Tuber.
A4 999 Mono-Coil-2, Battery Set
OUR PRICE
12 FOR.
$10^{\circ}$
$\$ 1.00$

## PHILMORE 2-TUBE AC-DC

 RADIO KIT An unusually com pact and easy-toassemble 2 -tube set which operates rom 110 volts A.C 76 D.C. Uses 2 type 76 tubes in an exceptionally efficient circuit. Has variable condenser for in tuning. Tunes tand and
band and (with extra coils below) Short Wave ands down to 17 meters. Complete with drilled hassis base, B.C. coil, all necessary parts, and headphones.) Shps tubes and A7057. NET
Type 76 tube. EACH ....................26c A7058 ${ }_{\text {Bands. }} \mathrm{Kit}$ of 4 coils to tune 17-200 meter

## PHILMORE 3-TUBE BATTERY RADIO KIT WITH SPEAKER

A dandy new bat
tery-operated 3 tube set in easy-toassemble kit form. Uses new $11 / 2$ volt tubes which provide for efficient amazingly low battery drain. Covers Broadcast band and (with extra coils below) Short-Wave bands down to 17 meters. Complete kit includes P.M. speaker and all necessary parts (les tubes, batteries, and extra coils).
With instructions. Wt., 6 lbs A7O64. NET


A7065. Tube and Battery Kit. Includes
 ${ }_{24}^{2-45 \mathrm{lbs} . \mathrm{NET}^{\mathrm{B}} \text { ", and } 1-71 / 2 \mathrm{~V} . ~ " C \text { " batteries. }}$
A7066. 4 coils (17-200 meters)
$\$ 4.85$
72 c
CATHODE RAY TUNING UNIT An inexpensive visual
tuningindicator using tuning indicator using Magic Eye typetube. any Broadcast. Allany Broadcast, Allset having AVC, but
 with visual tuming devi with mounting brackets, color-coded cable and instructions, less tube. Wt., 2 lbs. 7
 15 A516. Raytheon 2 E5 tube for receivers Asing 2.5 V . tubes. NE
$67 c$

## CHROME STEEL MAGNET

A chrome steel, $21 / 1^{\prime \prime}$ horse-shoe magnet for experimental purposes. Ideal for teaching funda-
mentals of magnetism. With mentals of magnetism. With magnetic "keeper" for retaining
magnetism. Wt., 1 lb .25 A9250. NET.
25.


## POPULAR TABLE MODEL RADIO CABINETS



MODEL 115 MIDGET CABINET
A solidly constructed midget type cabinet. Just the thing for set kits, intercom systems, extenhigh, 6 " deep. Shpg. wt., 3 lbs . \$7.98 A 10600 . NET.
$\$ 1.98$
MODEL 216 MIDGET CABINET
Same as above but has speaker openings on both ends instead of on front panel. $\$ 2.03$
A10601. NET . ................


## ATTRACTIVE TABLE CABINET

An unusually beautiful and well-constructed cabinet or housing buideyour-wn sets or choice walnut-veneered order cabinets. Has sides and top. Striking curved louvre-type crille is of American gumwood. Outside dimensions: $123 / 8^{\circ}$ wide, $8^{\circ}$ high. $71 / 4^{\prime}$ deep; inside dimensions: $115 / \mathrm{s}^{\circ}$ wide $61 / 2^{*}$ high. $6^{\prime}$ deep. Hand rubbed finish. Will give a "professional' appearance to an
A10604. NET
s. 2.75

## O Mewn RECEIVER \& ADAPTER KITS



## NEW 12-TUBE 'CUSTOM' 5-BAND SUPER KIT

Here is a receiver designed for the custom set builder who wants the best. Has all the latest developments: new "television" tubes, elecformers, separate bass and treble tone controls, 15 watts output. 5 bands covering all Broad 42 M.C. and Long Wave band from 132 to 405 K.C. Has full-vision $9^{\prime \prime}$ illuminated dial; vernicr dial drive on 3 gang condenser, full A.V.C Tubes: 1853 R. F. Amp ${ }^{\circ}$ 6SA7 Mixer, 1853 Osc. 2-6K7 I.F. Amp. $6 \mathrm{H} 6-2$ nd Det. 6 C 5 1st A.F., 6C5-2nd A.F.. 2-6L6 P.P. Output, 5X4G-Rect. 6G5 Tuning Eye, Easy to as semble from detailed diagrams and instructions
supplied. Size: $10^{\circ} \times 1^{\prime} \times 3^{\circ}$. Shps. wt., 25 lbs. A14825. Complete Kit, less panel. cab inet, speaker and tubes.
NET
\$52.04
A14826. Metal Cabinet, $191 / 4{ }^{\circ} \times 10^{\prime \prime} \times 111 / 2^{*}$ A14827. Front Panel, $191 / /^{\circ} \times 10^{\circ}, . \$ 2.06$ A14828. RCA Tube Kit. NET ... $\$ 10.15$ A9267. $12^{\prime}$ Dynamic Speaker. NET \$ 3.69

## COMPLETE TUNING UNIT

"Custom" tuning unit. Dial with 5 bands tunes from 7.1 to 2270 meters ( $42 \mathrm{M} . \mathrm{C}$. to 132 K . C.) Uses 410 mmi. condenser, 1853 R.F. Amp. 6SA7 Mixer, and an wired. $\$ 26.75$
pletely assembled and wis. 4829 . Less tubes. NET. 26.2

## 9 TUBE "CUSTOM" SUPER

Combines excellent tone quality with superior performance. 4 bands cover 7.15 to 555 meters (42 M.C. to $540 \mathrm{~K} . \mathrm{C}$.). Requires: $2-1853$. 6 KA 6SA7, $1-6 \mathrm{~K} 7,1-6 \mathrm{~F} 8 \mathrm{G}, 2-6 \mathrm{~V} 6,1-5 \mathrm{Y} 4 \mathrm{G}$ and 1-6G5 tubes. Requires only screwdriver. pllers, and soldering iron for assembly, Chassi measures $9 \times 1$ A14830. Complete Kit, less panel, cabinet, speaker, and tubes. NET
$\$ 34.99$
A14826. Metal Cabinet. $191 / 4^{\circ} \times 10^{\prime \prime} \times 111 /{ }^{\prime \prime}$ A14831. Front Panel, $191 / /^{\circ} \times 10^{\prime}$. . $\$ 1.76$ A14832. RCA Tube Kit. NET...\$7.95 A9265.12 ${ }^{\circ}$ Dynamic Speaker. NET.\$3.69


## 7-TUBE A.C. "UTILITY" SUPERHET KITS

These fine kits are supplied complete with all coils, tuning condenser, chassis, controls, knobs, wire, hardware, etc. Uses $6 \mathrm{~A} 8,607,6 \mathrm{~V} 6,6 \mathrm{G} 5$, 5 Y4G, $2-6 \mathrm{~K} 7$. Less panel, cabinet, tubes, speaker. Wt., 18 lbs.
A10643. Broadcast Band $\$ 20.43$ A10644. Broadcast and S.W. (530-1660 NET.;
$\$ 22.78$
A10647. Panel for A10643.
$\$ 1.09$
A10648. Panel for A10644.
. $\$ 1.09$
A10649. Cabinet for above kits. Black arackle-finished steel NET
A10629. RCA Tube Kit. NET $\$ 4.40$ A9262. $81 / 2^{\prime \prime}$ Dynamic Speaker.


## LATEST TELEVISION KIT

Designed after months of intensive research and development in the Meissner laboratories, this newest of Television Receiver Kits incorporates complete video and audo circuits Uses a 5 cathode ray tube and is designed for standard 441 line scanning. Has front panel built-1n speaker for audio channel. The col plete set uses seventeen tubes as follows: 1852 Second Video IF, 6 H 6 Second Video Detector 6 F6 Video Amplifier. 1852 Synchronizing Amplifier $2-6 \mathrm{~N} 7$ Multi-vibrators and 2AF8G Sweep-circuit Amplifiers, 1852 Audio IF 6 SO7 Audio Second Detector-Amplifier. 6V' 6 Audio Output Amplifier, 5 V 4 G Rectifier, 879 High Voltage Rectifier, and 1802-P4 Videotron $5^{\circ}$ Cathode Ray Tube. Any experienced Amateur or Experimenter can assemble the Meissner Television Receiver from detailed circuit diagrams and instructions supplied. Kit includes every necessary part and all tubes, including $5^{\circ}$ Cathode Ray Tube. For operation from 110 V .60 cycle AC only Write for detailed descriptive literature. 55 lbs.
Al4835. NET
\$139.50
A14836. Walnut Cabinet for above. BeautiA14837. Construction Sheets, with picA14837. Constructlon Sheets, with pic-
torial and schematic diagrams. NET... 25 c

## PORTABLE BATTERY-OPERATED

 RADIO KIT

A complete kit of parts to make a portable batteryDesigned for loop antenna operation. Superheterodyne circuit tunes the standard Broadcast band- $\mathbf{K} 35$ to 1600 made to connect external antenna for greater signa strength and distant receptoniowses atest type low-battery-drain tubes. Following t. F Ampes required: 1-1 -1 A7G Det.-Osc. $2-1 \mathrm{C}$ G Output. Burgess batteries required: $1-4 \mathrm{~F}$ (Cat. put. Burgess
No. A89teries
A required wt., 9 lbs.
A14838. Complete Kit less $\$ 14.70$
case, batteries, and tubes. NET A14839. Cabinet in airplane-luggage style. canvas-covered. Holds complete kit and bat-
teries. $13^{\circ} \times 9^{\prime \prime} \times 8^{1 / 2^{\circ}}$. NET........ $\$ 4.12$ NOISE SILENCER KIT


Designed to reduce static and man-made interference. Based on the famous Lami any superhecerodyne having an I.F. of 450 to $470 \mathrm{~K} . \mathrm{C}$. Silencer supplies its own ilament current Equipped with tube prong for plusging each-6K7, $657,6 L 7$ and 6 H 6 tubes. With instructions. $81 / 4^{\circ} \times 53 / 4^{\circ} x$ $31 / 4$. overall. Shpg. wt., 3 lbs.
T. 56.76 A95 58. Less tubes. NET

## NEW INSTRUCTION MANUAL

A valuable book full of information for the Serviceman, Amateur, Experimenter. Set Builder, etc. Includes technical data on Radio and Television, wiring instructions, schematics
A9559. NET
48
WE CAN SUPPLY all the Meissner Kits and Adapters. Write us tor tree copy of the Meiss ner catalog. Complete Kits costing more than $\$ 20$ are available on the Meissner convenient
Time Payment Plan. Ask for details.

## StUdENT "MIDGET" KITS

These outstanding new kits are ideal for the radio newcomer and experimenter. The new provide high tubes provide high omy of pattery consumption. Each kit includes coil for the Broadcast band Clear instructions fo wiring and operating are supplied. Wts., approx. 2 lbs.
 A9560. 1 TUBE KIT. For headphone reception. Uses $1-1 \mathrm{E} 4 \mathrm{G}$ Less, tube and batteries.
$\$ 2.65$
A9561. 2 TUBE KIT. Requires $1-1$ C5G 1-1E4G'tubes. $1-11 / 2 \mathrm{~V}$. "A", 2- 45 V . "B" and $171 / 2 \mathrm{~V}$. "C" batteries. Less tubes and Batteries.
\$2.94
A9562, 3 TUBE KIT. Requires 1- ${ }^{1} \mathrm{C} 5 \mathrm{G}$.
 and batteries.

## ACCESSORIES FOR ABOVE

A9563. 70-200 Meter Plug-in Coill.) EACH A9564, 35-70 Meter Plug-in Coil, $34 c$ A9566. $545-1500$ Meter Plug-in Coil. 88c A710. Raytheon 1E4G Tube. NET.... 7 lc A705. Raytheon 1C5G Tube. NET....94c A719. Raytheon 1 H 5 G Tube. NET...94C A8920. 45 volt " $B^{\prime \prime}$ " battery. NET.... 94 c A8917. $71 / 2$ volt "C" battery. NET... 48 C
A2813. Single 1,000 ohm headphone with
headband. NET....................... 6 C

## ADD.ON KITS

Permits increasing size of 1 and 2 tube kits. A9586 Kit will provide speaker reception. A9585. Converts 1 tube kit to ${ }^{2}$. 44 e A9586. Converts 2 tube kit to 3 tubekit. Lesstube and batteries.
$\$ 1.09$

4.TUBE AC-DC TRF KIT

An easlly-bult metal tube receiver with surprising sensitivitv and tone quality. For broadcast reception. 530 to $1600 \mathrm{~K} . \mathrm{C}$. Uses a $6 \mathrm{K7}$ R.F. amplifier, 6 J 7 power detector, 25 A 6 pentode output. and 2526 rectifier. For 110 volts A.C. or D.C. Kit includes all parts, instructions and diagrams Shpg. wt. 91 bs .
A10640. Complete Kit, less
chassis, tubes and speaker. NET.. $\$ 7.20$ A10641, Punched and drilled
chassis, $\mathbf{7}^{\circ} \times 1^{4} 1^{\prime} \mathbf{2}^{2} 2^{\prime \prime}$. NET. Speaker NET
$\$ 1: 32$
$\$ 1: 38$
WIRELESS PHONO OSCILLATOR

A self-powered new type wireless phono oscillator designed for use with any radio in conjunction with magnetic or crystal phono pickup. Does not require connec-
tion to radio receiver. Uses 6F7 oscillator
and 2525 rectifier. Supplied complete wit and instructions (less tubes) For 110 Volts A.C. or D.C. operation. Shpg wt., 5 Ibs.
A10630. NET


A10630. NET ......... $\$ 6.76$

## R257 ELECTRIC FENCE

 CONTROLLER KIT

R257. This Popular Mechanics controller ls one of the most economical new type "Electric Fencers" available. With only four dry cells, you can control up to 5 miles of fence in wet or
dry weather. While this controller was origindry weather. While this controller was originally designed to work with four dry cells, any torily. Equipped with many new features including indicating neonglow lamp, safety fuse, wet-dry switch. etc. The low-current consumption of the R257 is made possible by doubleduration shocks per minute.
CUTS LABOR AND FENCING COSTS This dependable Fence Controller Kit requires the use of only a with the wire, they recelve an effective but harmless "sting" which drives them away. Livestock soon learn to keep away from these wires, and controller can be shut off for loug periods of time, thus effecting more economy of operation. Relay armatures are the only moving parts in the assembly. The R257 has a neon lamp which glows when fence is operating correctly. Simple to construct. Chassis $_{81 / 2 \times 43 / 4 \times 11 / 2}$ A9568. NET.
s7.95 A14100. Insulator KIt. 50 Fence and 4 A89 11. Dry Cells. 4 required. EA. ${ }^{33}$. C

## ONE TUBE FLASHLIGHT SET



R252. Popular Mechanics. A complete matched kit of parts for this pqpular
set. Exceptionally efficient and easy to assemble The new high-gain circuit uses a single 49 tube; two pen-light cells serve as B batteries, and a sin-Plug-in coils cover the short-wave bands, Complete kit includes all parts drilled panel, tube, batteries, and coil forms A9517. NET

## POPULAR MECHANICS KITS

Here is an extensive selection of complete kits of matched parts for building the most popular circuits described in recent issues also supply parts lists for ali Popular $\frac{\text { also }}{\text { Mecianics " } R \text { pats number kits as soon as they }}$ are published. For best results build these circuits with ALLIED approved parts.

## CONSTRUCTION BLUEPRINTS

The leading new Popular Mechanics sets are
clearly described on $17^{7}$ x22" bluepriuts. In clude schematic and pletorial dlagrams. essential construction data, and matched lists of parts. Simplify build using these blueprints.


A 1944 . R271. Beginner's 1 Tube A.C.-D.C. A1943. R270. Phantom Record Player. A 1928 . R26. Beginners' 3 Unit Set A1927: R265: Little Giant Phono-Radio
919. R263. Photo-Cell Relay.

A 1917 . R259. All-Purpose Power Supply A1901. R257. 6Volt Electric Fence Control. A1904. R253. A.C.-Drogressive Sets 1905. R252. One Tube DX S.W. Set A1915. R227. Audio Amplifier for R252. A1907. R244, Intercommunication System. A1908. R248. SMeter M.O.P.A. X-mitter. Al911. R243. Metal and Ore Locator Al916, R239. Portable P.A. Amplifier. YOUR
EACH .............................


BEGINNERS' ONE TUBE AC-DC LOUDSPEAKER SET
R271. An Inexpensive, experimental one tube receiver using a crystal detector. Operates
directly from 110 volt directly from 110 volt A.C. or D.C. line. Sintype tube serves as dual purpose audio amplifier
crystal needs no adjust-
ment; tuning accom-
plished by variable
trimmer type condenser

$\qquad$ reduces voltage for filament supply. Magnetic type $3^{*}$ speaker gives ample volume on local stations. An ideal kit for the $\$ 435$
A9842. NET
4.95

A828. Raytheon 25A7GT tube

## PHANTOM RECORD PLAYER

R270. An casily assembied kit for consembied a "wireless" record player. Play
our favorite records, h speak on mike celver without using wire connections beween the phonoKraph and radio. to a quiet dial posi-
 ion at or near 1700 KC and music from record player will be heard issuing from receiver loud speaker. Complete A9848. NET
A9849. Tube Kit. Consists of 1-35A5 and A9849. Tube Kit. Consists of $1-35 . \mathrm{A}$ and
$1-3523$ Raytheon tubes. NET..... $\$ 1.42$ A9 172 . High impedance Quam microphone

## SIMPLIFIED TUBE TESTER

 R264. Build professional typetube tester. Easily tube tester. Easily
constructed from complete parts kit furnished together vith detalled instructions on asWill test the ma-
 ube types in general ube types in general use Selector chooses correct filament test voltage 0 -1 mil ampere meter furnished may be colored for Good-Bad" indication. Provides "short" test rom cathode to other elements; neon "short" indicator. Five sockets used. Tests octal base ubes. Complete with cracklefinished metal case
A9523. NET...

## BEAT OSCILLATOR KIT

Easily constructed BFO

## 21/2 METER TRANSCEIVER

An inexpensive Transeeiver Kit for the Amateur or Experimenter who wants to investigate the 112-118 MC band. The circuit uses a type 76 tube acting as a super-regenerative detector for receiving and as an oscillator for transmitting. The type 41 tube alternates as an audio amplifier and speech amplifier for rains tubes and send respectively. tains tubes and all necessary parts including

hook-up wire and hardware. Detailed instructions for assembly are provided. May be used with the power supply listed below or any 6 V . vibrator pack capable of producing 150 V . of | ripple-free power. |
| :--- |
| A9520. NET................. |

A9520. NET
A9522. Power Supply Kit., A well-filtered unit providing "A" and "B" voltages for
A2513. Universal Handset. 2000 ohm phone and single button "mike." NET $\$ 5.88$
unit which can be at-
tached to any B.C. or tached to any B.C. or
S.W. $450-525$ K.C. superhet. Will enable you to weak signals weak signals
Supplied with type 58 tubes, or with 6 D 6 vol sets with 6.3 Volt tubes. Specify which is neerded. A9599. \$2.75


VOLUME EXPANDER KIT
For use with all re-
ceivers or amplifiers duction of Broadcast uction of Broadcast programs or phonovides greater fidelity of reproduction by restoring the original ranges which are usually suppressed dur
 roarcasting or recording. Reproduces the recling and warmth of the original rendition. Makes ordinarily flat and colorless recordings glow with full-bodied tone. Degree of expan wion is adjustable to suit varying conditions. Will greatly improve tone quality. Complete $1-6 \mathrm{~L} 7,2-76$ 's, and $1-80$. tubes. Require A9892. Less tubes. NET
s 6.65

# PHOTO-ELECTRIC CEIL RQUIPMENT 

KNIGHT PHOTO-ELECTRIC CELL KIT
 Highly sensitive. lowestpriced photo-
cell kit May be cell kit May be used for starting and stopping motors, controndings
bells and lights.
 falarms, ndd ar thousand other
applications.
and
and apprications.
Increase or de crease of light intensity conpowered for 115 voit A.C. or D.C. operation. Uses G-M sensitive photo-cell and type 25A6 pentode as rectifier and amplifier. Relay is of the S.P.D.T. type. Kit includes all parts. photoceliled Raythesin type inst tube. Shgg. wt., NET.
$\$ 5.90$

## AC-DC LIGHT SOURCE

An efficient light source kit for photo-electric cell work. The 32 C.P. bulb has life of 1000 hours. Black case

## "FYRE-SCOUT" FIRE ALARM SYSTEM



Fire is man's most deadly enemy when uncontrolled. Each
day fire claims on an day fire claims on an
average of 40 lives average of 40 lives and causes over a mike
lion dollars damage.
Fire Fire insurance does will it bring back to life some member of your family. Every fire is small when it starts, be slight. The "Fyre-Scout" alarm system has been designed to provide adequate protection in the home, shop, garage, farm, or institution. The heart of the system is the Detector Head, an automatic switch which rings the Fire Gong as soon as the temperature reaches 145 degrees. Any number of Detector Heads may be used. They should be placed at all possible danger spots such as furnaces, stoves, fireplaces, etc. Fire Gong operates on 6 volt dry cells. Batteries last approximately two years. Complete system consists of 2 Fire Heads finished in
Ivory, a $6^{\circ}$ Fire Gong, 75 feet of wire, staples. and instructions. Wt., 5 libs. $\$ 5.85$ A1217. Detector Head. May be easily attached to ceiling or walls. Attrac- $\$ 1.76$
tive ivory finish. NET............. A1218. Fire Gong. Operates from 4 standard $11 / 2$ volt dry cell batteries. NET...S2.50
A12 19.75 feet wire. Ivory finish. NET.. 59 c

## LIFE-SAYER FIRE EXTINGUISHER



A radically new type of fire extinguisher. Abnormal heat melts seal releasing Underwriters' approved fuid
which quickly snuffs out fames. Fluid is harmless to russ, furniture, walls, or huraan beings. Protects 800 cubic feet of space. For home. shop, office, ham shack, garage, factory
A1234. NET.
${ }^{\text {s }} 1.25$

## CETRON PHOTO CELLS

 CE. 3 CELLA1140. A quality photo-electric cell suitable for many applications. Will replace W.E type
for sound film work. Flexible leads with phone tip connectors. Cathode plate is $13 / 4$ sq. in. Requires an average ionizing voltage of
volts. A dependable Photo Cell.
CE-1 CELL

A1141. For replacing cells in Acme. Simc. Mas 4 prong plug-in type base. 3 Powers. high. with cathode area of $94^{\prime \prime}$.

## CE. 2 CELL

A1142. For use with Argus, Bestone, DeVry. Full Range, Pacent, and Universal type procathode area of $1.33^{\circ} .4$ prong brice, EACH OFA AB OVE. .... $\$ 5.40$

## WORNER "FOTO-ELECTRIC" PRODUCTS

We can supply Worner Photo-Electric equipment for all types of industrial use such as counting, | "INVISIBLE SERVANT" | BURGLAR ALARM SYSTEM |
| :--- | :--- |



Will signal the passing of persons or obwindow or passageway. Ideal for announcing store customers, doctors or dentists patients, for sare-guarding propsists of light source, photo-electric cell,
amplifier, and relay all in one compact case. Has 6 V. A.C. output for operating chimes, bells, buzzers, etc. Ideal with A9876 chime listed below. Range of unit is from 30 to 40 feet Crackle gray-finished case measures $41 / 2 \times 5 \times 7^{\prime \prime}$
With mitror. Easily installed. For 115 V .60 cycles. Shps. wt. 6 lbs.
cycles. Shpg. we. $\mathbf{A 1 2 2 8 .}$.... $\qquad$ s16.76

## THE NEW "ANNOUNCER"



Specially designed for announcing purposes. contained unit has photo-electric cell: fier. and relay. Has 6
V. A.C. output. May be mounted directly on door. Supplied with mirror and a ures $7^{\circ} \times 6^{\circ} \times 2 \frac{1}{2}{ }^{\prime \prime}$. For 115 V. 60 cycles. Shpy. wh., $21 / 2 \mathrm{lbs}$.
\$71.47

## PHOTO CELL AND RELAY



Contalns a sensitive photo cell and quickacting relay. Highly dependable; ideal tor tion, counting. grading. for controlling machinery. lights, and motors, opening glad to answer all intion probleins. Size of unit is $63 / x^{27 \times 4^{\prime}}$. A suitwt 10 lbs 60 cycles. Shpg: wt., 10 lbs .
515.58


Provides long life, easy installation, reliability, and economy of operation. Indispensable in the protection of homes, offices, stores, shops, etc.
Consists of 2 units: an favisible light source and a combini units: an invisible lll relay, amplifier, and alarm bell. In operation. light beam is focused on the photo-electric cell. Any interruption of this beam or breaking of the 115 volt circuit will cause alarm to ring. It will continue to ring until it is re-set by means of the keyless combination locking device. Light unit size, $7 \times 4 \times 31 / 2$ riray unit. $63 / 4 x 7 x 4$. Range
feet. For 115 V .60 cycles . Shpg. $\$ 27.34$
wt. 9 lbs . NET A1220. NET

## EXTERNAL ALARM SYSTEM

A1221. Rings in conjunction with main alarm. Continues to ring even if cut ofr irom cable. Shpg. wt., 61 bs................. $\$ 7.64$
A1222. Mirror. For increasing effective area of protection. NET............. $\$ 2.65$

## PHOTO CELL LIGHT SOURCE

Designed for operation with
Photo Cell and Relay listed at left but may be used
with other types of photo electric cell tyits and relays. The long life bulb has very low wattage consumption, asauring maximurn operating cost. Special lens permits throwing a long. permits throwing a long.
 concentrake beam of ight. 115 V .
Size of case is $7 \times 4 \pi \mathrm{~V}^{\prime}$. For 115
Supplied with bulb and line cord. Shpg, wt.. 4 lbs.
A1231. NET.
s6.17

trated Wlth brackets and instructions. NET ..........
A1225. $6^{\prime \prime}$ Focal Lens. For directing light on cell. NET
is concenA1226. 'Photo Cell. A highly sensitive unit. NET. $\because 29 \mathrm{c}$ AEP RELAYS. All relays are S.P.D.T. type with silver contacts. 5 amps. 125 A4090, 2500 ohm coll. Plate circult of tube. NET.
A4091. With 6 volt A.C. coll. NET
A4092. With 110 volt A.C. coll. NET
A4093. With 6 volt D.C. coll. NET.
$97 c$

## EBY PHOTO CELL EQUIPMENT

## PHOTO CELL

A new type of photo cell designed for long life and maximum sensitivity. Ideal for all Entire unit is shock-proof and moisture-proof. Measures $11 / /^{\prime \prime}$ standard 4 prong
A4032. NET. diameter $3 / 4^{\circ}$ high. Mounts in $\$ 2.06$


## SEESSITIVE RELAYS

Designed for direct, or for full or half-wave rectified current circuits, where the operating
power is small. Ideal for photo power is small. Ideal for photo
cell equipment, vacuum tube cell equipment, vacuum tube amplinet circuits, etc., due to contacts carry 2.5 Amps. at 115 V. A.C. or 1.5 Amp. at 115 V. D.C. Wt., 1 lb .
A4045. 1000 ohm coll.
A4046. 2500 ohm coll.
A4047. 5000 ohm coil.
A4048. 10000 ohm coil.

EACH
$\$ 3.82$

## ELEGTRIC EYE HANDBOOK

A 32 page book which contains a wealth of information. Describes in detail the underylls. Theory and practice are fully covered and illustrated. Indispensable for the engineer and the experimenter. ... 29c


## EXPERIMENTAL

 PHOTO CELL KITContains necessary parts for building various Eleccludes Eby photo-cell sensitive relay, punched and drilled chassis base, adjustable voltage di vider, R.C.A. tube, sock ets, resistors, condensers,
 etc. Also includes Eby
Handbook. For 115 V .60 Hand book. For 115 C . 60 cycles. Shpg. Wh.. 4 lbs.

# NEW COILS FOR ALL PURPOSES 

## LATEST TYPE MEISSNER COILS

## plastic replacement

## I.F. TYPE COILS

A radically new line of L.F, transformers priced remarkably low. Trimmer base and coil form are moterial absolutely unaffected by moisture. Specially-served Litz wire is used for the coils. The extremely compact size, $11 / 4$ square by $21 / 2^{\prime \prime}$ high, makes it an ideal replacement unit for any set.

Shield can is of aluminum. TransShield can is of aluminum.
formers are

| Freq. | Input No. | Interstage No. | Output No. |
| :---: | :---: | :---: | :---: |
| 175 | A4930 | A493 | A4932 |
| 262 | A4933 | 44934 | A4935 |
| 370 | A4936 | A4937 | A4938 |
| 456 | A4939 | A4940 | A4941 |

NET
NETH

## UNIVERSAL ADJUSTABLE

## FERROCART COILS



These units permit exact duplication of defective R.F... Ant, or Osc. coils. Inductance is variable over a wide range to permit tracking. Shield size, $13 / 4 \times 13 / 4 x$
$21 / 2^{\prime \prime}$. Mounts in small space. SHIELDED TYPES
AS595: Antanacin A5797: R.F. Coil.
UNSHIELDED TYPES
A4990. Antenna Coil.
A49991: R.F. Coil. Coil. $\begin{aligned} & \text { NETALOR } \\ & \text { EACH }\end{aligned}$
73.


## IRON-CORE BAND EXPANDING I.F.'S

An iron-core I.F. transformer with sharp selectivity for efficlent C.W. or foreign reception. Also provides broad band-width for high-fidelity local-station reception. Electrically
variable. Two of these units may be used to provide almost single-signal selectivity. 456 KC factory-set range $340-640$ K.C. Mica-tuned type. Size, $13 / 8$ " $\times 13 / 8^{" \times} \times 31 / 2^{*}$
A5768. 2 Pasition. Sharp selec
NET. tivity and Broad for High Fidelity
$\$ 1.76$
A5769. ${ }^{3}$ Positlon. Sharp selectivity, Broad for High Fidelity. Medium \$2.06
for average use. NET............. 2.06


## HIGH-GAIN THREE PI

 I.F. TRANSFORMERSNew type highly efficient IF transformers with three pi windExceptionally high gain. For best results, only one should be used in a recei ver in single-stage I.F. amplifier. Double-top-tuned with ce-ramic-base mica-insulated trim-
mers. Cans measure $13 / /^{\prime \prime} \times 13 / 0^{\circ} \times$ mers. Cans measure $13 /$
$31 / 2^{\prime \prime}$. Quality-built units.

## A5812. 456 KC Input. <br> AEST13. A56 Kc output. <br> s 1.09 <br> AET...................s. 1.09

## TELEVISION COMPONENTS



The units listed below have been developed by careful laboratory rescarch in television for latest Meissner catalog which contains complete information.

| No. | Description | Type | NET |
| :---: | :---: | :---: | :---: |
| A4995 | R.F. Coil Assem | 13-7608 | \$7.35 |
| A4996 | First Picture I.F | 17-3461 | 2.06 |
| A4997 | Second Picture I. | 17-3462 | 2.06 |
| A4998 | Third Picture I.F. | 17-3463 | 2.06 |
| A4942 | Sound 1.F. | 17-3464 | 2.06 |
| A4943 | Sound Trap 14.25 | 15-7500 | 1.47 |
| A4944 | Shielded I.F. Choke | 19-1912 | . 59 |
| A4945 | Sound I.F. Grid Coil | 17-3467 | 88 |
| A4946 | Video Peaking Coil. | 19-1911 | . 29 |
| A4947 | Low-pass Filter Choke | 15-7501 | -29 |
| A4948 | Television Const. Sheets. | J90 | . 25 |

## FERROCART IRON-CORE

## I.F. TRANSFORMERS

Incorporates a finely powdered
iron core with each particle insulated from the others, resulting in a higher " $Q$." Gain and selectivity are nearly twice that of air-core types. Ideal for replacements or original installations. Double-tuned from top; mica insulated; $13 / 2^{\prime \prime}$ square, $31 / 2^{\prime \prime}$ high.
With instructions.

 \$7.18 NET EACH. nterstage.

DUAL BAND COILS
Efficient Short-Wave and Broadcast coils for the serviceman and experimenter. Shielded types are complete with mica-diclectric trimmers. Use with $456-465 \mathrm{KC}$. IF systems. For 365 mmi., T.R.F.
variable condensers.

## BROADCAST AND POLICE

Cover 67-200 meters and 193-555 meters



A7514 Dual Adjustahle Padding Condenser. Each section $180-620 \mathrm{mmid}$. Correct Series padder for oscillator coils above. 32c
A5775. ${ }^{3}$ Gang 2 Position Switch. For use with coils listed above. For making front-Of-panel band changes.



## THREE BAND COILS

Similar to 2 band coils above, but
have 3 band coverage. Trimmer condenser bank mounted on one side for ease of adjustment. Supplied in the most popular bands. Fully shielded.

BROADCAST, POLICE \& S.W. For use with 450 mmf . condenser. Range: 170 16; 16.2-57.7 meters.
$\left.\begin{array}{l}\text { A5910: Antenna } \\ \text { A5911: R.F } \\ \text { A5912. Oscillator }\end{array}\right\}$ EACH A5912. Oscillator Condenser Kit.... $\$ 0.73$ 6. 3 Gang 3 Position Switch.. 1.18

## BEAT FREQUENCY

## OSCILLATORS

Especially designed units for use in incorporating beat-frequency oscil-
lators in all-wave or lators in all-wave or short-wave reprovide "beat-note" tuning for locating weak signals, or for code reception. Can size, $13 / \mathrm{g}^{\circ}$, square x $31 / 2^{\circ}$. With pitch control knob on top. Mica-insulated trimmer.


## OSCILLATORS

Compact. thoroughly impregnated oscllator coils particularly designed for Exceptionally easy to mount. Each unit has bake-
 te base with jug terininals. Designed for use wh 365 mmf. TRF type variable condenser and a padder. Coils are duo-lateral wound to minimize distributed capacity. Wax-impregnated; moisture-proof.

## UNSHIELDED TYPE

A5820. 175 KC . Use 900 mmf . padder A5821: 456 KC. Use 350 mmf . padder NET

SHIELDED TYPE
A5822. ${ }^{175} \mathrm{KC}$. Use 900 mmf . padder.
A5823. 456 KC . Use 350 mmf . padder
NET

## KNIGHT COILS

## STANDARD I.F.

## TRANSFORMERS

 Standard high-gain IF transformrers of superior design. Ideal for replacements and new set building. ,attice-wound primary and secondary tuned by mica-insulated compression type condensers from top of can. RMA color coded $13 / 8^{\circ}$ square and $31 / 2^{\prime \prime}$ high. $13 / 8^{\circ}$ square and $31 / 2^{\prime \prime}$ high.

| Freq. | Input No. | Interstage No. | Output No. |
| :---: | :---: | :---: | :---: |
| 175 KC | A5835 | A5838 | A5841 |
| 262 KC | A5836 | A5839 | A5842 |
| 456 KC | A5837 | A5840 | A5843 |
| NET EACH |  |  |  |
| 10 FOR |  |  | . $\$ 5.50$ |

## OUTPUTS

A5783. 175 KC. ЕАСН.

## KNIGHT IRON-CORE

I.F. TRANSFORMERS

These compact units have high permeability iron-cores and low-
loss windings to provide maximum loss windings to provide maximum sensitivity and selectivity. Dou-ble-tuned from top with mica in sulated trimmers. Shield can measures $13 / /^{*} \times 13 / 3^{*} \times 31 / 2^{\prime \prime}$. Mounting centers. $13 /{ }^{16}$. Supplied with

| Freq. | Input No. | Output No. |
| :---: | :---: | :---: |
| 175 KC | A4983 | A4986 |
| 456 KC 1500 KC | A4984 | A4987 |

## NET EACH

 98.
## HIGH GAIN T.R.F. COILS

Bank-wound with Litz wire, per-
mitting unusual sensitivity and uniform gain over entire wave band Round shielding can $21 / 4^{\prime \prime}$ high. $178^{\prime \prime}$ diameter. Use with 370 mmf . condenser. Covers 1760 to 540 KC Low Impedance primaries.

## FULLY SHIELDED TYPES

## A5844. Antenna Coll

A5845: R.F. Coil. Same size and mounting NET EACH
A5846. ${ }^{4}$ Tube KIt. Contains 1 Ant. Coil NET.... 1 . Coil.
A5847: 5 Tube Kit. Contains 1 Ant. Coil and 2 R.F. Coils
1.03
(All kits include schematic diagrams.)

## UNSHIELDED TYPES

Similar to coils listed above but not equipped with shield can. and dowel with screw and betet permits mounting in any desired position. $7 / 8^{\circ}$ diam. by $21 / 4^{\prime \prime}$ long. A5777. Antenna Coil. \} EACH 27c A5779. 4 Tube Kit. Contains 1 Ant NET........ Coil. $\ldots 3$ Coil and 2 R.F. Coils. 79 (All kits include schematic diagram.)

## MIDGET SOLENOID COILS

Extremely efficient midget solenoid type coils,
wound with enameled wound with enameled wire on a special tubing $178^{\circ}$ long and $1^{\prime \prime}$ in diameter, For replacement in midget TRF sets. PriMaries are adjustable.
 Unermit ame use with 370 mmf . condenser, 540 to 1600 KC A6590. R.F. Coil. Coll. \}EACH 15 e A6588. Set of 2 Coils. NET ........29 29 A6589. Tapped for 2400 KC . 1-Antenna Coil and 1-RF coil.
35.

# COILS • COIL FORMS • COIL KITS 

面

## MILLER IRON-CORE

## R.F. COILS

Small size R.F. colls, especially desirable for use in auto or other sets where a high-gain coil of smal physical size is required. In alumi diameter and $2^{\circ}$ high. For use with 370 mmf. condensers.
A6584, Antenna Coil. $\}$ EACH
88.



## 10 K.C. FILTER COIL

For use in the load circuit of a dode or infinite impedance de tector, to eliminate 10 KC whistle At wide-range broadcast receivers. approx. 30 db . Size: $11 / 2^{\text {" }}$ square $21 / 22^{\circ}$ long
A6587. NET
s1.32

## SKIP-BAND COIL ASSEMBLY



Will make a sensitive receiver tunto 18 M.C and 540 to $1580 \mathrm{~K} . \mathrm{C}$. Coil assem pletely wired and ready to install. Kit contains: 2 band antenna coll and 2 band oscillator coil mounted on a band-change switch; padding condensers; $2-450 \mathrm{KC}$. 1 z trans condenser. Diagram is included. A2707. NET
s3.74

## ANTENNA \& R.F. COILS

## High-gain fully shielded coils; for

 use with screen grid tubes. High impedance primaries. R.F. coil has primary at $90^{\circ}$ For 370 mmi , con Sinat Mith cuin in tifit kit

## MIDGET UNSHIELDED

 TRF COILSThese high-gain coils, with high-impedance primaries, are particularly well-suited, for particularly well-suited for ret andillator coll) mircuits They are designed for use with 370 mmf . tuning condensers. Inpregnated coil forms are $5 / 0^{\circ}$ diameter and $13 / 8^{\circ}$ long. Colls are wound with high-grade Litz wire. Brackets permit easy mounting. With wiring diagrams A5815. Antenna Coil A5816. RF Coil EACH
Astisk fotit till $\qquad$
12.
$\qquad$ 19.

## NOISE SILENCER <br> J.F. TRANSFORMER

A close-coupled IF transformer single-tuned, with center-tapped secondary, especially designed for use in the popular noise silencer cir With wiring diagram


## UNSHIELDED

 PRESELECTORSHigh-gain band-pass preselector coils for the broadcast band. Litz wound. Range, $1500-540 \mathrm{KC}$. with 365 mmf . condenser and 1715-550 KC. with 410 mmf .
A5811. For 365 mmf . NET.

## CARTWHEEL I.F.

 REPLACEMENT COIL Ideal for replacement in midget sets. Has molded plastic base with 2 trimmers. Highgain coils. Forimput or output high overall. For $456-465 \mathrm{KC}$45824. NET

PLUG-IN TYPE COILS
 Space-wound coils or use with 140 mmf. condensers. bakelite are smooth ameter and $21 / 4^{\circ}$ high; rim-top.
4 PRONGS - 2 WINDINGS
A5565. Short-Whave Coil Kit. 4 coils cover range from 16 to 217 meters. 85 A5566. Broadcast Coil 8 cover range from 190 to 550 meters. 65. A5567. Ultra Short-Wave Coil. Covers Kange from 9.5 to 21 meters.

## 6 PRONGS - 3 WINDINGS

A5568. Short-Wave Coil Kit. Primary, secondary and tickler windings. Cover 16 to 200 meters. 4 coils in klt.
45569 Broadcast Coil Kit. 2 AO to 550 meters.
45570. Uitra Short-Wave Coil. Covers 8.5 to 21 meters 38.

## BAND-SPREAD COILS

5 prong coils with band-setting condenser mounted on top. For use with 140 mmf. condenser. Complete with ceramic base. NET

No. A1920 $\quad 20 \quad 14.014 .4 \quad$ EACH | A1921 | 40 | $7.0-7.3$ |  |
| ---: | ---: | ---: | ---: |
| A1922 | 80 | $3.5-4.0$ | 4.5e |
| 1923 | 160 | $1.7-2.0$ |  | A1923 Kit of 4 coils. ................ $\$ 1.70$

## BAKELITE RIBBED TYPE

 13/9. diameter and /4 high: molded inding rim hanes. Uniform windings for use with 140 mmf. condenser
4 PRONGS - 2 WINDINGS A5574. Short Wave Coil Kit. Set of fous coils covers 16 to 217 meters. Grid and tickler'windings. NET. . \$ ? A 5575 . Broadcast Coil Kit. 2 coild
cover 190 to 550 meters. NET. 4 e A5576. Ultra Short-Wave Coil.
Covers 9.5 to 21 meters. NET.......

## BAKELITE COIL FORMS

## RIM TYPE

Low-loss, with high dielectric strength. Molded rim handle for easy grip. $11 / 4^{\circ}$ dia., $23 / 16^{\circ}$ high. $\left.\begin{array}{ccc}\text { No. } & \text { Prongs } \\ \text { A1930 } & 4 \\ \text { A1931 } & 5 \\ \text { A1932 } & 6\end{array}\right\} \quad 10$ $\left.\begin{array}{ll}\text { A1934 } & 7 \mathrm{~S} \\ \mathbf{A 1 9 3 5} & 8\end{array}\right\}$ ?

## SMALL RIBBED TYPE

Genuine molded bakelite; $13 / 6^{\circ}$ diameter, 21/4 high. Have molded bs for low-loss winding,
No. Prongs NETEACH
A5578
A5579


## LARGE RIBBED TYPE

Large ribbed coil forms of molded bakelite for whinding low-loss coils pace. Have molded rim at top
No. Prongs NET EACH
$\left.\begin{array}{ll}\text { A2695 } & 4 \\ \text { A2696 } & 5 \\ \mathbf{A} 2697 & 6\end{array}\right\} \quad 17$
A5662 7 Prong. SPECIAL...7C

## PHONO OSCILLATOR

## TYPE COIL

For constructing either a "wireess" or a direct-connected phono oscillator. Tunes entire broadcast band. Coil thoroughly impreg nated. Black crackle finished shield can, $13 / 8$ " $\times 13 / 8^{7} \times 31 / 2^{"}$. With instruc tions and diagram. $\$ 5814$. NET......


## REPLACEMENT MAJESTIC

I.F. TRANSFORMER COILS

Will fit in original Majestic shield cans without hange. Well-constructed. Thoroughly impreg. nated; moisture-proof. Wound of double-coated nameled wire on paper tubing. Coils are upplied less tuning condenser and can. ACH
Cat. Majestic Model EACH
No. Part No. MET
A7150 Part No. 4428 Model $15.15 \mathrm{~B}, 150$ SO. 30

| A7151 | 8384 | $15,158,150$ | SO. 30 |
| ---: | ---: | ---: | ---: |
| A7154 | 6506 | 15,150 | 34 |
| 77158 | 6250 | 55 | 37 |

A7158
A7160
A7161
A716
A7169
A7169
A7175
7187 Primary coil used
as $R F$ plate coil in Models $310,330,460,520$ and 800 .
.37
COIL ASSEMBLIES IN CANS

| Cat. | Part |  |  |
| ---: | ---: | :---: | ---: |
| No. | No. | Model | EACH |
| A7190 | 4428 | $15,15 B, 150$ | $\$ 1.24$ |
| A7191 | 8384 | $15,15 B, 150$ | .78 |
| A7193 | 10149 | 460 | 1.49 |
| A7195 | 3908 | 20 | 1.49 |
| A7196 | $\{3960\}$ | 20 | 1.59 |
| A7197 | 49079 | 60 |  |

WE CAN SUPPLY exact duplicate, or adquate replacement coils for any set. When rdering, state name, morlel and lype of set, where coil is used, bands covered, condenser specifications. Send old coil for quatation or pand deposit for replacement without delay

## three circuit TUNER

Tuner has primary, secondary and variable tickler windings. Deaigned for use with a lenser. Pigtail tickle
connections assure posi

## TAPPED FOR SHORT WAVE

Both the three circuit tuner and the R.F. coil are tapped for short wave as well as standard roadcast reception
iET. 78
A1705. R. F. Coil to match Tuner.
$34 c$
BAND-SWITCHING COILS
Covers from 16 to 550 meters. Two or more units may be conveniently ganged. Has prong base for easy mounting Complete with pointer knob lal plate and diagrams. For 40 mmf condense
A5661.
s2.65


पाँ


REPLACEMENT
PRIMARY WINDINGS
High-impedance replacement type primary windings. Permit repairs to be made with a minAntenna inductance, 1.7 MH . R.F. Inductance, 3.5 MH .

| Cat. No. | \|Inside| Dia. | Type | Cat. No. | Inside Dia. | Type |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A2971 | $3 / 8$ | ANT. | A2976 | 13/16" | ANT. |
| A2972 | 3\% | R.F. | A2977 | $15 / 16^{\prime}$ | ANT. |
| A2973 |  | ANT. | A2978 | ${ }^{1515}{ }^{\circ}$ | R.F. |
| A2974 | 1/2* | R.F. | A2979 | $11 / 16^{\circ}$ | ANT. |
| A2975 | 5/8* | ANT. | A2980 | $1376{ }^{\circ}$ | ANT. |

# FARIABLE COUDEISERS \& CHOKES 

## USL MIDGET CONDENSERS



A small, well-buitt condenser ideal for Short Wave use. shaft extends $7 \%$ from front of condenser, $1 /{ }^{\circ}$ bushing al up to $1 /{ }^{*}$ mounting on panels up to $/ 4$ thick. Single hole with plates open, $11 / 4^{\prime \prime} \times 11 / 2^{*}$


Max.

Mmf. NET 1 | 15 | $35 c$ |
| :--- | :--- |
| 30 | $38 c$ |
| 45 | $41 c$ |
| 60 | $44 c$ |
| 80 | $47 c$ |
| 100 | $48 c$ |
| 25 | $53 c$ |
| 140 | $57 c$ | Midegt




### 2.6ANe

 CONDENSER410 mmid. max. capacity Has trimmers;
$21 / 2^{\prime \prime} \times 31 / 2^{7} \times 17 / 8^{\prime \prime}$. Whaft. 21 bs


29c

RADIO FREQUENCY CHOKES AIR-CORE



$3600^{\circ}$ of micrometer tuning. Air dielectric and ceramic insulation. Dust- and moisture-proof
 53. A575 58. Fig. A, $25-50 \mathrm{mmf}$
A5759. Flg. A, $40-100 \mathrm{mmf}$.
59.

NET...........................73s
A5760. Fig. A small compact trimmer


# TUNIIIG DIALS • PILOT LICHTS 

(1)EVEREADY MAZDA PILOT LIGHT BULBS
Genuine Eveready Mazda pilot light bulbs. Fampus for quality. These lamps are mado to operate on the voltages indicated. Excellent for all pilot lamp requirestandard sets and devices.

| $\begin{gathered} \hline \text { STOCK } \\ \text { No. } \end{gathered}$ | Lamp No. | Volts | Amps. | $\begin{aligned} & \text { PRICE } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { PER } \\ & 10 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 41 | 2.5 | . 50 |  | \$0. |
| 12 | 43* | 2.5 | . 50 | 10 c |  |
| A12 | 42 | 3.2 | . 35 | 12 c |  |
| A12 | 40 | 6-8 | . 15 | 9c |  |
| 12 | $50 \dagger$ | 6-8 | . 20 | 10c |  |
| 2 | $51 * \dagger$ | 6-8 | 1.0 | 7 c |  |
| A126 | 55* $\dagger$ | 6-8 | . 40 | 7 c |  |
| A125 | 48 | 2.0 | . 06 | 15 c |  |
| A125 | 49* | 2.0 | . 06 | 15 c |  |
| A125 | 44* | $6-8$ | 25 | 9 C |  |
| A1256 | 46 | 6-8 | 25 | 9 c | 5 |

*Indicates miniature bayonet base.
tindlcates $s$ mall round bulb.
BULB FOR RCA-VICTOR RE-32 S11. A special 10 watt bulb designed aperation on 115 Volts. 15 c
A6449. NET EACH....


PILOT LIGHT SOCKETS
Miniature base pilot light sockets for all radio requirements. Highest quality construction. With special tinned lugs for easy soldering. Spring contact in the socket holds lamp firmly in place. Bulbs not included.
A6380. Type A.
A6381. Type B:
A6378. Type D. Bayonet Shell Type A6379. Similar to type D, but mounting clip reversed.
10 for 40 C.
100 for $\$ 3.50$. EACH. . Sc ) $1 / 2^{\prime \prime}$ JEWELLED BRACKETS
Visual indicators for use on racks, etc. Socket takes reghole mounting. Shows definitely when your equipment is "on." With jewel.

| Base No. | Bayonet Base No. | Color |  |
| :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { A6387 } \\ & \text { A } 6391 \\ & \hline \end{aligned}$ | Red Green Amber |  |

## JEWELS FOR PILOT LIGHTS

 Attractive colored jewels for panel use. Require $1 / 2^{\prime \prime}$ hole. $1 / 6^{\prime \prime}$ thread shank. $3 / 8^{\circ}$ long. A6385. Green. NET EACH.........

I' JEWEL BRACKET
For transmitters, test bulb replaceable from front. $11 / 3^{=}$long; requires $1^{\prime \prime}$ hole for mounting.

| t | Miniature | Color | EAC |
| :---: | :---: | :---: | :---: |
|  |  | Red Green Amber |  |

1/2 INCH JEWEL BRACKET A6294. Red. A6296. Amber. 24 Green. NET EACH.......


DRAKE 3/4 BRACKET
Mounts in ${ }^{13366^{\prime}}$ hole. Lamp replaceable from

| Bayonet | Miniature | Color | EACH |
| :---: | :---: | :---: | :---: |
| A6040 | A6043 |  |  |
| A6041 | A6044 | Green |  |
| A6046. Candelabra Socket. Clear for ${ }^{\text {a }}$ (1/4 |  |  |  |
|  |  |  |  |

## VALUES IN MODERN DIALS

4-INCH ULTRA-MODERN RADIO DIAL


Airplane type dial with black figures on gold foil. Scale. $41 / 4 * \times 37 / 0^{\prime \prime}{ }^{\mathrm{Cali}} \mathrm{C}$
brated 550 to 1600 KC brated 550 to 1600 KC 12 to i. Bronze escutcheon. Particularly suited for use with 365 and 420 mmrd. condensers. For $3 / 8^{\circ}$ or $1 /{ }^{1 / 6}$ accurate dial at an unusually low pric ace.

A4732. NET

## 111/8" LONG

 SLIDE-RULEBeautiful new, giant type Slide-Rule dial. 111/8 ${ }^{\circ}$ long, $51 /{ }^{\prime \prime}$ wide overall. Requires $31 / 15 \times 93 / /^{\prime \prime}$ opening in panel. 4 band calibrations. 55 to 150 ; 0 to 100; 100 to ; 150 to 55. Easy-to-read numerals on gold. For $3 / 8^{n}$ or $1 / 4^{\text {" }}$ shaft. Drive ratio is 20 to 1 . With non-breakable escutcheon and 2 pilot Rule Dlal of unusual accuracy. $\$ 3.82$ A4185. NET


## 91/4" LONG SLIDE-RULE

A fine value in a new Slide-Rule dial, $91 /{ }^{\circ}$ long $x$ 53/16 wide $41 / 8 \times 81 / 6{ }^{\circ}$ opening. $41 / 8 \times 8$ Kis
Universal opening.
scale calibrated in KC and MC. Has bushing to fit $3 / 8^{\prime \prime}$ or /4" shaft. 20 to 1 drive ratio. With escutcheon and 2 pilot light sockets. Wt., 2 lbs . $\$ 2.65$


31/4 INCH MODERN. ISTIC DIAL
An attractive square type airplane dial with bronze escutcheon. Positive non-sip drive. Fith $3 / 8^{3}$ to $1 / /^{*}$ reducer. Tuning ratio of $10-1$. Universal scale for use with any clockwise or counterclockwise condenser. Complete with two pilot
light brackets. Shpg. wt.. 1 lb . $\$ 1.05$

## KURZ-KASCH VERNIER DIALS

A durable and attractive dial always popular with builders and experimentlite. Universal scale reads 0-100-0. Has smooth positive friction-drive action: no backlash. Available in two sizes, both to fit $1 / 4^{*}$ shaft. Ideal for all equipment. 4 -inch dial has tuning ratio of 13 to $1 ; 3$-inch size has 9 to 1 ratio. A fine value in a low-cost highly-cficient (radio dial. " Diameter. NET........ 45e A6200. $3^{\prime \prime}$ Diameter. ..............................................


## MOLDED DIALS

Attractive black bakelite dials with large calibrations in white. Easy-grip $2^{2}$ knob on
$3^{*}$ dials. $2^{2 / 8}$ knob on $4^{F}$ dials. All types listed below fit $1 / 4$ " . Excellent dial values.

3 INCH DIALS A4196. 0-100.
NETH..... 23e

> AINCHDIALS A4198. 0-100. A4198. $0-100$.
A $199.100-0$.

## 110 VOLT PILOT LIGHT

1 pilot light assembly. Candelabra socket. Bulb removable from front.
Chrome-finished. Less bulb. A6462. Red. A6464: Amber
A6463: Green.

## NET

EACH.
A6465

54.

## KNIGHT-CROWE SLIDE-RULE

 4" RADIO DIALBeautiful Cro-Art
Slide-Rule Dial of modern design with black figures on bronze foil. Two MC For $20^{6} 16$
denser con
Direct drive. Has a $a^{\circ}$ diameter shaft on the pulley hub for mounting of tunins knob pulley hub for mounting of tuning knob. Requires panel opening tractive bronze escutcheon having non-breakable crystal. Pilot light
socket included.
A4189. NET


## 63/4" LONG

## SLIDE-RULE

Attractive, new dial, 63/4 " by $315 / 16^{\circ}$. Universal scale on gold face. 12 to 1 ratio rive. With escutch eon and pilot light
scale on gold face. Fits either $3 / 8^{*}$ or $1 / /^{\prime \prime}$ shafts. Requires panel opening $21 / 16^{\circ} \times 5$ 㣙". Shpge wt.. A4183 NET
 Wight socketcheon and 2 . 2 bs . Ao attractive and popular builders dial.

## 23/8 INCH <br> AIRPLANE DIAL

A friction-drive dial with a tuning ratio of 6 to 1 . Dual translucent dial calibrated with a univer-
sal scale, $0-100$ and $100-0$. sal scale, 0-100 and 100bezel and pilot ligh slass A4. Fits 3/3 " shaft. 68 e


## $31 / B$ INCH

 AIRPLANE DIAL Positive-action, smoothtuning dial. Dual translucent universal scale with glass bezel. Tuning ratio 6 to 1. Pointer travels with condenser Has bushing to fit $3 / 8$ " or $1 / 4$ shafts. With pilot cheon.

A4182. NET... 83 c

## 4 INCH

## AIRPLANE DIAL

 A high quality translucent dial with universal scale. Positive friction drive. Tuning ratio 9 to 1. Dial pointer travels with con denser. Will fit $3 / 8$ " shaft. With two pilot light sockets, escutcheon plate and ${ }^{2}$

## $51 / 8$ INCH

## AIRPLANE DIAL

A large handsome dial withglass-protected pyrain face. Two scales, 0-100 and 100 -0 for clockwise or counter-clockwise con densers. Dual pointers; shaft with split bushing for $1 / 4^{\prime \prime}$ shafts. Wt., 2 lbs . An excellent dial value.
A4177. NET.

# TUNING KNOBS and DIALS 

FINE BAKELITE KNOBS


Durable bakelite molded knobs. Fit $1 / /^{\circ}$ shafts. All have set screws except Type "C" which is push-on type. Type "G" has pointer. Types B, set knob replacements. Knobs marked * are set knob replace

| at. | Fig. | Diam. | Color | $\begin{aligned} & \text { NET } \\ & \text { Each } \end{aligned}$ | $\mathrm{FOR}_{\mathrm{O}}^{10}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A6206 | A | 1 | Walnut |  |  |
| A6207 | A | $13 / 8{ }^{13}$ | Walnut |  |  |
| 6209 | B |  | Walnut | 6 c | 45 c |
| 2917 |  |  | Wa |  |  |
| 160 |  |  | Black |  |  |
| 170* | E |  | Black | $5 c$ | $40 c$ |
| 6161 | E |  | Walnut |  |  |
| A6172* | E |  | Walnut |  |  |
| A6162 | E |  | Ivory |  | $45 c$ |
| A6174* | E |  | Ivory |  |  |
| A6163 | F | ${ }^{6}$ | Black | 5 c | 40c |
| A6164 | $\stackrel{F}{\text { F }}$ |  | Walnut | 6 |  |
| A6166 | G |  | Black | 6 |  |
| 6167 | G | 116* | Walnu |  |  |
| A6168 | $\stackrel{\mathrm{H}}{4}$ |  | Black | 5 C |  |
| A6169 | ${ }^{\mathrm{H}}$ |  | Walnut |  |  |
| 2914 | C | $13 / 8{ }^{\prime \prime}$ | Black | 4 c | 30 |

MODERNISTIC TYPES


All have set screws and will fit $1 / 4$ inch shafts For use with midget sets. All are walnut-colored and beautifully made.

| No. | Type | Dlam. | EACH | 10 FOR |
| :---: | :---: | :---: | :---: | :---: |
| A6202 | A | 11/8. |  |  |
| A6203 | $\stackrel{B}{\text { B }}$ | 11110" | 6 |  |
| A6205 | D | ${ }^{11 / 88^{\prime \prime}}$ | - c | 45 c |



## POINTER KNOB

Black $11 / 2^{\prime}$ bakelite knob. Arrow engraved on face. Fits $1 / 4^{*}$ shaft. A6208. 10 FOR 4Oc. 5

## FINGER-GRIP

## BAKELITE KNOB

A fluted black bakelite knob
for single finger rotation Highly polished. Dia. 11/4
A6155. 10 FOR 75 C
STREAMLINED BAR KNOBS
Modern black knobs for test instruments, ampliners,
(except Fig . D). Fit $1 / /^{*}$ shafts. Recessed set screws


GENUINE WOOD KNOBS


Attractive in design and finish. For $1 / 4$-inch shafts. All have surc-grip feature. Brass bushing inset; side set-screw. Knobs marked * are of maple; all others are of walnut.

| No. | Fig. | Width | No. | Fig. | Width |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A3765 | A | 7/8* | A3770* | B | $1{ }^{\prime \prime}$ |
| A3766* | B |  | A3771 | c | 1 " |
| A3767. | B | $5 / 8$ | A3772 $\dagger$ | c | 1 " |
|  |  |  | A3763 | D | $1 *$ |
| EACH. |  | 8 c | A3764 | D | 11/8* |
| 10FOR |  | 700 | NET |  |  |
| A3769 |  |  | EACH. |  |  |
| NET E |  |  | 10 FOR |  | 70 c |

## POPULAR-BAKELITE KNOBS



## METAL NAME PLATES

## MCROPHONE C

A2885. See page 166 for complete listing of markings available. EACH.

## METAL DIAL PLATES

Attractive black dial plates with etched aluminum figures. For amplifier panels. etc. ${ }^{2} 11 / 4^{\circ}$ hish
$11 / 16^{\circ}$ wide. For $300^{\circ}$ rotation. A4 100. "Record." 0-10. A4 101 . "Microphone." 0.10 A4 102. "Gain." 0-10. A4103. "Tone." 0-10.



## DELUXE BRASS DIAL PLATES

New type dial plate with single
hole mounting. Bantiful brown hole mounting. Beautiful brown enamered brase plate with iutplated, etched numperals. Re-
cessed mounting hole. $3 / 8$ dia A5 187. Plain 0-10.
A5188. Microphone
A5188. Microphone 1.
A5199: Microphone 2 .
A5190: Microphone 3.
A5 192. Phonograph.
A5193. Dual Phonogra
A5195: Bass.
A5 196. Treble.
A5 198. AVS-AVE
A5 199. Master.

PUSH-BUTTON TUNERS


## KNIGHT SELECT-O-MATIC

 TUNING UNITSSuitable for any T.R.F. of Superhet, A.C. or D.C. Uses special low-drift mica-insulated trimmer condensers. Supplied completely wired ready to install. Includes handsome escutcheon, knobs, station call-letter sheets, and complete instructions. Six-button model tunes five stations automatically; elght-button model covers seven stations. Size: $25 / /^{\prime \prime} \times 43 / 4^{\prime \prime} \times 23 / 4^{\prime \prime}$. Shpg. wt., 5 lbs.
A5755. 6 Buttons. Five station buttons: sixth button is release.
s.35

A5756. 8 Buttons. Seven station buttons; NEThith button is release
\$3.40
MEISSNER PUSH-BUTTON TUNER
Push-button tuning for any TRF or Superhet A.C. or
D.C. set. Seven buttons provide of any seven sta-
ions; eighth button is release for manua ing. Requires only setting of trimmer condensers. Dimensions: $6^{\prime \prime} \times 23^{\prime \prime} \times 41 / 2^{\prime}$. Complete with escutcheon, station call-letters, mounting
hardware, and instructions.
A5 752 . NET.....................

## DIAL DRIVE RUBBERS

Box of 24 assorted dial-
drive friction rubbers in eight different types.
Used in such sets as RCA. Atwater Kent. Stewart Warner, etc NET. 84 c


## NON-SLIP DIAL COMPOUND

## PHOSPHOR BRONZE DIAL CABLE

The 42 Strand Cable is made up of 6 individual cables each consisting of 7 strands of the finest grade of phosphor bronze wire, around central linen core. The 16 Braided Cable is made up of 16 strands of fine bronze wire woven together. Minimum stretch. A6085. 30 ............ 15 c A6085. 30
A6086. $32, \ldots, \ldots, \ldots, 154 \mathrm{c}$ A6088: 44,3 A6089. 37. A6090.

Columbia
A6092. All......

Specially made for alding in repair of friction and cord driven dials. Prevents slipping. Comes in powder piug parts. This compound will save you time and money over and over again in dial repair work. 8 e

## BRAIDED SILK DIAL CORD

 Durable dial cable of pure braided silk, with water-proof finish.| No. | Length | NET |
| :---: | :---: | :---: |
| A6080 | 5 ft . | \$0.22 |
| A6081 | 25 ft . 50 | . 80 |
| A6083 | 100 ft . | 2.75 |



## EXACT DUPLICATE DRIVE CABLE-BANDS-BELTS

Exact duplicates of the originals in size, ma- | old dial cable, or state make and model of set. terial, and design. We can supply any type of We will supply the proper replacement prompt-




A6104. S14.21.31...15c A6105. 15, 22 Front. 24 C 46093. Crostey Rar.. 24 C A6093. $40 \mathrm{~s}, 60 \mathrm{~s}, 804.18 \mathrm{c}$ A6095. Majestic $\mathrm{No} 1-70,$.

A6096. No. 2-70,
 A6103. 180..........15c A6098. All........... 13c A6100, 16, 17, 18, 33, 15c c

## INSTRUMENT DIALS and KNOBS

## INSTRUMENT DIALS



23/4 INCH DIALS A5733. 325 degrees. A57 34. 180 degrees NETCH.

73


Chrome silver dials with grained satin finish and engraved black numerals and calibra-
tions. Ideal for dressing tions. Ideal for dressing up transmitters, testequipment, etc. Heavy
black knob offers a real black knob offers a
grip. For $1 / 4$ inch shaft Read 0-100 in choice of either 325 or 180 de grees rotation. Complete
arker
A5735 DIALS A5736. 325 degrees NET
\$1.03

## DIAL PLATES WITH KNOBS

Handsome, professional dial plates finished in silver-grain satin with calibra tions neatly engraved in black. Calibrated 0 to 100. Fluted fin ger grip pointer knob
fits $1 / 4 \%$ shafte. $325^{\circ}$ style Ideal for voluine controls, on amplifiers, modulators, etc. A5670. ${ }^{2-180}$ Degrees
A5670. 325 Degrees. NET EACH $3^{31 / 2-1 N C H ~ D I A L ~ P L A T E S ~}$ A5672. 180 Degrees.

NET EACH
$52 c$

4-I NCH DIAL PLATES
$71 c$
A5674. 180 Degrees. NETEACH.. 91 ce
DIAL PLATES ONLY (LESS KNOB)


## VERNIER MARKERS

Attractive dial markers for accurate tuning dress up your equipment.

| No. | Dial Size | Deg | NET |
| :---: | :---: | :---: | :---: |
| 5747 | 23/4, | 325 |  |
| A5748 |  | 180 |  |
| A5732 | $\stackrel{4}{4}$ | 180 |  |



## FLUTED KNOBS

Molded of high quality black bakelite; for $1 / 4$ " shaft Has an attractive, professim gives positive grip Supplied with flange, with pointer, or plain.

Fig A. Pointer Type A5475.11/8".EACH 23 C
A5476.15".EACH 28 C A5476.15/8".EACH 28 C

Fig. B, Flange Type A5478.21/K"EACH 28 C

Fig. A. Less Pointer A5480.11/".EACH 16 C A5481.15/8"EACH 22 C

## VERNIER DIAL

Attractive satin silver-finish Vernier Dial for test instruments, receivers, etcio; friction shaft. 5 - 1 Vernier ratio; type drive. Dial plate calibrated type drive. Dial plate calibrated
$0-100$ in 180 degrees. With transparent mark knob. 8 ASETEACH

## GEAR REDUCTION UNIT



6 to 1 ratlo. For use with any condenser not equipped with
reduction gear. Has doubledriven gear and anti-backlash spring. $1 / 4^{\prime \prime}$ drive shaft. Visespring. $1 / 4^{\prime \prime}$ drive shaft.
holds condenser firmly.
A4 111 . For $1 / 0^{\circ}$ shaft.
$35 c$

## CROWE DIALS AND TUNING UNITS

## MODERN DIALS AND KNOBS



Fine appearance and accurate workmanship characterize these knobs and dials. Dial plates are made of anodized black aluminum with calibrations and numbers in contrasting ivory.tive styo styled and attractively styled and can be had colors - red ivory, and black. Large knob ofters sure grip and permenel and is o adjustment. Marker mounts on panel and is tenths of a subdivision. All knobs fit standard $1 / 4$ " shafts. Calibrated $0-100$.
4-INCH DIALS

| 270 Degree | 180 Degree | Color | EACH |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & A 3700 \\ & A 3701 \\ & A 3702 \end{aligned}$ | $\begin{array}{r} \text { A } 3703 \\ A 3704 \\ A 3705 \end{array}$ | Blacki ivory Red | 8 |
|  | $23 / 4$-INCH | DIALS |  |
| 270 Degree | 180 Degree | Color | EACH |
| $\begin{aligned} & A 3706 \\ & A 3707 \end{aligned}$ $A 3708$ | $\begin{aligned} & A 3709 \\ & \text { A3 } \\ & \text { A } 3711 \end{aligned}$ | Black <br> Ivory <br> Red | 7 |
|  | $13 / 4-$ INCH | DIALS |  |
| 270 Degree | 180 Degree | Color | EACH |
| $\begin{aligned} & A 3>12 \\ & A 3>13 \\ & A 3>14 \end{aligned}$ | $\begin{aligned} & A 3715 \\ & A 3716 \\ & A 3717 \end{aligned}$ | Black Ivory Red | 44 |



## CROWE GIANT

 6-INCH DIALA large dial for numer ous uses. Particularly suited for test instru ments such as Beatfrequency OscillaSignal Generators, etc. Easily read. Direc dive. Black anodized with $23 / \mathrm{s}^{2}$ knob in a with $23 / 8$ knob in a listed below. Calibrated $0-100$ in 180 degrees rotation with contrasting ivory markings. The marker is of the hair-line type and mounts directly on panel. Allows accurate duplication of previously obtained reading.
A3691. Red Knob.
A3692. Ivory Knob
A3692, Vory Kmob.
$\$ 2.06$


## CHANGE-O-NAME DIAL PLATES

These unique dials combine a dial plate with a selective name plate allowing any one of a number of dcrignations to be used. Name on dial easily name plate to desired position $17 /{ }^{\prime \prime}$ dial has silver-white figures on position. $17 / \mathrm{m}^{\text {dial has silver-white figures on }}$ white letters on red background A3694. Calibrated $0-100$ in $270^{\circ}$. Reads Fader, Gain, Selectivity, Tone, Volume, Blank A3695. As above, but reads: Master Volume, Micro 1, Micro 2, Radio Volume, Record Volume, Blank
A3696. Calibrated $0-100$ in $180^{\circ}$. Reads: Amplifier Antenna, Crystal, Detector, Os cllator, Blank
21.

## 2 SPEED PLANETARY DRIVE

Used as auxiliary speed reducer on many controls. Mounts on conknob shaft. Slow ratio 7 to 1; fast ratio 1 to 1. Drive fits any $1 / 4$ diameter shaft.
$\$ 1.32$

## PLANETARY DRIVE KNOBS

A set of two knobs for use with drive unit listed above. Large knob fits Z/6" high-speed shaft, and small or walnut finish.
A3757. Walnut.
A3758. Black.

MATHEMATIC PRECISION TUNER


A highly precise type of tuning control for use where fine tuning and accurate logging is required. Suitable for use in the construction of laboratory equipment for schools, colleges, experimental laboratories, etc., as well as precision, custom-built broadcast and communications receivers. May be connected to condenser shaft direct or through a fexible coupling. Takes standard $/ 4$ shaft set-screw mates 72 to 1 in a $360^{\circ}$ movement of condenser shaft. Gear driven movement with take-ups to prevent backlash. Has two dial scales, the com bined reading providing 600 graduations in $180^{\circ}$ of tuning condenser rotation. Also suit able for test equipment use. Complete with fly wh
A3699. NET.
s3.73


A new line of knobs unusually striking in de sign. Made of Croplastic-a material which lends itself to a highly polished finish. The at tractive colors give a professional appearance to test equipment, amplifiers, and receivers All knobs fit $1 / 4^{\prime \prime}$ shaft; with set screw.

BAR KNOBS

| Color | Fig. B | Size | Fig. A | Slze |
| :---: | :---: | :---: | :---: | :---: |
| Black. | A3650 | 13/8" | A3653 | 2 * |
| Ivory. | A3651 | 11/4" | A3654 |  |
| Red.. | A3652 | $11 / 4 *$ | A3655 |  |
| $\begin{aligned} & \text { NET } \\ & \text { EACH. } \end{aligned}$ |  | 9 | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | c |
|  | ROUND |  | G. C |  |
| Size | Black | Ivory | Red | NET |
| 5/8\% A | A3656 | A3661 | A3666 | 7 c |
| 1/8 ${ }^{\circ}$ | A3657 | A3662 | A3667 | c |
| 118 | A3658 | A3663 | A3668 | 1 c |
| 15/ ${ }^{\prime \prime}$ | A3659 | A3664 | A3669 | 5 c |
| 23/8 | A3660 | A3665 | A3670 | 26 c |
| ROUND | D KNOB | WITH PC | POINTER-FIG. D |  |
| Slye | Black | ivory | Red | NET |
|  | A3671 | A3675 | A3679 | 15 c |
| 1\%" | A3672 | A3676 | A3680 | 17 c |
| 15\% | A3673 | 43677 | A3681 | 21 c |
| 23/8" | A3674 | A3678 | A3682 | 32 c |

## JACK MARKERS

Made of aluminum with background etched dull black. Bor ders and letters raised and highly A3685. "Phones." NET A3686. "Microphone." EACH A3687. "Mike Cur." "Phonograph." A3689. "Plate Cur

## AC-DC DIAL PLATES

Graduated tuning dial is marked $0-100$. Volume plate has etched arrow. $15 / 8$ diameter. Bronz of the AC-DC type.
A5677. Tuning dial. NET
A5678. Volume. $\quad$ EACH


## SWITCH PLATES

Toggle-switch plates, attractively finished in etched alu minum with black ba
44106 "Micro-Ph
A4106. "Micro-P
A410

# RADIO-BUILDERS' SUPPLIES 



CRYSTAL-FINISHED CABINETS


Sturdy steel cabinets with hinged lids. Front and back panels, or bottom, easily removed. Supplied No. Ln. Wasiy assembled.
 A1
A1
A1
A1
A

## PANELS FOR ALL RADIO PURPOSES

Here is a full gelection of panels in a variety of sizes and materials for Electralloy and Aluminum panels are Y/i"" thick and have natural finish; Hard Rubber and Bakelite panels are $3 / 16^{\prime \prime}$ thick and have polished finish. Finished panels are $1 / 16^{\prime \prime}$ steel with black wrinkle enamel finish; Masonite panels $1 / 8^{\circ}$ panels are $1 / 16^{\prime \prime}$ steel with black wrinkle enamel finish; Masonite panels $1 /{ }^{\prime \prime}{ }^{\prime \prime}$
thick have smooth black finish resembling bakelite in external appearance.

| $\begin{gathered} \text { Size } \\ \text { In. } \\ \hline \end{gathered}$ | Electralloy |  | Aluminum |  | Rubber |  | Bakellte |  | Finished |  | Masonite |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | NET | No. | NET | No. | NET | No. | NET | No. | NET | No. | NET |
| $7 \times 10$ | A15080 | \$0.40 | A15100 | \$0.39 | A15114 | \$0.69 | A15122 | \$0.78 | A15093 | \$0.32 | A15135 | 0. 26 |
| $7 \times 14$ | A15081 | . 55 | A15101 | - 59 | A15115 | . 82 | A15123 ${ }^{\text {A } 15124}$ | . 99 | A15094 | . 38 | A15136 |  |
| $7 \times 16$ | A15083 | :59 | A15103 |  | A15116 | . 98 | A15124 | 1.14 | A15095 | . 44 | A15137 A15138 1 | 34 |
| $7 \times 18$ | A15084 | . 65 | A15104 | - 78 | A151i7 | 1.22 | A15126 | 1.39 | A15096 | . 59 | $\begin{array}{\|l} \text { A15138 } \\ \text { A15139 } \end{array}$ | 8 |
| $7 \times 19$ | A15085 | : 7 | A15105 | : 82 | A1sil | 1.22 | A15126 | 1.39 | A15096 | . 59 |  | . 43 |
| $7 \times 21$ | A15086 | . 78 | A15106 | . 83 | A15118 | 1.42 | A15127 | 1.59 | A15097 | 76 | A15141 | . 48 |
| $7 \times 24$ $7 \times 30$ | A15087 | . 89 | A15107 | . 94 | A15119 | 1.58 | A15128 | 1.84 | A1S09 | 76 | A15142 | . 52 |
| $8 \times 18$ | A15089 | 1.170 | A15108 | 1.23 | A15120 | . 98 |  | 2.24 |  |  | A15143 | 4 |
| $9 \times 15$ | A15090 | . 70 | A15110 |  |  |  | $\begin{aligned} & \text { A15130 } \\ & \text { A15131 } \end{aligned}$ | 1.55 | A15098 A15099 | . 59 | A15144 | 7 |
| 24×36 | . |  | A15111 | 4.55 |  |  |  | 1.44 |  |  |  |  |
| Special Slzes Cut to Order |  | SQ. in. | 1c PE | $\mathrm{CH}^{\mathrm{R} S Q_{0}}$ | $13 / 4 \text { c } \mathrm{P}$ | $\begin{gathered} \text { ER } \\ C Q \end{gathered}$ | $13 / 4 c P E$ |  |  |  | 1/2c | $\mathrm{H}^{\text {SQ }}$ |

Orders for Special Panels must amount to a 75 cminlmum ; Masonite to 50 c .

## GRID CAPS



## STANDARD

Type A is for standard tubes; Type B is for new metal tubes. Assure easy soldering.
A6334. Type A.
A6335: Type B. 12 FOR $\qquad$ ......8c

## COMBINATION

Reversible cap designed to fit leads with phone tips.
A6328. Red


## METAL TUBE GRID SHIELD

Fits firmly over grid cap of all metal type tubes. Slot provided for grid lead.
A5290. EACH Per Dozen.

## COIL SHIELDS

Aluminum coil shields with detachable base permitting easy removal of top. Sturdily-built. A5723. $21 /{ }^{1 / 2} \times 3^{\prime \prime}{ }^{\prime \prime}$
10 FOR 98C A5715, SPECIAL VALUE. $13 / 8^{7 \prime} \times{ }^{25} / 6^{4}$ long.
EACH. 10 FOR 3.


BULB COLORING KIT
Kit contains one bottle each: a bottle of solvent.
A2998. PER KIT.... $27 / 4$


## GRILLCLOTH

Finest tapestry material; interwoven black and gold design. Specify size. widths. any length. 16 . Square Foot... 18 c


## BAKELITE TUBING

 High grade polished bakelite tub-ing. Natural
wall thickness

| No. | Inside | Pia. | Per. |
| :---: | :--- | :---: | ---: |
| Ft. | Per |  |  |
| Inch |  |  |  |



## FORM-FITTING TUBE SHIELDS

For ST12 Bulbs

## Body consists of two

snug-fitting half shields
with cap and base assur-
ing perfect fit. A clamp and krounding clip are furnished for the large size bulbs.
A5255. For short tubes with grid caps, as 1A6, 2A7, 38, 75, 89, etc.
A5256. For short tubes, without grid caps, as 6Y5, 12A5, 27 , 30.31, etc.

A5257. For long tubes with grid caps, as 6C6, 6D6,57,58, etc. A5258, For long tubes withNEt ${ }^{\text {out }}$ grid caps.
NECH
LOTS OF 10. 45c
For S14 and ST14 Bulbs A5253. For S14 straight side A5254. For ST14 dome-shaped tubes such as 24A, 32, 35, 2A5,
OAA, 26,45, etc.
NEACH
LOTS OF 10.
45c


## BANTAM TYPE

 TUBE SHIELDDesigned especially or the new 1.4 volt
bantam glass tubes or other $\mathrm{T}-9$ bulbs.
A5285. One piece
without cap. Grounds 113 zel automatically. A5286. Same as above but has cap and ground clip. Se A5287. With grid lead type 10 FOR 45c. EACH......Sc

## TEST BUZZER BUTTON

Pearl buttom held in
$5 / 4$ in, hole by spring clasps, Has many uses. NET.

# SOCKETS • PLUGS • CONNECTORS 

FAMOUS AMPHENOL TUBE SOCKETS


REPLACEMENT SOCKETS
Made of molded bakelite. Special universal adapter plate permits quick replacement of any water socket. Side grip contacts or sure tube prong contact. These universal replacement sockets may mounted in any desired position.


"MIP" SOCKETS Cadmium-plated steel plate centers. Strongest sockets made.
No. Prongs EACH

A4
A4
A
A
A
A
A
A
A
D
A
A


CHASSIS TYPE
For chassis hole mornting. Steel locking ring. Molded bakelite with cadmi-um-plated contacts. No, Prongs EA. A4532 A4532
A453 A4533

A4534 $\begin{array}{ll}\text { A4534 } \\ \text { A } 4535 & 75\end{array}$ | A4535 | 7 M |
| :---: | :---: |
| A4536 | 7 M |
| A4537 | 年 |

| A4538 | $\begin{array}{c}\text { Comb. } \\ 8 \\ \text { Octal. }\end{array}$ |
| :---: | :---: | :---: |
| $\begin{array}{c}\text { A4539 } \\ \text { A4625. For Loctal }\end{array}$ |  |



AMPHENOL SHIELDED CABLE CONNECTORS
Insulated steel cap snaps over Clip-Tite socket (or plug) ; provides perfect electrical shielding, Has rubber grommet in end to protect cable. Assures perfect connection. Diam. $1 / 4^{\prime} 1^{11 / 4}$. long

| No. | Prongs |  | P |
| :---: | :---: | :---: | :---: |
| A1630 | . 4 | A1635 |  |
| A1631 | 5 | A1636 |  |
| A1632 | 6 | A1637 |  |
| A1633 | 75 | A1638 | 7 S |
| A1634 | Octa | A1639 | 8 Octa |
| A1629 | 9 | A1619 |  |
| A1624 | 11 |  |  |
| NET <br> EACH | 5 | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |  |
| 162 |  |  |  |
| + |  |  |  |
| CH | 24. | EACH |  |

A 1640 , Locking Type Metal tors and screw together. Set of 2 Pleces
A1783. Chassis Type Meta

## VIBRATOR SOCKETS

We can supply replacement sockets for any vibrator. Molded sockets designed for heavy-duty service. Mounting plate slotted to fit rivet hole spacing from $11 / 2^{2}$ to $17 / 8$. Send in old socket, old vibrator, or diagram of pin ar proper socket. proper socket.
12.

## STEATITE

The ideal socket for Short-Wave receivers and transmitters. New low-loss design With un steatite. mounting platersa mounting plate. Sil-ver-plated contacts very popular higb No. Prongs EA. $\left.\begin{array}{lc}\text { A4541 } & 4 \\ \text { A4542 } & 5 \\ \text { A4543 } & 6 \\ \text { A } 454 & 75\end{array}\right\} 24 \mathrm{C}$
$29 c$
$24 c$


TOP CHASSIS Mounted in beavy aluminum shell which raises socket panel and shield socket connections. 4 wiring entrances Sturdily designed

No. Prongs EA. | No. | Prongs EA. |
| :---: | :---: |
| A4522 | 4 |
| $A 4523$ | 5 |




AMPHENOL AC PLUGS AND RECEPTACLES
Molded bakelite plugs and receptacles. Fis. A is available in either male or female type. Fig. B has mounting plate for mad.
No. Fig. Type NET

 | A4080 | B | Male |
| :---: | :---: | :---: |
| A 4081 | B | Male* |
| Female |  |  |$\quad 161 / 2 \mathrm{C}$

RECESSED PLUG AND

ype

| No. | Type |
| :---: | :---: |
| 44083 | Male |

NET A4083 Male

24e


## OAK TYPE WAFER SUB-PANEL SOCKETS

High grade wafer type sub-panel tube sockets of tigh grade wafer cype sub-pion. Sturdy and reiable with fully insulated top. Contacts are fullfloating type, self-aligning, and of one piece construction for low resistance connection; make sidewiping contact with tube prongs. Center rivet securely holds laminations together. Each sock


STANDARD SIZE
127/38 Mounting Centers No. Prongs EACH PER 10 $\left.\begin{array}{cc|c}A 4020 & 4 \\ \text { A4021 } & 5 \\ \text { A4022 } & 6 \\ \text { A4023 } & 7 \mathrm{M}\end{array}\right\} \quad$ e

## MIDGET SIZE

11/2 Mounting Centers No. Prongs EACH PER 10 A4026 4 A402

FOR ALL OCTAL BASE TUBE
Similar to sockets above but has 8 holes to fit octal base glass and metal tubes. $11 / 2^{\prime \prime}$ mounting centers.
A $4031.10{ }^{\text {F }} 45 \mathrm{C}$. NETEACH


BAKELITE TYPE
One-piece black bakelite construction. Sturdy contact guides. $111 / 16^{*}$
 BASE MOUNT SOCKETS


A molded bakelite
socket for
panelor
baseboard
mounting.
Rusged con: tacts. $17 / 6^{\circ}$
diameter. with nickel-plated binding posts. No. Prongs EACH PER 10 $\left.\begin{array}{l|c|c}\text { A4515 } & 5 \\ \text { A4516 } & 5 \\ \text { A4518 } & 7 \mathrm{M}\end{array}\right\} 21$ c $\$ 1.95$ A4519
A 4520.8 (Octai). EACH... 27 C

HEAVY-DUTY RUBBERHANDLE PLUGS
 Molded bakelite plugs and sockets mounted handles. For use on haeakers, power packs. speakers, power packs, multi-conductor conmecting cable. Hollow, tinned prongs for individual wires in
cable. $21 / 2$ handles.
PLUGS I SOCKETS

| No. | Prongs | No | s |
| :---: | :---: | :---: | :---: |
| A4035 | 4 | A4040 |  |
| A4036 | 5 | A4041 | S |
| A4037 | 6 | A4042 | 6 |
| A4039 | 75 | A4043 | 7 M |
|  |  | A4044 | 75 |
| NET | - | NE | ? |

## ISOLANTITE TYPE

Low-loss sockets, especially effecive on bigh frequencies. Rust proof side-gripping contacts. Oval No, Prongs EACH|PER 10

| A4015 <br> A 4016 | $4$ |  | \$ |
| :---: | :---: | :---: | :---: |
| A 4017 | 6 |  |  |
| A4018 | 7 S |  | 2.97 |
| A 4019 | 7 M |  |  |
| A4014 | Octa | 35 |  |

## 2-PIECE CONNECTORS

Connectors of two piece molded bakelite construction. Sure gri handles; sturdy contacts and pins. For microphone or speaker plugs.


\section*{BAKELITE MALE CONNECTOR PLUG <br> A sturdy, neat, two piece molded bakelite conncer or plus for etc. Top unscrews. <br> | No. | Prongs | 1 |
| :---: | :---: | :---: |
| A1800 | 4 |  |
| A1801 | 5 | EACH |
| A1802 | 6 |  |
| A1803 | 7 M |  |
| A1804 | 75 | c |
| A1805 | 8 (Octal) |  |

HOWARD B. JONES PLUGS AND SOCKETS
Multiple contact plugs and sockets of molded bakelite with metal caps. Compact, dependable units; popular for Public Address use.


H\＆H TOGGLE SWITCHES


Underwriters ap－ proved；rated at

 | 1 amp． |
| :--- |
| Oxidized bronze | Oxidized bronze

finish．Threaded hnish．Threaded Supplied with SINGLE POLE SINGLE No．THROW SEACHSER 10


SINGLE POLE DOUBLE A 5453 HOW（3

 DOUBLE POLE SINGLE A545 5 RROW 4 UUGS A5456
 DOUBLE OOLE DOUBLE $A 545 \%$ ${ }^{A} 546{ }^{2}$


## TOGGL

 SWITCH PLATEAninexpensive＂on－ oft＂plate for any tog－ ghaft hole．Attractive bronze finish and clear lettering．
A5467．Net EACH
PER TEN．
H\＆H ROTARY SWITCHES （2） $\begin{aligned} & \text { Positive contact } \\ & \text { rotary type nower }\end{aligned}$ rotary type power amps． 125 a mo $\quad 250^{\prime \prime} \mathrm{V}$ diameter．Threaded $5 / 18$ long， $1 / 4$ stems for panel mounting．Withlock auts，Underwriters＇Approved． A5466．S．P．S．T．1／4＂ Stent 10 for $\$ 1.25$ ．EACH 4 ．

 A5464．D．P．S．T．3／ tem． 10 for \＄2．88．EACH 32e


## PUSH－BUTTON TYPE

S．P．S．T．metal plunger type．Press o close circuit；press again to open $1 / 2^{\circ}$ stem． A5720 $\qquad$ $24 c$
$\$ 2.15$ 10 FOR BAKELITE BUTTON TYPE As above，but with＇snap－on bake－ ite button in red or black．
A5721．RED
A5722：BLACK．EA．．．29e 10 FOR $\$ 2.60$

## （8）－$\rightarrow$ SWITCH LOCK

For automobile radios，etc．Key withdraws only in locked position． Nickel－plated，With inch body diam－ A2905 NET

47c


## TAP

SWITCH
Amphenol 8－po－ sition，single－pole switch for impe－ etc．Tap designations visible through window in cap
A4505．NET
180
44.


YAXLEY GANG SWITEHES
For test equipment and general radio and labora tory work．Have 1 fixed and 1 adjustable stop laminated bakelite insulation，and phosphor bronze springs． 2 gang switches are spaced $1 / 2^{\prime \prime} ;$ gang are spaced $1^{* *}$ ．Notched $2^{\prime \prime}$ shaft is easily shortened．Require $7 / 16^{7}$ mounting hole．Complete
with bar knob，but less dial plate．


| Non－Short－ Ing Type | Poles | Pos． |
| :---: | :---: | :---: |
| A11955 | 1 | 1－6 |
| A11956 | 1 | 1－11 |
| A11957 | 2 | 1－5 |
| A11958 | 3 | $1-3$ |
| A11965 | 2 | 1－6 |
| A11966 | 2 | 1－11 |
| A 11967 | 4 | 1－5 |
| Al1969 | 8 | 1－2 |
| Al1943 |  |  |
| A11944 | 3 | 1－11 |
| A11945 | 6 | 1－5 |


| List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: |
| \＄1．00 | \＄0．59 |
| 1.15 | ． 68 |
| 1.25 | ． 73 |
| 1.35 | ． 79 |
| 1.45 | ． 85 |
| \＄1．60 | \＄0．94 |
| 1.75 | 1.03 |
| 2.00 | 1.18 |
| 2.10 | 1.23 |
| 2.25 | 1.32 |
| \＄2．20 | \＄1．29 |
| 2.35 | 1：38 |
| 2.50 | 1.47 |

## YAXLEY SINGLE GANG SWITCHES

 The Yaxley types 3100J and 3200J series of and tap switch red for short－wave，tone control， test equipment service．Have $2^{\prime \prime}$ notyped shafts；silver contacts； $3 / \mathrm{g}^{\text {．}}$ threaded bushing． With bar knob and mounting nut．All $1^{11} / 15^{\prime \prime}$ base dia．types have adjustahle stops．| $\begin{gathered} \text { Shorting } \\ \text { Type } \\ \hline \end{gathered}$ | Non－Short－ Ing Type | Poles | Pos． | Base <br> Dlam． | Each | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A13020 | A13100 | 1 | 1－5 | 11／4＂ |  |  |
| A13021 | A13101 | $\frac{1}{2}$ | 1－12 | $11{ }^{1 / \prime \prime}$ |  | 4 |
| A13023 | A13103 | 2 | $1-2$ $1-3$ | $11 \%$ | 75 c | 4 |
| A13024 | A13104 | 2 | 1－6 | 11\％＊＊ |  |  |
|  | A13105 | 3 | 1－4 |  |  |  |
| A13026 | A13106 | $4$ | 1－2 | 11／4＂ | 85 c | 53 c 50 c |
| Al3027 | A13107 | $\begin{aligned} & 4 \\ & 1 \end{aligned}$ | －${ }_{1-17}$ | 11／4＊＊ | 50c | 5 |
| A13028 | A13108 | 1 | 1－17 | 11416＂ | \＄1．35 | $79 c$ 790 |
| A13030 | Al3110 | 3 | 1－6 | ${ }^{1} 11 / 16^{\prime \prime}$ | 1.35 1.50 | 79 c |
| A13031 | A13111 | 6 | 1－3 | 111／16＂ | 1.50 | $88 c$ $88 c$ |

## YAXLEY SWITCH PLATES



For switch，tone or volume control use．Have aluminum figures on black background． $7 / 16^{\circ}$ center hole．

| Marking |
| :---: |
| 1 to 6 |
| 1 to 7 |
| 1 to 8 |
| 1 to 9 |
| 1 to 10 |


| Marking <br> 1 to 12 <br> 1 to 17 <br> Of－ 1 to <br> Of二 1 to <br> Off二 1 to 5 <br> Off 1 to 6 |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  | $\frac{\text { Marking }}{\text { Of－}}$ $\mathrm{Off}-1$ to 7

$\mathrm{Of}-1$ to 8 Of－ 1 to 8 $\begin{array}{ll}\text { Off－1 } \\ \text { Ofo } \\ \text { Of－} & \text { to } \\ 10\end{array}$ Volume
A13035．Speclify marking deslred．（＊Net Price，15c）

CUTLER－HAMMER TOGGLE SWITCHES


Finest quality Under－ writers Approved switches．Have $1 / 2^{\prime \prime}$ threaded stem and hole mounting type with solder lugs at plated finish nickel－ blated finish． $15 / 32$ sets，meters and all other requirements
 Ab 30．4．S．PD．D．T．${ }^{2} A$ A1 3045．D．P．ST．T． 3 A 26 A1 3046．D．D．T．${ }^{3}$ A．

## ＂ON－OFF＂PLATES

Nickel－plated＂on－off＂，switch plate or above switches．Clearly etched



YAXLEY NO． 10 MIDGET JACK SWITCH
 A11990．

29．

| 29. |
| ---: |

## MIDGET BAKELITE KNIFE SWITCHES <br> For panel or base mount－ plated blades and contacts； <br>  <br> A6515：S．P．S．T． $1 / 2 \times 1 /{ }^{*}{ }^{\prime \prime}$ ． 9 C A6518：D．P．S．T．${ }^{10} \times 1 /{ }^{\prime \prime} 21 \mathrm{C}$ <br> 

FEDERAL ANTI－ CAPACITY SWITCHES The original anti－capacity switehes；now efficient with
springs and contacts of silver－plated phosphor bronze and Phenol insu
A4155．D．P．S．T．
A 456. EACH

D．P．D．T． | A4 156. D．P．D．T．$\$ 1.65$ |
| :--- |
| A4 157.4 P．D．T．．．．．．．．．．$\$ 1.90$ | PUSH－BUTTON SWITCHES Have cadmium． plated springs and hole mounting． makes contact with knob pushed in．Non－locking type opens when knob is released．

| $\begin{array}{c}\text { Locking } \\ \text { Type }\end{array}$ | Type | Non |
| :---: | :---: | :---: |
| Locking | NET |  |
| EACH |  |  | A8960 SPST A8964 53c 48962 SPDT A8965 50 A8963 DPDT A8966 596

## INDUCTANCE SWITCHES

 Compact switch used in ces．Nickupment， type with pointer cnob． $3 / 8$ in．holemtg． Of fine quality．

NEW CENTRALAB LEVER－

## ACTION SWITCHES

A compact，new
2 pole 3 position， 2 pole 3 position，
low－capacity lev－ $\underset{\substack{\text { er－action switch } \\ \text { for rad }}}{ }$ amplifiers，test equipment，etc． ver plated con－ tact clips；bakelite in
$17 / 8^{\prime \prime}$ high， $11 / 2^{\prime \prime}$ deep．


A1996．Positive CIGPE
A1996．Positive Close．
NON－SHORTING TYPE
A1998．Positive Close．
AET 99 Spring Return．S．
PLATES FOR ABOVE
Black crackle－finished cold rolled steel mounting plates with vertical mounting holes．

| A2995．For 1 Switch．．．．．．． 12 c |
| :--- |
| A2096．For 2 Switches．．．． 18 c |
| A2097．For 3 Switches．．．． 21 c |
| A2098．For 4 Switches．．．． 26 c |
| A2099．For 5 Switches．．．． 29 C |

## CRL TONE SWITCHES



Shorting type
contacts．Rating．
A3270．
Type 1460．S．P．2T． $1 \times 11 / 4$ ．
A3271．Type 1461．S．P．3T NETEACH 29. A3272．Type 1462．
$2 P .2$ T．1x1 $1 / 2^{\circ}$ ．NET 35.

## ROTARY CANOPY

 SWITCHSingle pole switch with $1 / /^{"}$ shank．Has brown
and $6^{\circ}$ leads．Rated 1 amp． 250 volts．
A5STEACM FOR $\$ 1.89$.


21 。

# PLUGS •JACKS • POSTS • CLIPS 

ALLIGATOR CLIPS
AR - ST. B
Long thin-nosed clips. Powerful grip. Banana plug fits back of clip. handy for general test and hookup purposes. with red or black handle A6317. FIG. A. $2^{\prime \prime}$ long.
100 Lots, $\$ 2.85$.
100 Lots, $\$ 2.85$
A6318. FIG. A. $23 / 4$ " Iong.
Per Doz., 54C.
100 Lots. \$4.25
NETEACH
5.

FIG. B. $21 / 4^{\prime \prime}$ INSULATED A6337. Red.
A6338, Black. 78 C. 7 C FIG. B. $3^{1 / 2 "}$ INSULATED A6339. Red.
A6340. Black. 8 Doz., 84 c. EACH..... 8 e
B. $23 / 8^{\prime \prime}$ FOR PHONE TIPS A6428. Red.
A6429: Black. EACH. TC

## BINDING POSTS



FIG. A FIG. B FIG.C FIG. A. EBY JUNIOR. Has nonremovable screw type engraved long. Insulated for use on metal chassis.
A4056. Plain. A4053. Out A4050. Ant
A4051. Gnd. A4054.
A4052. 1 at. 40 5
PACH ${ }^{\text {Per }}$. 99 C .
EACH
FIG. B. EBY TWIN assembly. Standard Ant. and Gnd. posts mounted on bakelite base or lami-
 A4059. Laminated.

FIGG C. COMBINATION takes banana plug; shank accommodates phone tip or wire
A6325. Red.
A6326. Black.
.76

## TWIN JACKS

## 앙 8

पु पु
FIG. A. LAMINATED TYPE Laminated bakelite construction with sure-grip contact springs. Ideal for headphone, phonograph or speaker connections. $2^{*} \times 5 / 3^{\prime \prime}$. A4061. Speaker.
A4062. Phono.
A4063. Plalm.
10 FOR 45 C . EACH.

## TRIPLE TIP JACKS

For microphones, speakers, ete.
A4068. Plain.
AOFORGIC.EACH.
7.

FIG.B.MOLDEDTWIN JACKS. Have single mounting $2^{\prime \prime} x^{5 / 2}$ molded into bak cord tips $2^{\prime \prime} \times 5 \%^{\prime \prime}$. For cord tips.
A4064. Speaker.
A4065. Phono.
A4066. Plain. EACH. 15

## SHORTING TYPE JACKS

Circuit automatically closes when cord tips are removed. Particularly adapted for use in point-tolar to Fig. B. Single mounting
A4067. NET........... 17c

## VALUES IN POPULAR PHONE PLUGS



MIDGET PHONE PLUGS
For use where space is limited in compact radios, P.A. systems, etc. $25 / 8^{\prime \prime}$ lons overall; barrel dia. $9 / 6^{*}$. A5737. Black.
A5
AOR R METAL SHELL TYPE
Ideal for portable amplifiers. Brass nickel-plated barrel for shielding purposes. $21 / 4^{\prime \prime} x^{9} / 16^{*}$.
A5694. 10 FOR $\$ 2.65$ EACH. 28 e


STUBBY PHONE PLUG Shielded type plug for use in limited space. Brass nickeled shell.
 A5695
10 FOR
2.65. EACH.
28.

## TRIMM FLAT PLUG



Compact flat phone plug of molded bakestem. Flat portion only. Flat portion thick. Scre ws hold Polarity indicated.
31.

## BANANA PLUGS AND JACKS



## STANDARD PLUGS

FIG. A. NON-INSULATED nickeled brass plug with tinned spring-brass prong. $11 / s^{\circ}$ long. 4 e A6342.EACH
PEROOZ., 36 C
. $\$ 2.85$
FIG. B. INSULATED TYPE Set screw holds tip in place A6345. Red.
A6346. Black. EACH

## SPLIT TYPE PLUGS

FIG. C. NON-INSULATED. Durable positive spring action Cannot bend out of shape. 4 c A6350, EACH. FORZ. $\$ 2.85$ FIG. D. INSULATED TYPE. Solderless connecting type.
A6351. Red. EACH $7 c$ A6352. BIack. EACR. $\$ 5.25$

## BABY TYPE PLUGS

FIG. E. Small banana plug for coil mountings. D0Z., 36C. PER 100 . $\$ 2.85$ FIG. E. INSULATED TYPE
 A6358. Black. EACR. $\$ 4.55$

MIDEET SHORT JACK


Smallest made.
Heavy bakelite Meavy oakelite quires $3 / 8^{\prime \prime}$ mounting hole. Widely lugs.
A8982. Open Circuit Type for
general output. A8983. Single Closed Circuit. NET
EACH.....

## 

## STANDARD JACKS

FIG. A. Nickel-plated brass jack to take all banana plugs. With lug and nut. $1 / 2$. ACH .
PER OOZ, 36 c .
100 FOR
.......
. $\$ 2.85$
FIG. B. INSULATED TYPE
With red or black bushing.
A 6347 . Red.
A6348. Black. EACH.
10 FOR 48 c .100 FOR $\$ 4.55$

## BABY JACKS

FIG. C. Designed for use with Baby Type Plugs listed at left. 4 c A6355.EACH FOR $\$ 2.85$
FIG. C. INSULATED TYPE A6359. Red. EACH Bc A6Z.,57C. 100 FOR.. $\$ 4.55$

## DUAL CIRCUIT PLUG

 AND JACKPlug and jack have two independent circuits. Occupies same
space as ordinary tip jack. Insulated.

## plugs

 A6156, Red. A6158. PER 10, \$2.10. 23.
## INSULATED PHONE TIP

 \& JACKPlug fits all standard tip jacks. Jack head countersunk to enable tip to hit snugly. No exposed metal; pre-

## plugs

 A6524, Red A6526.PER 10, 48 C .
100 FOR $\$ 4.55$. EACH.... $6 c$


FIG. A. Nickeled tip jacks for minimum panel space. Bronze quings insure positive grip. Repanels up to $3 / 8^{\prime \prime}$ thickness.
A6362
PERDÓz., 29C. EACH
$.3 e$
FIG. B. Short compact type. Fits panels up to $1 /{ }^{*}$ thick.
A6363

FIG. C. INSULATED TYPE,
New type sure grip springs insure positive contact. Insulated head and shoulder washer
A6364. Red.
A6365, Black. EACH..... ©c
PER DOZ., 57 C .
100 FOR . $\qquad$ .$\$ 4.55$
FIG. D. BANANA PLUG OR TIP JACK. A combination insu lated jack for standard tip or banana type plug. Useful in construction of test equipmeat. Wit nut and insulating washer. Re guires $1 / 4$ mounting hole.
A6367. Red.
A6368. Black. EACH..... 8 C 100 FOR

## YAXLEYCOLORED <br> TIP JACKS

Insulated jacks for
Mountin $3 / 8$ " hol
Spring contact with solder lug connectlon. With bakelite caps one red, one black.
A4069. SET OF $2 \ldots .$. Se


IMP PLUGS
FIG. A. A metal sleeve midget plug with screw-on connection. Fits all standard tip jacks. Nicke!ed brass. Solderless type.
A 670 . EACH.............. A6370.EACH.
PER 100................. \$2.80
FIG. B. INSULATED TYPE
 AER POOZ., 57 C . 100 FOR.................... 4.55

##  CORD TIPS

FIG. A. Practical new design. Hole in sleeve provides convenient means of soldering to wire insert. A 6373 . PER 100, 72 C . 8 c A6374. PER 10.

FIG. B. Standard size solderless screw-on connector, $11 /{ }^{\prime \prime}$ long. Easily attached to cord.
PER 10, 25 c .
A6375. EACH
Fic.
ch. Standard size nickelplated brass cord tip; will fit any
regular tip jack $100,45 \mathrm{c}$.
A6376, PER
A6377: PER 10.........
FIG. D. Heavy-duty brass tip with nickel-plated finish. Used on 46522 . PER $10,25 \mathrm{c}^{2}$
A6522. PER10

## FUSES • CLIPS • CONNECTORS

MUELLER CLIPS


Strong channel construction. No solder required. Screw or lug connection. 5 and 10 amp. types are lead-coated steel.

MESH TEETH TYPE
A 6500 PEE-WEE, $11 / 2^{*}$ long. 5 amps. No. 45, 71 b . spring. Jaw spread, $3 / 8$. . Box of $10 \ldots 29$ e A6501. PEE-WEE. $2^{\prime \prime}$. Spread. EACring. 4c. Box of 10....32e


WEE-PEE-WEE SOLID COPPER CLIPS
A6509. No. 88. $11 / 16{ }^{\circ}$ long. Jaw spread, $1 / 4^{\text {" }}$. Ideal for close Wound coils. A6510. No. 88 clip with rubber nsulator. Per Palr, 1 Red, Black. NET, 24 c A6480. No. 45 C , $11 / 2^{\prime \prime}$ long. 86 10 amps. Spread, $1 / 4^{\circ}{ }^{\circ}$


GRIP TEETH CLIPS
A6502. $27 / 8^{\circ}$ long No. 24A. ${ }^{17}$ IbCH, spring. Spread, ${ }^{\prime \prime} \cdot 59$ e A6503. 4 long. No. 21A. 33
 46504. $6^{* \prime}$ long. No. 114.38 Ib, spring, Spread, $13 / 4^{4}$ :

## 

## CROCODILE CLIPS

Type 85. Small clips with slender elongated jaws. Screw terminals; plugs. Length, $23 / 8^{\circ}$. Jaw spread,
 CROCODILE "TIP-CLIP" Type 85-T. Has standard phone ip soldered to lower jaw. For test removable binding posts. 2



## ALIIGATOR CLIPS

A6580. No. 60 2 $^{\prime}$ long. Round chumb grip. Barrel connection for banana plug. 10 FOR. $34 c$ A6581. No. 60 S . As abo with screw connection. A6582. No. 60CS. Like 60 s EACH, 10 of. 10 FOR.. .69 c

## RUBBER INSULATORS

In pairs of 1 red and 1 black A 6485 or clip Per Pr. 5 Palrs A6485 48 BB \$0.14 \$0.52 A6487 24A A6488 21A | A648 185.85 T | 1.19 |
| :--- | ---: |
| .08 |  |

LITTELFUSES FOR TEST INSTRUMENTS Designed especially for the protection
of delicate instruments. Glass enclosed
units, $1 \times 1 /{ }^{\circ}$. High-speed action with
short time lag. For use on A.C. or D. C.
up to 250 volts. Highest quality. up to 250 volts. Highest quality.

| Cat. No. | $\begin{gathered} \text { Rat- } \\ \text { ing } \\ \text { Amps. } \end{gathered}$ | Max <br> M. A. | Aver. Resis. 5 M. A. Load | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { PER } \\ & \text { DOZ. } \end{aligned}$ | Use to Protect Milliammeters: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{gathered} \text { Voltmeters } \\ \text { Ohms } \\ \text { per Volt } \\ \hline \end{gathered}$ | All Magnetic Types |  |
| A6241 | 1/200 | 5 | 500 | 18 c | \$1.95 | Over 1000 | Galv. | 0-5 |
| A6230 A6231 A6232 A6233 | $\begin{aligned} & 1 / 100 \\ & 1 / 32 \\ & 1 / 16 \\ & 1 / 8 \end{aligned}$ | $\begin{array}{r} 10 \\ 25 \\ 60 \\ 100 \\ \hline \end{array}$ | 110 <br> 20 <br> 5.0 <br> 1.5 | 12 c | \$1.32 | 1000 $500-1000$ $100-500$ | $\begin{array}{r} \text { Up to } 0-1 \\ 0-10 \\ 0-25 \\ 0-75 \end{array}$ | $\begin{array}{r}0-10 \\ 0-25 \\ 0-60 \\ 0-115 \\ \hline\end{array}$ |
| $\begin{aligned} & \text { A6234 } \\ & \text { A6235 } \\ & \text { A6236 } \\ & \text { A6237 } \\ & \text { A6238 } \end{aligned}$ | $\begin{aligned} & 1 / 8 \\ & 1 / 4 \\ & 3 / 8 \\ & 1 / 2 \\ & 3 / 4 \end{aligned}$ | $\begin{aligned} & 100 \\ & 200 \\ & 300 \\ & 400 \\ & 600 \end{aligned}$ | 3.0 6.2 3.0 2.5 .40 | 9 c | \$1.00 | $20-100$ $10-20$ $5-10$ $3-5$ | $0-75$ 0.150 $0-250$ $0-350$ $0-500$ | $\begin{aligned} & 0-115 \\ & 0-200 \\ & 0-300 \\ & 0-400 \\ & 0.600 \end{aligned}$ |
| $\begin{array}{r} \text { A6239 } \\ \text { A6240 } \\ \hline \end{array}$ | $\frac{1}{2}$ | $\begin{aligned} & 1000 \\ & 2000 \end{aligned}$ | .24 | 6 c | 65 c |  | $\begin{array}{r} 0-750 \\ 0-1500 \end{array}$ | $\begin{aligned} & 0-1000 \\ & 0-2000 \end{aligned}$ |
| LITTELFUSES FOR RADIO AND AMPLIFIER <br> For use in 105-120 volt primary line. Underwriters" approved. $11 / 4 \times 1 / 4$ " |  |  |  |  |  |  |  |  |
| No. |  |  | Volts |  | No. | $6{ }^{\text {Amp }}$. | Volts |  |
|  |  | $1_{0}^{1} 1 / 2$ | $\left[\begin{array}{l} 250 \\ 250 \\ 250 \\ 250 \end{array}\right\}$ | $\begin{aligned} & \text { A. } \\ & \text { RD } \\ & 50 \mathrm{O} \\ & \hline \end{aligned}$ |  |  | $\left.\begin{array}{l} 500 \\ 500 \\ 500 \\ 500 \end{array}\right\} \text { EA } \$ 1$ | $\begin{aligned} & 9 \mathrm{c} \\ & 002 \\ & .00 \end{aligned}$ |

## TELEVISION FUSES

Vacuum enclosed, low current
fuses for Video equipment. Will fuses for Video equipment. Wil break up to
$13 / 4^{* x} x^{2} / 2^{p}$ dia

| No. | Amps. |  |
| :---: | :---: | :---: |
| 44950 | 1/1000 |  |
| A495 | 1/500 | NET |
| A4953 | 1/100 | EA |
| A4954 | 1/32 | 9 |
| A495 | 1/16 |  |
|  |  |  |

10 For


FUSE MOUNTINGS
Black molded bakelite mountings for Test Instrument Littelfuses. Have single hole mount.
A6250.
9
A6251. Panel type mounting Per Doz., \$1.30. .........................
$46255^{\text {. }}$ "Meter Back"

12 .


Underwriters' approved. Cad-mium-plated shell, with, bakelite base. Size, $21 / 2 \mathrm{x}^{7 / 8^{\prime}} \cdot 21 / \mathrm{s}^{*}$ mounting centers.
A62 57. $12 c$
$\$ 1.30$

8

## SPECIAL VALUE BATTERY CLIPS

 Exceptionally low priced, high quality battery clipswith heavy non-corrosive finish. Have strongsprings; will give dependable serv-

A6400. ${ }^{11 / 2^{2}}$ long. Jaw spread EACH.
3.

A6401. $2^{*}$ long. Jaw spread, EACH ${ }^{\prime \prime}$ for 25c.
EACH
$3 c$
A6402. ${ }^{21 / 2^{\prime \prime}}$ long. Jaw spread
${ }_{E A C H}{ }^{10} 42 \mathrm{C}$.
$5 c$
A6403. $37 / 6^{\circ}$ long. Jaw spread,
$11 / /^{\prime \prime}{ }^{10}$ for 55 c
E.
6 .

## SFE AUTO FUSES

New series of Underwriters ${ }^{\circ}$ approved fuses for autos. Standard in most new cars. Size varies according to amperage.

| No. | Amps. | Slize |
| :---: | :---: | :---: |
| A4960 | 4 | $5 / 0^{21 / 4 \%}$ dia |
| A4962 | 6 |  |
| 4963 | 14 |  |
| 4964 | 20 | $11 / 4^{\prime \prime} z^{1 / 4}{ }^{\prime \prime}$ |
| A4965 | 30 |  |
| Per 10, |  |  |

NET ${ }^{10,54 \text { c. } 100 \text { for } \$ 4.50 .}$ NETH.

BUSS QUALITY FUSES
TYPE 3AG Tubular fuses. made. Size is $11 / 4 \mathrm{in}$. $\mathrm{x} 1 / 4 \mathrm{in}$. Protect radio sets, test in-


EAGLE INDICATING FUSES
Shows "OK" in win dow when fuse is good "OK", vanishes when fuse blows.
A3995. 10 Amp. A3996. 15 Amp. A3997. 20 Amp.
 A3998. 25 Amp.

## 

MOUNTING STRIPS
Handy insulated strips to support resistors, junction connections, etc., oa metal chassis.

| NO. | LUGS | EACH | TEN |
| :---: | :---: | :---: | :---: |
| A6305 | 2 | 3 c | 16 c |
| 6306 | 3 | 3 C | 18 c |
| A6308 | ${ }_{5}$ | $4 \mathrm{4c}$ | 33c |
| A6309 | 6 | 4 C | 33 c |

TERMINAL STRIPS $\underset{\text { strips with as }}{\text { Bakelite }}$ securely fastened scre
terminals.


TERMINAL BOARDS
Plug-in type. Has tempered metal contacts securely fastened on $1 / 2^{*}$ enters on durable bakelite strips. $\left.\frac{\text { No. }}{44910}\left|\frac{\text { Cllps }}{2}\right| \frac{\text { EACH }}{6 c} \right\rvert\, \frac{\text { TEN }}{54 c}$



A4915
17. Contacts. 10 For... $7 c$

NSULATED PIN PLUGS 49920. RED.

A492 1. BLACK.


FAHENSTOCK CLIPS
A6320. Single, ${ }^{1 / 2}$ long. 10 e A6321, Single, $3 / /^{4}$ long. $\mathbf{N E}_{c}$
A6322 P Double, $13 / 4$ " long. 26
A6323. Double, $11 / 2^{\prime \prime}$ long. 25 e

## RADIO HARDWARE VALUES

WING NUTS


Quality nuts.
nickel-plated
over brass
Easy to screw
Easy to screw on with a flip

No. A4850 44852


RADIO HARDWARE IN JARS


Glass jars with screw-on caps offer a neat. convenient vay of storing your radio hardware, Jar comes filled with any single selection of hardware below. Buy your hard
YOURPRICEANY JAR
COMPLETE WITH HARDWARE....... 24C A4870. Glass Jar Oniy

## CADMIUM-PLATED MACHINE SCREWS

Standard thread, Cadmium-platbetel of sizes for every purpoe election of sizes for every purpo 6.32 ROUND HEAD

HANDY ROUND HEAD RACK SCREWS-WASHERSIC

MACHINE SCREWS (A)
No.

## ACORN TYPE

 CAP NUTSNickel-plated acorn cap nuts. Dress up apparatus.
A4855. 6-32 Thread. A4856. 8-32 Thread. 100 for 95 c . 10 for
11.

## KANT-LINK

## LOCK WASHERS

Good quality spring steel lock washers. Assu
binding of screws.
A4858. For 16 Screw 25 FOR A4859. For 18 Screw 100 for

RIGHT ANGLE
 BRACKETS Nickel-plated brassrigh Provide firm support at corners of cabi$1 / 8^{\circ}$ width.
 A4863


## WITH TAPPED HOLES

Ideal for assembling chassis, cabinets, etc. Have one 8 -32 tapped hole and one ssa" diameter plain hole. Cadmium-plated steel.
$\qquad$
No.
A1664
Size 10 6.

(-)

## INSULATED GROMMETS

Prevent wires from raying or breakin
Stock Fits Inside
No. Hole Diam. Lgth. DOZ. $\begin{array}{lllll}\text { A7024 } & 1 / 0 & 1 / 0 & 3 / 8 & 52 \mathrm{c} \\ \text { A7025 } & 7 / 16 & 3 / 16 & 53 \mathrm{c}\end{array}$ $A 7026$

## RUBEER GROMMETS

For insulating boles in metal chassis plates. For metal stock about $1 / 16^{\prime \prime}$ thick
$\begin{array}{cccc}\text { Stock } & \text { Fits } & \text { Inside } & \text { Pe } \\ \text { No. } & \text { Hole } & \text { Diam. } & \text { Dox } \\ A 7028 & 1 / 4^{\prime \prime} & 1 / 8^{\prime \prime} & 8\end{array}$ $A 7028$
$A 7029$
A7030
ESCUTCHEON SCREWS


These $1 / 4$ long wrood screws
Ar name plate.
29.

PLUG BUTTONS Plated brass buttons for covering up punched or chassis, ctc. of any metup to $1 / 46^{6}$ thickness.

| No. |
| :--- |
| 3964 | $4^{\text {H }}$ "y/" $1 / 2$ TEN

A3964腬965 A3967 16
20
24
24
24 A4885. 20 each $10-32 \times 5 / 8^{76}$ oval bend screws with cup washers. SELF-TAPPING SCREWS (D) No. Quantity No. $6 \times 1 / 4$ $\begin{array}{lll}\text { A4886 } & 50 & \text { No. } 6 x^{1 / 4} \\ \text { A } 4887 & 45 & \text { No. } 6 x^{3} / 8^{\prime \prime}\end{array}$ A4888 40 No. $7 \times 1 / 2$ $\begin{array}{rrr}\text { A } 4890 & 100 & 6-32 \\ \text { A } 4891 & 90 & 8-32 \\ \text { A } 482 & 80 & 10-32\end{array}$

RADIO HARDWARE IN ENVELOPES
NOTE: All hardware above is also available in smaller quantities in envelopes. When ordering, write letter A arter catalog number o identify type of hardw 6

## HANDY HARDWARE ASSORTMENTS

## CABLE CLAMPS

The $3 / 4^{*}$ size fits $1 / 4^{*}$ cable; $1^{\prime \prime}$ size fits $1 / 2^{\prime \prime}$ cables. Made of heary-gauge
steel, cadmium-plated. Have a No. 6 mounting A1666. $1 / 4^{\prime \prime}$ long.
A1667.
100 FOR

or


ALL-PURPOSE ASSORTMENT An indispensable item for the serviceman, experimenter, etc. Metal case has 12 compartinents contain ing assorted machine screws, nuts, spade bolts, seli-tapping screws rubber grommets, knob set screws ivets and eyelets, lugs, washer etc. $7 .{ }^{\circ}$
AZOT.
s1.76

## BRACKET ASSORTMENT

 A. very usefu assortment consisting of 28 popular-sized angles and radio work or for experimental projects. Nickelplated brass. Shpg. wt., 11 A7009PRICE. $\qquad$ 24。

## HEX NUT ASSORTMENT

 A popular assortplated bexacon plated hexagon
nuts threaded 4-36 6-32. and 8-32. Easily screwed on make firm connection.
A 4900 . NET 24.


SWITCH POINTS AND STOPS
Solid brass. Heavily nickel-plated. 6-32,1/2 Ints. Switch 5 tops.



1000 PIECE ASSORTMENT A bargain assortment of radio hardware that will prove inval uable to any serviceman or experi menter. Contains fivets, grom ets, soldering lugs, etc - 1000 pieces of ugeful hard ware for serv icing, set-building and all other needs. Shpg. wt. 4 lbs. 95
AOOS. YOUR PRICE.

## FIBRE WASHERS

Alarge variet
of shouldered
washers useful
washers userul
Experimenter
and Service
man. Assortment of 100 washers per box

SPACERS AND BUSHINGS Assortment of 25 bushings

to $3 / 4$ fong. For raising subpanels, chassis, etc. In brass or fenoline insulated. Wt., 1 lb
A4902. Insulated Assortment. A4901. Brass Assort-
ment. NETEACH...... 39 C


SOLDERING LUGS
Good quality tinned brass soldering lugs in sizes and shapes to neet every requirement. Provide sure, permanent connections.

|  | Style | Screw Size |  |
| :---: | :---: | :---: | :---: |
| A7045 | 1 | 6,8 |  |
| A7046 | 2 | 8 | PER |
| A7047 | 3 | 8 | PKGE |
| A7048 | 4 | 6,8 | of 100 |
| A7049 | 5 | 6,8 |  |
| A>018 | 4 | 10 |  |
| A7023 | 4 | $1 / 4{ }^{\prime \prime}$ |  |
| A>034 | 6 | 6 |  |




## METAL TAPPING

 SCREWSCut their own threads i metal as they are turned to No. 16 gauge.
SIZE 6 SIZE 8
No. Gross Lgth. No. Gross $\begin{array}{lllll}\text { A7035 } & 30 \mathrm{C} & 1 / 4 " \text { A704i } & 34 \mathrm{c}\end{array}$ $\begin{array}{lllll}\text { A7036 } & 32 \mathrm{C} & 3 / 8 & \text { A7041 } & 34 \mathrm{C} \\ \text { A7037 } & 35 \mathrm{C} & 1 / 2 & \text { A7042 } & 36 \mathrm{C} \\ \text { A7038 } & 37 \mathrm{C} & 5 / 8 & \text { A7043 } & 38 \mathrm{C}\end{array}$ $\begin{array}{lllll}\text { A7038 } & 37 C & 5 / 8 & \text { A7043 } & 38 C \\ \text { A7039 } & \text { 4OC } & 5 / 4 & \text { A7044 } & 40 \mathrm{C}\end{array}$


HEXAGONAL NUTS
Standard s/s" nuts, ma
chined steel, cadmium plated A7005: ${ }^{6-32 .}$. PER 100. 18 c

## SHAKEPROOF

 HARDWARE

Sturdy lugs and washers that canened ind spensable for close workmanlike connections
Lug No. Washer No. A4905 For 6-32 Screw A4907 A49FO F 20 c . ${ }^{1000} 50 \mathrm{FOR} 20 \mathrm{c}$

## TUBULAR RIVETS

For replacement and repair work. Much faster than screws and nuts
No. Size PER 100 PER 25


## EYELETS FOR ABOVE

No. Size PER100 PER25
A6396
A6398
RUBBER BUMPER FEET
These rubber feet have
standard 6.32 screw. Proride steady, solid footing to table cabinets, etc. without marring other ar 7092 .
10FOR. 18 C 50 FOR

# Quase TOOLS FOR EVERY PURPOSE 

BLACK \& DECKER $1 / 4$ " JUNIOR DRILL
Anideal drillfor maintenance and installation work. Made by a leading manufacturer. Musky po" oilless bearings will of smooth operation. Can be used in stand for light grinding and wire brushing. Universal 110 and 120 volt AC-DC motor operates at 1800 R.P.M. Without load 1050 Equipped with 3 wire cable and plug ( 3 rd wire for grounding); 3 -jaw Jacobs chuck and key; thumb control switch. Wt. 5 lbs. A2109. YOUR SPECIAL PRICE

AC-DC ELECTRIC SPEED DRILL
Here is a high-quality electric price. Very sugged construction, yet light in weight and easy to handle. Efficient motor is designed for long life. Sturdy chuckassembly accommodates up to and including $1 / 4$ drill. Pistol-grip handle has thumb-controlled
switch. High speed drills below switch. High speed drills below
are ideal for use with this orill
 1500 R.P.M. Drills $3 / 4$ ' from corners. For 110 V. A. or D.C. With 7 foot cord. Wt., $41 / 2$ lbs.

## NEON TATTELITE

This handy tester uses a tiny neon lamp for indicating voltages in excess of 90 volts peak Can be used to indicate A.C. D.C., or R.F. voltages. When both electrodes glow. D.C. polarity can be found by noting that only the negative electrode glows. Neon tube encased in non-breakable hoider with two color-coded leads terminat-
ing in insulated test tips. Proing in insulated test tips. Pro cessive current drain A6256. NET.


## NEW AUTOMATIC DRILL

A /highly efficient low-priced automatic pushdritl with innumerable uses in the home and workshop. Drills holes quickly and with surprising ease in wood, soft metals, wall-board, plaster, etc. Supplied with eight lated-shank drill points, from 16 to 64 in diameter, con tained in numbered compartments in magazine type black bakelte hand Sires spiral driving mechanism, shpg. A2123. Automatic drill
$\$ 1.39$


## ASSORTED DRILL SET

A real value. High quallty twist drill set containing the popular sizes necessary for radio and other work. Set consists of 9 carbon steel drills ranging from $1 / 16^{\circ}$ to $3 / 16^{\circ}$ sizes American-made A7734. NET
A7720. High-Speed Drill Set. NET, 95 c

A.C. TRI-EXTENSION A compact, con venient, threeway extension tap of molded on back. Supplied fastened foot brown rubber cord of approved conserve tion with bakelite handle plug cap.

24


PLUG CAP
Molded brown bakelite plug with fingergrip. Preventspuling
out wires. Paralle blade type. Sturdy A3443. NET 5c


CUBE TAP
Three connections from one outlet from one outlet struction; molded brown bakelite Sure contact. 7


MONARCH UTILITY GRINDER Fully guaranteed, precision-built grinder com-
bining speed, accuracy, and utility. Convenient $5 m a l l$ size; overall dimensions, $23 /$ a $^{\circ}$ dia. by $53 / 8$ long. Ideal for model-building, engraving. operates at 18000 R.P.M. Operates on $\mathrm{i} 10-120$ volts, D.C. or A.C. 25 or 60 cycles. Has Durex bearings; improved wiring system gives postive protection against shocks and short circuits. With 6 -foot Underwriters' approved rubber cord. Finger type switch. Complete with extra collet for $3 / 32^{\prime \prime}$ shank, two emery wheels and one felt buffer.
Shpg. wt., 4 lbs.
$\$ 4.25$
MORRIS COIL WINDER


This Universal Coil Winding Machine will wind Honeycornb, Spiderweb, and Solenoid collsin different widths and diameters. Handles various sizes of wire to make coils that equal factory accuracy. Recorder with adjustable pointer accurately counts number of turns, Hand-powered, Shpg. we., 4 ibs. $\$ 4.35$
A9302. NET PRICE.......
$\$ 4.35$
TAP AND DIE SET


Supplied with most popular size dies for general purpose use. Wooden box contains three cutting dies $1 / 4^{\circ} .5 / 16^{\circ}$, and $3 / 6^{\circ}$, with plug and hand taps to match; tap wrench; and die holder. Al parts of finest tempered steel. Shpg. wt., 3 lbs . A2114. S.A.E. Thread
A2115.U.S.S. Thread.

## FRICTION TAPE

Made of good quality fabric impregnated with an adhesive rub ber compound. Has high insulawill not dry out. Black in color Rolls come in $3 / 4^{e}$ width
ATZ
A7706. 4 Oz. Roli, NET


A 7707 : 8 oz . Roll. NET

## SCOTCH ELECTRIC TAPE

A tough flexible tave with high insulation value. Paper backing with sensitive adhesive coating. ${ }^{1 / 2} \mathbf{2}^{2}$ wide. 10 yard roll.

29 c

## RUBBER HANDLE CAP

Unbreakable soft rubber attachment plug cap. Strong, durable, and conplug cap. Strong, durable, and con venient. Sturdy brass blade A3978
PER 10


POLISHING HEAD OUTFIT


A complete polishing kit for home or shop. By using a $1 / 6$ to $1 / 4$ horsepower motor, it makes an efficient outfit for polishing. grinding, buffing, sawing, or drilling. Consists of polishing head and chuck, saw table and guide, cotton and 9 steel drills Head hery stone, , cather belt Chuck has a capaetey has a two-speed pulley trolled case-bapactty of $92^{\circ}$. The 3 spring con dead center. The two steel flanges are milled flat so as to hold stones, scratch brushes squarely against materlal being worked. Saw table clamps securely to polishing head. Red enamel finish. Shpg. wt. 8 lbs. $\$ 3.35$ A2112: Polistuing head and chuck only

TOUCH-UP SPRAYER
Ideal for painting panels, cabinets, furniture, toys, etc. This sprayer is designed to operate efficiently from a very low pressure source such as a with an air-tiglit brass valve an adjustable brass spray tip, a rubber hose, and a 2 -ounce paint jar. Sprays lacquer, paint. varnish, sheliac, or any other finely mixed, free-fio
A21i 3. NET PRICE
59

## RADIO TOOL CHEST



This handy chest contains 10 handy, sturdy tools for the serviceman or set-builder Consists of: $3^{\circ}$ and $5^{\circ}$ screwdrivers, scriber, reamer, wrench sets for hexagon and knurled, socke 3 hexagon nut wrenches from $1 / 4{ }^{1 / 20}$, and wit, ${ }^{2}$ libs. NET................... $\$ 2.25$

## POCKET TOOL CASE

A high-grade, two partition case that can be carried in the hip pocket. Will hold generous assortment of small tools. Genuine leather of small ava: sewed, with snap-on fiap. Saves wear pock It and tear on pockets. A handy case for the Serviceman.
A1643. NET
59.

## NEW PRES.TO OILER

A handy new general-purpose oilermade like a fountain pen. Ideal for use where conventional oiler would not serve. Control and tuning shafts, small rotating equipment and similar applicaTransparen accessible with this oiler. supply of oll.
A1621. NET
38.

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | KRAEUTER PLIERS |  | POPULAR-PRICED radio pliers |  | A 1 |  |
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| 74. | 91. | 82. | ${ }^{5}{ }^{18}$ | $\$^{12}$ | 32. | 38. | 32. |  |

## HANDY ALL-PURPOSE SCREWDRIVERS



## SUNDT 'FIRE-DEVIL'"

 NEON SCREWDRIVERSA versatile new tool that combines a fine quality screwdriver with a bullt-in sensitive neon tube. Iube mounted in handle glows then contact is made. Chrominm finished steel blade; transparent amber handle A $7880,43 / 8^{\circ}$ overall. Handle. $17 / 8^{\circ}$ NETEACH.
$24 c$
12 FOR
A7881. $7^{\prime}$ overall. Handle, $33 /^{\circ}$. NET EACH
6 FOR.
Blade 5.18
$\$ 3.18$


New screwdrivers with spring action gripper that holds, starts, and sets up screws in slides out of way. With chrome vanadium tee blades and transparent amber handles. ATE 85. $3^{\circ}$ Blade.
A7886. 4: Blade.
A7887: A $^{\circ}$ Blade. NET.
33.

FOR RECESSED HEAD SCREWS
Specially designed to fit snugly into recessed head screws. Has $6^{\circ}$ chrome vanadium blade A7 7889 . $6^{\circ}$ Blade, NET.
52.

## HEAYY-DUTY 20000 VOLT INSULATED SCREWDRIVER

A new Stanley screwdriver built for greater safety. Cohardite insulated all the way up the blade to within $3 / 8^{\prime \prime}$ of point. Tested to 20.000 volts. Ideal for television work or wherever high voltages are present. Has flared tip; steel A7ET90. ......................... 88

## MUELLER "SNAPPER'

May be used to start nuts and screws in out-of-the-way places, as test clip in inaccessible spots, or as a prod contact. Push-button top opens and closes universal clip. American-mad A6483 $\qquad$ 38.

## GRIP-IT SCREW HOLDERS

A simple easy attachment that will make any screwdriver a screw-holding type. Simply slip on the holder that fits your screw driver, and it is ready for work. In sets of 3 sizes to fit all

## $\square$ <br> FIRM-GRIP SCREWDRIVERS

Forged chrome-vanadium alloy steel blades accurately ground to fit screw slot. Tough Amberlite handles. American-made. A $7{ }^{7} 1^{5}{ }^{\text {P }}{ }^{3}$ INCE BLADE. A7716. ${ }^{6}$ INCH BLADE. AT717 ${ }^{8}$ INCH BLADE. $30 c$ $38 c$ $42 c$

INSULATED BLADE TYPES
10,000 volt insulated screwdrivers. Red and black compositlon handle. High quallty steel blade insulated almost entire length. American-
made. made. 5 . $\operatorname{INCH} B L A D E$. 14.
18. A $7699.61 / 2$ INCH BLADE.
18.


NON-SKID SCREWDRIVERS
Shock-proof, with ribbed points. Handy founA7712. 3 INCH BLADE. 10 . 12 A7711. 2 INCH BLADE. AT F11. 10 R NCH BLADE. E. 11. Aフ71O. $11 / 2$ INCH BLA
 10.

## MIDGET SET SCREWDRIVERS

Shaped to fit into set screws of knobs and to
balance trimmers. Overall length. $45 / 8^{\circ}$. Specially hardened blade, $21 / 4$ long. Amber handle with clip. American-made.
A7895. 10 F OR $81 c$. EACH.... Se


## FLEXIBLE SHAFT SCREWDRIVER

Here is a screwdriver that will eliminate a lot of skinned knuckles. Special flexible shaft allows its use in many awkward out-of-the-way places, Has molded handle. $834^{\circ}$ long. American maded handle. $8 / 4$ long. American-
m 7 .

88

## HANDY 3 UNIT

## SCREWDRIVER KIT

A popular kit of three screwdrivers in the most useful sizes. Comes in converient leatherette holder for shop wall mountiag, Each screw-
driver has insulated handle and findriver has insulated handle and finger guard, Blades measure $23 / 3^{2}$. Amerlcan-made. This is one of our most popular tool kits. A very fine value.
A7719. NET............. 38

## LENK BLOW TORCHES



## HI-HEAT BLOTORCH

This heavy-duty American- made blow torch assures perfect results. Features lame control, shut-of vaive, and non-clogsing burner. Fool-proof in design and construction; selfquickly from asbestos-filled F. flame. Tank is 2000 drawn be. Tank is heavy shaped bottom. Height $71 / 2$ inches; diamerne base 3 inches. Type 104 uses sasoline wt., 31 bs .

$\$ 1.30$
A6224. Type 104.
Uses alcohol.
YOURPRICE
\$1.47


- NO. 24 BLOTORCH

This efficient torch is entirely automatic in operation. Uses conductor for quick seneration of sas. Made of nickel-plated brass. Solid leakproof base. Ideal for shop use. Handy size, A6221. ............ 69


IMP GASOLINE HAND TORCH
Entirely automatic gasoline hand torch. Flame temperature over $2000^{\circ} \mathrm{F}$. Has priming cup. No pumping or blowing necessary. Ideal for use where fusing or At., 2 Ibs. 72昜 UTILITY ALCOHOL LAMP cabinet finishing work, repalr steady flame. Of nickel-plated seamless drawn brass; funnel shaped base. $1 / 2$ pint capacity. Shpg. wt., 2 ibs.
A6222. NET
.75

## "PHILLIPS" SCREWDRIVERS



END-WRENCH SET
A handy little end-wrench set with rust. Wrenches are $1 / 44^{\circ} \times 3 / 16^{\circ}{ }^{\circ} 3 / 8^{\circ} x^{7} / 16^{\circ}$, and $1 / 2^{*}$ with alligator jaw. Americanmade.
A2078. Complete set of

# Rese Tools for vviry Puproos 

SELF-ALIGNING

## PUNCHES



New patented spring construction prevents shearing die or punch. tions where hole cannot be drilled. Contoured cutting edges make clean round holes. Made of hardened high-grade steel Self-aligning feature requires only pin punch instead of hole or condenser centering. Is ideal Punches are all American-made. CAT. HOLE NET


## CLIPTITE PUNCHES

Designed to cut holes in chassis rides lacking tube sockets. Proprevents socket from A16" standard. NET..... $\$ 204$

## ALL-PURPOSE CIRCLE CUTTERS



Designed to cut large holes accurately and quickly. May be used in slow-speed drill press or ordinary handbrace. Type No. 5 is deslgned for heavy-duty work; Type No. 4 is a standard professional cutter, heavy bar construction; Junior type is for light work on
softer materials. Will cut holes in wood, bakelite holes in wood, bakelite, metal, etc. Fine values in American-made tools.
A>731. No, 4. Profeshardened steel. Cuts clean circular holes $7 / 9^{\circ}$ to $4^{\prime \prime}$ in di- $\${ }^{2}$ A7730. Junlor. Not illustrated. Cuts holes $5 / 8^{\prime \prime}$ to $21 / 2^{\prime \prime}$ in diameter. Suitable for light duty cutting in panels and chassis.

78 c A7732. No. 5. Square Shank. Heavy-duty type cutter. Cuts NET......................................................... $\$$ 47733 . No. 5. Round Shank. Same as No. 5 above, but with
round shank for use in power drill chuck. Cuts holea from ${ }^{\text {s }}$, round shank for use in power drill chuck. Cuts holes from ${ }^{1 / 2}$ to $51 / 2^{n}$. NET................................................... 8 A7735. Cutter siades. Extra blades for No. 4 and No. 5 cutters listed above. Made of finest tool steel, hardened for long wear. 24 . A7723. No. 8. $13 /$ to 8 . Circle Cutter. All-purpose cutter of high brade hardened gtee. Fits brace or chuck. Cuts metal. $\$ \mathbf{N} \boldsymbol{2}$.................................................. 5

## RADIO CHASSIS

 PUNCHES These punchesoffer a simple and speedy
method of cutmethod of cuting clean sock t and condens holes in met arhassis. Elim essity of nec mering. ham meally desirable for ional holes in making addichassis where the shock of ham. mer blows might injure mounted components. A few turns of the cap screw quickly punches a clean mooth hole by a shearing action Precision-made of oil-hardened tool steel. Ideal for all general purpose requirements. Specify sizes desired when ordering. Am-erican-made quality tools that will give dependable service.
CAT. NO. DIA. EACH
 44978
44979
${ }^{\mathrm{s}} 1.64$
A4981. Extra $3 / 8{ }^{\prime}$ Cap Screws.

## HIGH-GRADE SOCKET WRENCH SELECTION



## SPIN-TYPE WRENCHES

Hish grade hexagon socket wrenches for every radio requirement. Sockets of hardened tool steel designed to grip surcly. Shanks are cadmium-plated steel with ribbed easy-to-grip wooden handies. Offset type reaches into tight
places. American-made.

| St Size | Straight | Straight | 6 " Offset |
| :---: | :---: | :---: | :---: |
| \% | A2055 | A2062 | A2069 |
| ${ }^{1 / 6}$ |  | A2064 | A2071 |
| \% | A2058 | A2065 |  |
| 疗 ${ }^{\circ}$ | A2059 | A2066 | A2073 |
| EACH | Oc |  |  |
| Set of 6 | 52 c | ${ }_{\text {Set of }} \mathbf{E A C H}$ | 2 c |

## SOCKET WRENCH SET AND SCREWDRIVER



A set of 9 sockets in assorted sizes to hande hex, square, Consists of $1-1 / 4^{\text {i }}$ hex socket mount ed on $33 / 4$ straight extension; 5 hex
 square sockets in 1 round nut socket, 1 " L "' shaped extension, Patented locking device holds tools firmly handle. Wt A5516. YOUR PRICE
73.


## HOME TOOL SET

A handy home tool set. Will and numerous applications in repair and maintenance of cal toys, sewing machines, radio, receivers, etc. Blades made of fine tool steel hardened througliout. Consists of one $21 / 2^{*} x / 16^{\prime \prime}$ screwdriver with mahogany finish. knob type handle; one $21 / 2^{*}$ handle; and one gimlet with straight par natural finish handle. Weight, 11 b . 25 .

$\overbrace{1}$
This efficient, time-saving tool strips insulation from wire easily and cleanly. Shpg. wt., 1 ib . American made. $\mathrm{S}_{\mathrm{c}}$


## AMBER HANDLE WRENCHES

A complete selection of high-grade socket wrenches for every radio requirement. Sockets take hardened tool steel. Shaits are hollow to amber-colored plastic, ribbed for easy reippins and fully shockproof. Sizes listed will handle all standard nut sizes used in radio work. Each wrench is $71 / 2^{\prime \prime}$ in length. These are high est quality American-made tools.


## CONTROL WRENCH

 hexagonal nuts measuring above, designed for Case-hardened steel socket. Ideal for volume A1601. YOUR NET PRICE...... 59
## SOCKET WRENCH SET



Sct of 5 detachable sockets of wrought steel With wrench handle. Sizes: $1 / 4,5 / 1 / 6,3 / 8$, $7 / 16$ and
$1 / 2$ inch. Exceptional wrench set value. 36 e
A 790 . NET PRICE.

HOLLOW HANDLE SET
American-made 8 geng
ges
Ideal for shop and tool bag. Hollow handle
 screwdriver socket, $71 / 2^{\prime \prime}$ long. Handle heavily knurled for good gripping surface. 48c


ICA RIVET \& EYELET PUNCH SET
A universal tool for resetting any size cyelet or rivet. Heavy cast ron anvil has hexagonal sides; may of clamped in a vise, Setting tools of hardened tool-steel produce a clean, factory-like job. $\$$. 32

## ICA SQUARE HOLE

 SHEARING PUNCH A hammer is the only tool necessary wize odd shanc hole (square, rectangular, hexagon, etc.) on panectan chassis of any metal up to No. 14 gauge thickness. Ideal for enlarging

## MICROMETERS

Precision-built; accurate to $1 / 1000$ of an inch. Hardened stee! construc ion. Zero setting in anvil. Highly polished chrome finish. Standard Shpg, wt. 1 ib measuring crystals Shpg. wt. 1 1b. A7878. $1 / 2$ Size. Precision-built
exactly as above. NET......49c


## DRILL \& WIRE GAUGE

A handy, accurate drill gauge of polished. tempered steel. Has index
on face for machine screvi, taps. on face for machine screv taps. Sizes
are given in decimal equivalents and size number. Size of wire in standard
B . $\& \mathrm{~S}$. B. \& S. gauge may be found by obtaining decimal equivalent from this
gauge and comparing with decimal gauge and comparing with decimal sizes siven in B. \& S. table. 95e
A1620. NET.............

## RADIO REPAIR LIGHT <br> (EAGE

A handy tool designed to save time and trouble. Provides light where you want it. A16.C. An essential tool. With bulb. ......................... 8


## KEYHOLE HACKSAW

A handy tool for general use in the home and workshop. Easily cuts all metals, woods, plaster, wallboard. conduit, metal lath, etc. Pistol prip and thumb-rest give firm hold. With A겨웅., Frame and Blade. NET. 22 | A 7871 Extra Blades for |
| :--- |
| GFOR |

# Values in POPULAR TOOLS 



## "RADIOJAC' <br> CHASSIS SUPPORT

The ideal tool to support radlo and amplifier chassis. Designed to hold any chassis firmly. Springtight fit between rod and base assures rigid support. Chassis may be turned without interfering with speaker leads. Bench stand supprom contains 36 hardwood rods rom $11 / 2$ to 8 inches in length, allowing selection of most convenbases; chassis rests on top of rods. bases; chassis rests on top of rods. stand, 36 hardwood rods. 1 large and 3 small bases. Shpg. wt., 2 lbs. A1697.
1.57

## ALL-STEEL PARTS CABINETS



Popular small-parts cabinets for the numerous items necessary in a service shop. Drawers have separator
A10605. FIG. A. Utility Cablnet. Six large drawers sectioned in
 $101 / 8{ }^{\text {wt. }} 20 \mathrm{lbs}$. NET. A10606. FiG. A. As above, but smaller in slize. Measures $8^{\circ}$ long, $6^{\prime \prime}$ wide, and $9^{\prime \prime}$ high. Contalns six drawers, each $5^{\circ}$ z $8^{\prime}$, with separators.
Shpg. wt., 6 lbs.
NET. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
1.76

A 10607 . FIG. B. A 4 drawer all-steel cabinet. Size, $81 / 4^{\circ}$ long, $53 / 4^{\prime \prime}$
wide, high. Each drawer measures $47 /{ }^{\circ}$ by $8^{\circ} .3$ drawers have separators. Shpg. wt., 4 lbs.
NET....................


## POPULAR ACRO CHASSIS CRADLE

An absolute necessity for efficien radio servicing. Permits placing any radio set or amplifier chassis in any position to allow easy tes or replacement of parts. Prevents damage to tubes and other mount ed parts. Ali parts of the chassis are easily accessible. Special mechamical clamp hol sip. firmiy in place, cansot sip. Idea for aligning receivers while set operating or for easy access wod . any size chassis up 21 long. Made of cold-rolled heavy long. Made of cold-r

A1617 ${ }^{\text {YOURICE }}$
s3.25
A1618. Extra set of clamps.

NEW DAVY FOOTSWITCH


This very convenient device meets the rigid requirements of a momentary contact. trigger-type switch. Underwriters' Approved. 750 watt capacity. Ideal for photo work, etc. Simply plug switch into nearest outlet and connect plug of device tacle on foot switch. Black tacle on foot switch. Black crystal finish; piated top rubber base. Wt. 2 lbs, A16T 96 . With cord and plug.
$\$ 1.96$

## MASTER STEEL TAPE RULES



INSIDE MEASURE-BUTTON LOCK A new steel tape rule for inside, outside, helght, depth, and layout measurements. Attractive, rust-proof nickel-plated zinc case. Rule has double-edge marking. $1 / 2$ tape, 6 feet long A 1690 weight. American-made.
A1690. NET
93.

A 1691 . In round metal case without lock NET.
56.


JUSTRITE SOLDERING IRON AND BLOWTORCH
A combination torch and iron with unusual versatility. Will operate for 30 minutes with valve wide open on one filling of $11 / 2 \mathrm{oz}$, of gasoline, naphtha, or benzine. Heavy brass shell to withstand high pressures. Bakelite casing over shell for cool easy grip. Wt., $1 / 4$ lbs. $123 /{ }^{\circ}$, long
A6220. YOR PRICE.
s2.95


## REPAIR

 CEMENTUsed for repalring loose colls and speaker cones. Rapid drying. Kit
consists of one can of cement, one can of thinner. and a brush.
$34 c$
A2930. NET

## BAKELITE CEMENT

Fot cementing bakelite to bakelite or to other materials. Handy for radio repair and building A5 552. 2 Ox. Can. NET
$21 c$
$66 c$


## STEELMASTER CHEST

This utility cabinet is an ideal case for filing smalt items and parts of every type. Indispensable for home workshops, stockrooms, garages and service stations, radio service shops, etc. Chest is of modern streamine design. Over-al size, $51 / 2$ wide, 8 deep, $1 /{ }^{2}$ high. Made of or bolts used in construction. Has hard-baked or ive-green enamel finish. Four easy-slide drawers are divided into compartments. Shpe, wh 4 lbs . An exceptional value. A $10972{ }^{\circ}{ }^{\circ}$ List, S1.OO. NET EACH. 88 e

NEW SPIN-A-BIN


This novel cabinet provides a modern way to keep track of the numerous small parts that always represent a storage problem in the service shop. Nuts, screws, sockets, condensers, resistors, volume controls-in fact, practically
every component necessary in service and repair cam be conveniently stored, indexed, and kept ready for instant use. May be used on a store counter to house rapidly moving merchandise which must be readily accessible. Also suitable for joint use by a number of workmen on a production line

## 24 HANDY BINS

SPIN-A-BINS are made in two standard models, each containing 24 bizs. Welded steel construction. Revolves on a spindle supported by a heavy cast-iron base. Attractively finished in green enamel. Made of 26 gauge steel; built to give lasting service. Shpg. wt., 18 1bs.


G.C. CABINET REPAIR KIT


Here is a practical, inexpensive repaly kit that will meet any emergency or do any cabinet repair job. With this versatile kit you can repair dents, scratches, or nicks on wood plastic. or $k$ it consists of : an assortment of 9 shades of shellac sticks; bottles of light and dark oil of shelac sticks; metal shading lacquer; polish; Magic stain; metal shadiag acquer; ponsh; spatula touch-up brushes; steel wool; sandpaper; and wiping cloth. In handy box.
A7648. NET.
s1.91
HANDY SCRATCH REMOVER
Handy scratch remover for use in touching up scratches and marred surfaces on receiver cabinets and other articles of furniture. Convenient stick has filler in one end for building up scratch to level bination pollsh and staln.
A7600. NET
22
HANDY CLAMP LAMP
A very handy lamp for supplying light when servicing radio receivers. Clampss on side of swivel bracket allows adjustment to any angle. Rubber covered clamp prevents marring cabinet. Positive action, pushthrough switch. Shade dia., 51/2" Wtakes any size bulb. Less bulb.
AJ 21 bs . NET........ 98 c


98


## NEW FLOATING

 BENCH LAMPThis new bench lamp has a remarkable fex ibility of action which where desired. Both arms are bair anced by a spring action which prevents recoil or slipping, Arm has a horizontal extension of $34^{\circ}$ above and $20^{\circ}$ below base; rotates through olled steel tubing, drawn stcel wire. and malleable iron castings. Has cast-iron base for clug. Less bulbT Shpg. wt. 5ibs. $\$ 7.35$

# SOLDERING IRONS \& ACCESSORIES 

## KNIGHT SOLDERING IRONS



## UNDERWRITERS' APPROVED-WITH STAND

Here is a splendid value in an efficiently designed, sturdily built soldering iron at an exceptionally low price. This new Knight Soldering Iron is Underwriters' Approved and has extra safety factors built in. Special features include: replaceable scresv-on type hard drawn copper tip; black rubberoid handle, shaped for easy gripping; tough, well-finished
nickel-plated case; 6 -foot cord with spring cord protector and unbreak nickel-plated case; 6 -foot cord with spring cord protector and unbreakable rubber plug. A convenlent metal stand is included with all models. This high quality iron is built to give long, dependable service and to
stand up under heavy use. All models operate from A.C. or D.C. Shpg. stand up under heavy use. All models operate from A.C. or D.
wt each, 3 lbs. A soldering iron value that's hard to duplicate.

## 75 WATT IRON

A6125. For 110-120\$ $\$ 1.32$
A6126. For $220-250 \$ 1.47$

## 100 WATT IRON

 A6128. For 220-250\$1.98

## KESTER SOLDERS

## Compounded of the highest

 grade tin and lead. Flux filling assures perfect perma-nent joints free from corrosion. Aluminum solder absolutely holds aluminum. Save money-buy the handy one or five pound spools.

## SOLDERING PASTE



A new improved soldering paste. Does a clean, non-corrosive
job of soldering. Unijob of soldering. Uni-
form quality and uniform quality and uni-
form fuxing strength make it ideal for radio work.
A6
10 FOR.
12.
$\$ 1.05$


DRAKE SOLDERING IRONS
Underwriters' Tested and Approved. A
sturdy dependable iron for all shop or Service sturdy dependable iron for all shop or Service
requirements. With an "Easy-Grip" non-tiring requirements. With an "Easy-Grip" non-tiring
wood handle. Heating elements are of highestwood handle. Heating elements are of highest-
grade nichrome wire wound on genuine amber grade nichrome wire wound on genuine amber
mica; reaches soldering heat quickly. Removmica; reaches soldering heat quickly. Remov-
able plunger type tip with set screw. With 6 foot approved cord and $7{ }^{*}$ iron stand. A 2203 . 80 Watt. Length $13^{\prime \prime}$; tip diameter
 A2204. 100 Watt. Length $121 / 2^{\prime \prime}$; tip diam-



## 

## AMERICAN BEAUTY IRONS

Type 3138. Adapted for production work on radio, ignition, telephone, etc. 100 Watt; 16 Shpg.w.., Líhiss. $\$ 7.20$. NET...... $\$ 5.85$
Type S-76. Light and compact. Heats quickly. Screw type removable tip. 50 Watt. 6 oz.
length $115{ }^{\circ}$; chisel point tip $3 / 16^{6}$. With 6 length $115 / \mathrm{R}^{*}$ : chisel point tip $\mathrm{K}_{6}{ }^{\circ}$. With 6
foot cord.
A200\%. List, $\$ 4.50$. NET...... $\$ 3.45$
 A2003. Extra tip for Type S-76.21e


MAGIC STYLUS SOLDERING PENCIL
A new, small, easy-to-handle soldering tool, ideal for soldering small parts in hard-toget-at corners. Heats quickly. Insulated handle with cork finger guard provides cool handling al-
ways. With 5 ft . cord. Underwriters' Approved. A 6150.110 Volt A.C. or D.C. Storase Battery.)
NETEACH.
72.

## 25 WATT PENCIL

A6004. 110 Volt A.C.-D.C. Extra-heavyduty soldering pencil. Has $1 / 4^{\prime \prime}$ tip. Brasswound, mica-covered element. With 3 tips, ${ }^{6} \mathrm{ft}$.t rubber cord, and stand. .................................
A6003. 40 WATT PENCIL. 110 Volt A.C. D.C. Has $3 /{ }^{3}$ tip with set screw; brass-wound. mica insulated element; 6 foot ap- $\$ 1.15$
proved rubber cord. NET........ 1.15

## SPECIAL IRON VALUES



## 55 WATT 2-TIP IRON

A well-designed iron sultable for every service Twe. Has wire-wound element in cerarnic tube. handle all or tips are supplied with iron to of chassis bases. Tips are $11 / 2^{2}$ long, $1 / 8^{\circ}$ and $9 / 10^{\prime \prime}$ dia. With 5 foot heater cord and rubber plug. An outstanding value at this special low price. Shpg. wt., 3 lbs.
A600S SPECIAL PRICE.
59.

## 100 WATT IRON

A high quality all-purpose iron. Has one $7 / 8^{\circ}$ dia. replaceable screw-on type copper tip. handle. With 6 foot heater cord. Shpg. Wt.,
AGOGS. NET.
95.


## MARVEL ELECTRIC IRON

A high quality soldering iron, ideal for general radio and light soldering work. Has a Nichrome wire element, mounted in a twin sleeve porcelain tube. Equipped with a good-quality 2-inch copper tip. With brown-finished, staycool handle and 3 foot Underwriters' approved flexible cord. Only 10 inches long. For 110 volt
A.C. or D.C. operation. Easy to use; retalns heat efficiently
A6008.
27.


## NEW 7.INCH STAND WITH "MAGIC CUP"

Here's a new idea in a soldering ironstand time and keep your
 iron in best working
condition. The 7 -inch sturdily made metal stand has a "makic cup" built in at one end. Just insert the tip of your iron into the cup and in a few seconds all oxide is removed from the tip. Convenient to use; adds to the working
life of soldering iron tip.
A2209. NET......................29e $29 c$
A2206. As above, but
$15 e$

## SOLDERING IRON TIPS

High quality replacement plunger type copper tips in sizes to fit all standard irons. Make your soldering iron as good as new. NET EA.
No.
Size
No.
A5997
A 5998
A5999

|  | ROSIN | CORE | ACID | CORE | ALUMINUM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Quantity | No. | NET | No. | NET | No. NET |
| Per Tin | A 6178 | 17 c | A6176 | 17 c | A6180 17c |
| ${ }_{5}^{1} \mathrm{lb}$ lb. spool | A61754 | \$2.80 | A6175 | \$2.80 | A6179 \$1.93 |

## TINNING BLOCK

Cleans and "tins" coppers very quick- KESTER
ly. Replaces ordinary salammoniac. Won't crumble or corrode. Convenient to use. A6185. $1 / 4 \mathrm{ib}$. NET.......25c A6 $186.1 / 2 \mathrm{lb}$. NET $25 c$ 40 c
65 c A6187. 1/2 1 lb . NET
 KESTER SADIO SOLDER


## ICA SOLDERING IRONS

A well-designed, practical soldering iron. Heating element is of the highest quality resistance wire. Will heat in three minutes. Handle recleaning or replacement. With cord and plug. Snap-on soldering iron holder supplied free. A5520. 60 WATT. Developed for
 s1.95 A55 22. 85 WATT. A good general-purpose iron. Shpg. wt. ${ }^{21 / 2}$ liss. $\$$.50. Your PRICE..... $\$ 2.38$ A5521. 115 WATT. Heavy Duty type; has $7 /{ }^{\circ}$ plunger type tip of adjustable length,
Shpg. wt. 2 lbs. List, \$5.50゙. YOUR Price.
s2.95

## 

## JACKSON SOLDERING IRONS

A high grade line of electric soldering irons. Elements are wound on amber mica insulation Both types are furnished with 6 foot cords. Shpg. wt., $11 / 2 \mathrm{lbs}$. each.
A6000. 75 Watt. With $5 / 60^{\circ}$ copper rod tip with set screw. Nickel-plated tube. \$1.76 A6001. 100 Watt. With $3 / 0^{\circ}$ copper tip. $121 / 2^{\prime \prime}$ long, with removable black $\$ \mathbf{2} .40$
handle. YoUR PRICE............ 2.40

## सn

## ESICO SOLDERING IRONS

Well-known high quality irons with one-piece blued steel cases, replaceable forged copper tips, and wickel chrome elements wound on mica insulation. Handles of rich, dark mahogany. With approved 5 foot cord and rubber plug. 110 V. A.C.-D.C.
A6122. 55 WATT "NICK-NACK." $K_{6}$ " dia. tip. $113 / 4$ " long. Shpg. wt., 2 lbs. 65 c A6123. 65 WATT "MIDGET., $\mathrm{Kin}_{6}^{\circ}$ dia tip. $11 \frac{11 / 4}{}$ long. Shpg, wt., 3 lbs. \$ 1.03 A6124, 100 WATT is JUNio R." $/ 16^{\prime \prime}$ dia tip. $121 /{ }^{1} /$ long. Shpg. wt., 3 lbs. $\$ 1.62$


## ELECTRIC FENCES \& ACCESSORIES



## NEW ELECTRONIC 2 TUBE ELECTRIC FENCE CONTROLLER

One of the safest and most dependable Electric Fence Controllers yet developed. Construction conforms with most advanced engineering principles. Equlpped with exceptlonal and exclusive new features Which insure long dependable operathon even under the most adverse 110 volt 60 Operates directly from and stockmen are sold on the effec tiveness and economy of this method of stock control. Designed to comply with the most rigid safety regula tions-bullt-in current limiting r sistors are used to assure safe voltages at all times. Special features: (1) No moving parts-nothing to wear out or get out of order. (2) Special built-in safety transformer which assures maximum safety aud eficiency at all hmes. (3) Currotion (4) Built-in two two-element radio tubes for dependable operation. (4) Buil-in current limiting resistors assure absolutely sale voltage at all times.
 shorts, wre down. at regular interval the fence light will not flash indicating a short excessive leakage on the fence, circuit. (6) Transformer is sealed in against weather. (8) The complete Fence Controller is shielded against radio and telephone interference (9) All metal parts are absolutely rustproof. (10) A Neon Tester is included with Controller. The absence of moving parts and vibrator contact points assures high efficiency because of the frictionless operation. Operates only when wire is short-circulted by animals touching the lence. Furnished complete with tubes, in weather-proof case illustrated. Shipping weight, $131 / 2$ lbs A 10971 List. $\$ 22.9$

## KNIGHT LOW-COST AUTOMATIC ELECTRIC fence controller

Here is today's low-cost answer to the farm fencing problem. Install a save. Save on wire: With this new Electric Fence only one wire (or two at most)-instead of two or three is required to hold in llvestock. Save on Posts: With the Knight Controller, short light stakes placed 50 feet apart will serve for any length of fence. Gatelatch listed below makes a gate out of any section of wire. Save on labor: One
man can easily fence 20 acres a day. man can easily fence 20 acres a day. The A.C. type draws no more than watts. A "Hot-Shot" type dry cell
battery will operate the D.C. conbattery will operate the D.C. con-

longer if used intermittently. For use with all livestock. The Knlght Electric Fence Controller employs a unique system of current control on the fence. The current cannot increase beyond a safelimit. The fence voltage is high enough to be practical in all weather. Only the usual precautions of making a good ground connection must be followed. If this is done, the Knight Electric Fence Control will effectively handle 15 miles of wire. The Knight Fence Controller is approved by the Fence laws. The standard model 6 volt unit is equipped with a built-in battery compartment which will take elther "Hot-Shot" battery or convertional dry cells. In attractive red metal case. $11^{\prime} \times 12^{\prime \prime} \times 31 / 2^{\circ}$
Shpg. wt.. 12 lbs.
NETPRRICE
A10622. 110 VOLT CONVERTER. Adapts above
A 10621.32 VOLT CONVERTER. Adapts above
Fence Controller to 32 V.D.C. Systems. NET............ \$. 25

## A COMPLETE SELECTION OF ELECTRIC FENCE ACCESSORIES

 A14101. Hishgrade knob type insulators for insulating electric wire irom fence
posts In Fence Controller 95 E
systems. 100 FO R. A 14102 , Dependable insulaors for insulating electric wire at NET EACH $21 / 2$ c

A14 100 Spectal insulator
Kit. Consists of 50 fence post Kit. Consists of 50 fence post
nsulators and 4 corner post insunsulators and 4 corner post insuNET....................... 63 c

A10000. Ground Rod. Copper plated steel rod $3 / 8$ dia. 4 it connection. (Shipped by 28 e 410007 . Ground Rod. 8 ft long $1^{\circ}$ dia. Express. \$2.49 A10008. Ives Extenston wire to existing fences Protects old weak fences. Wt., $\$ 2.25$
8 lbs . Per Boy of 50 .


A14106. Fence SIgn. Meets Wisconsin State speci-

EECTRC FEIEEelectric fence iden ificatio

5 c
NET
A14104. Gate Fastener. Equipped with spring. Insulated
handle prevents shock, Hook on ne end and spriag on other. Spring holds wire tightly 15 a 940 Knight Hot-shot Battery. Efficient 6 volt dry batery, designed or Electric Fence Controllers Metal case, $101 / 2^{\prime}$ 21/20x6. Wt. 7 lbs. $\$ 1.21$

## VALUES IN EASY-TO-OPERATE ARC-WELDERS



## DE LUXE COMMERCIAL

 ARC WELDERA professional type welder destgned according to best engineering practice. This arc welder is a comblnation machine which can be operated either from 110 volts or 220 volts, 60 cycle A.C simply by re-arranging connections in a uncbility of ctached to the unit materials from a 20 gauge shre thickness of $3 / 4^{\prime}$. Ideal for sheet-metal work, cylinder blocks. fenders. tanks, bumpers, farm machinery, etc. Makes all types of welds in any metal.

## VERNIER HEAT CONTROL

Veraler control of welding heat is obtainable by the use of two sets of jacks-one giving large variations of curres welder is fully housed intermediate values. Welder is iully housed ed on casters for portability. Louvres in case provide ventilation, Size: $26^{1 / 2^{\prime \prime}}$ high, $18^{\circ}$ wlde. 14, deep. Will handle any size rod from $1 / 15^{\circ}$ to $3 / 11^{\circ}$. Furnished complete with elecservice cord and plug. welder's helmet, and a generous supply of assorted welding rods. Shpg, wt.. 125 1bs.
Shpg, wt... YOUR NET
ARFICE . YOU,
PRI
$\$ 8<24$


## SUPER INDUSTRIAL <br> HEAVY-DUTY ARC WELDER

A De Luxe Industrial type Arc-Welder. Heavyduty type for all welding work, such as on inder Will weid all metals up heat ranges to apply to all types of welding equirements. Conveniently portable; weighs only 72 lbs . Economy of operation brings cost down to about five cents per hour. Will weld onling arrangement

## COMPACT AND EFFICIENT

Built very compactly; unit measures only $101 / 2^{\circ}$ $59^{\circ} \times 14^{\prime}$. Works with remarkable efficiency on all kinds of metal when brazing, soldering, or welding. Each unit is shipped complete with hve pounds of assorted rod, ground cab, headhield helmet, 2 special fuses, carbon flux. solder, heat control plug, etc. Complete detailed nstructions supplled are actually a course A welding. Shpg. wt., 90 lbs. A10599. For 110 V., 50-60 cycle A.C. A10591. For 220 volt, 50-60 A.C.
EITHER MODEL,
NET.
….... $\$ 5^{60}$


## DYNAMIC SUPER-CHARGED

 LOW-COST ARC WELDERHere is the low-cost answer to those innumer able welding jobs you have been putting aside This handy arc-welder will weld cylinder blocks bumpers, fenders, tanks, and practically al metal farm implements. It is no longer necessary to discard perfectly usable machinery be cause some part has broken, Just plug the socket and in a few minutes' times the broken socket, and in a few minutes times the broken part is repaired. Works on iron, steelic tin welding. Willeasily weld metals up to $1 / 4^{\prime}$ thick wo previous experience is necessary to operate the welder successfully.

VARIABLE HEAT CONTROL
Convenient terminal outlets for Low, Medium, High, and Very High heat welding. Settings will depend on type of welding being done. Range of four settings is 30 to 75 amperes. Each unit is shipped with assortment of rods for all types of welding. Complete Dynamic Arc-Welder includes ground clamp, ground cable spring type electrode holder, helmet, and detailed instructions. Size, $71^{\prime}{ }^{\prime} \times 9^{\circ} \times 111 / 2^{\prime}$ :
With convenient carrying handle and mount-
ing feet. Shng. wt, 35 lbs .
Alo598 Col. $\qquad$ $\$ 22^{09}$


## IT'S EASY TO ORDER

Use our convenient order blanks. Type or print your name and address in full and specify whether shipment is to be made by Express, Parcel Post or Freight. List the items you want-one to a line-making sure to give the correct catalog number for each item. Enter correct prices and make extensions carefully. Then total your order and make your remittance large enough to cover both the cost of the merchandise and shipping charges (unless C. O. D. shipment is requested). Additional order blanks and envelopes are packed with each order and will also be sent on request.

## HOW TO SEND MONEY

Remittance may be made most safely by post office or express money order, bank draft or check. Avoid sending coin or currency, but if necessary, be sure to register your letter. For special haste, your order and money may be telegraphed through any Western Union or Postal Telegraph station. Make allowance for postage on parcel post orders. Prompt refund of any excess follows shipment. Do not include transportation charges for express and freight shipments unless there is no agent at your station. Because we use postage meter machines in our mailings, please do not remit in stamps except on orders for very small amounts.

## SHIPMENTS TO CANADA

Special handlling is given to all orders from our customers in Canada and Newfoundland for safe, ast shipment. Proper invoices are proParcel Post C. O. D. Service to Canada or Newfoundland, C. O. D. shipments are made by Express or Frelght only; include $20 \%$ deposit with C. O. D. order and specify nearest limit to Canada is 15 lbs ; rate is 14 c per lb . On Parcel Post shipments include full remittance for merchandise, postage, and insurance Items heavier than 15 lbs, should be ordered shipped by Express or Freight.

SHIPMENTS TO U. S. TERRITORIES Orders from United States Territories and Poss sessions always receive special attention. All $20 \%$ deposit. Remit in full for merchandise plus postage to the elighth zone on Parcel Post orders to the Philippine islands and Canal Zone, since there is no Parcel Post C. O. D. service to these territories Console radios, bulky equipment and all items we have indicated as not mailable, are shipped by freight. Terms on freight shipments are $50 \%$ deposit, balance by sight draft attached to shipping documents; or, send an irrevocable letter of credit on any Chicago or New York
bank for full amount. All freight shipments are carefully boxed with no extra charge for export packing. The Parcel Post weight limit to U. S Territories and Possessions is 70 pounds, except pines: Manila City-70 libs. Iloilo Che Philip pines: Manila City- 70 lbs.; Iloilo, Cebu, and Parcel Post regulations other places 20 ibs shipments be boxed or crated. Add 5 lbs to catalog weights for export packing. There is no charge for this extra packing service.

## CHICAGO CUSTOMERS

For handy quick counter service, visit our Cits Salesroom. Free parking lot available for our Amateurs are always on hand to and icensed you can't come in, phone your requirements to our City Order Department for prompt deliv ery. All telephones: HAY market 6800 .

## WE INVITE YOU

On your next visit to Chicago, be sure to visit us in our enlarged Radio Headquarters at 833 W. Jackson Blvd,, conveniently located on the edge of Chicagos Loop." See, and hear the
famous Kight Radio Sets and Sound Systems.

# Sico Esae io Onder from arrifos 

## PARCEL POST SHIPMENTS

See the table at bottom of page for parcel post rates. If in doubt, ask your postmaster for your zone number and charges on items for which weights are shown, or write to us. Save C. O. D. charges by sending enough money to cover postage. Any surplus will be promptly refunded. If remittance does not cover postage, shipment will be made C. O. D. for the balance. For your protection all our parcel post shipments are insured. Allow for insurance at the following rates:

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

## EXPRESS SHIPMENTS

Radio Sets, Windchargers, Generators, Storage Batteries, and any items in this catalog which we have indicated as not mailable, should be shipped by express or freight. In general, it is best to send radios by express. This will assure quick shipment and safe delivery. If there is no express agent at your location, please be sure to specify your nearest express office. All express shipments are insured. For shipping charges, refer to your local Railway Express agent or write to us. Express charges need not be included in your remittance. Shipment will be made collect.

## FREIGHT SHIPMENTS

You save by ordering merchandise sent by reight where rapid shipment is not essentia and merchandise selected weighs approximately 100 pounds or over. The minimum freight charge is for 100 pounds. If you have a freight agent, do not send shipping charges. If you are on a prepaid station, please send funds to pay charges in advance. Any surplus will be promptly refunded. Charges are the same whether prepald or collect. If there is no freight station at your location, please be sure to specify your nearest shipping point.

## OUR TERMS

Our low prices to you are the result of efficient organization and the most economical merchandising methods. We buy for cash, sell for cash, and pass the savings on to you Our terms of sale are cash with order or C. D. D. We ship C. O. D. if you wish (except on orders for special merchandise); new customers are requested to include a $20 \%$ remittance with first orders when specifying C. O. D. shipment. A $20 \%$ deposit should also be included with C. O. D. orders for heavy items such as windchargers, batteries, generators and console receivers. All quotations in this catalog are net, F, O. B. Chicago (except where noted). ALLIED will always give you the benefit of any price reductions. All prices are necessarily subject to change without notice. (We reserve the right to add any Federal or State Taxes which may be levied after this book is printed.)

## DON'T SPLIT YOUR ORDERS

We will never be undersold. We meet all competitive prices for identical standard merchandise of current manufacture. We can secure for you any special radio equipment. not shown in this catalog, at lowest prices and with minimum delay. Enter your order with deposit, and give full description or send sample for duplication.

## ALL ORDERS FILLED

Whether your order is big or small, you get the benefit of ALLIED'S speedy service always. We set no restriction on the amount of your order. It's wise to buy where you are always better served.

## FULL DISCOUNTS

In addition to all trade discounts, a FULL $2 \%$ CASH DISCOUNT HAS ALREADY BEEN DEDUCTED from every price in this book. Our net catalog prices are the prices you pay

## 2\%

 TRANSPORTATION ALLOWANCE SAVES YOU MONEYTake advantage of our $2 \%$ Transportation Allowance on all orders for $\$ 25.00$ or more. Don't split your orders! This $2 \%$ Transportation Allowance is in addition to the Trade Discounts and the Full $\mathbf{2 \%}$ Cash Discount already deducted from every price in this catalog. Deduct this extra allowance in advance. The $2 \%$ Transportation Allowance on orders of $\$ 25.00$ or more applies on shipments made anywhere in the United States on all merchandise listed in this catalog with the exception of National Company products and items which are marked Postpaid. (Orders from U. S. Territories and Possessions and Export Orders are also excepted.) Take advantage of this extra $2 \%$ saving.

HOW TO ESTIMATE PARCEL POST RATES
(For U. S. only. Postage rate to Canada is 14 c per pound.)
Packages Under 8 Ounces, Allow $11 / 2 \mathrm{c}$ Each 2 Ounces

| $\begin{aligned} & \text { WEIGHT } \\ & \text { POUNDS } \end{aligned}$ | FIrst, Up to MiLES | $\begin{gathered} \text { Second, } \\ 50 \text { to } \\ 150 \\ \text { MILES } \end{gathered}$ | Third, 150 to 300 MILES | $\begin{aligned} & \text { Fourth, } \\ & 300 \text { to } \\ & \text { G00 } \\ & \text { MILES } \end{aligned}$ | Fifth, 600 to 600 to <br> MILES | Slxth, 1000 to <br> MILLES | $\begin{aligned} & \text { Seventh, } \\ & 1400 \text { to } \\ & 1800 \\ & \text { MILES } \end{aligned}$ | $\begin{aligned} & \text { Elghth, } \\ & \text { Over } \\ & 1800 \\ & \text { MILES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 2 3 4 4 | $8 c$ $10 c$ $11 c$ $12 c$ $13 c$ | $\begin{array}{r} 8 c \\ 10 c \\ 11 c \\ 12 c \\ 13 c \end{array}$ | $\begin{aligned} & 9 c \\ & 11 c \\ & 13 c \\ & 15 c \\ & 17 c \end{aligned}$ | $\begin{aligned} & 10 c \\ & 14 c \\ & 17 c \\ & 21 c \\ & 24 c \end{aligned}$ | $\begin{aligned} & 11 c \\ & 17 c \\ & 22 c \\ & 27 c \\ & 33 c \end{aligned}$ | $\begin{aligned} & 12 c \\ & 19 c \\ & 26 c \\ & 33 c \\ & 40 c \end{aligned}$ | $\begin{aligned} & 14 c \\ & 23 c \\ & 32 c \\ & 41 c \\ & 50 c \end{aligned}$ | $\begin{aligned} & 15 c \\ & 26 c \\ & 37 c \\ & 48 c \\ & 59 c \end{aligned}$ |
| 6 7 8 9 10 | 14 c 15 c 16 c 17 c 18 c | $\begin{aligned} & 14 c \\ & 15 c \\ & 16 c \\ & 17 c \\ & 18 c \end{aligned}$ | $\begin{aligned} & 19 \mathrm{c} \\ & 211 \mathrm{c} \\ & 23 \mathrm{c} \\ & 25 \mathrm{c} \\ & 27 \mathrm{c} \end{aligned}$ | $\begin{aligned} & 28 \mathrm{c} \\ & 31 \mathrm{c} \\ & 35 \mathrm{c} \\ & 38 \mathrm{c} \\ & 42 \mathrm{c} \end{aligned}$ | $\begin{aligned} & 38 c \\ & 43 c \\ & 49 c \\ & 54 c \\ & 59 c \end{aligned}$ | $\begin{aligned} & 47 c \\ & 54 c \\ & 61 c \\ & 68 c \\ & 75 c \end{aligned}$ | $\begin{aligned} & 59 c \\ & 68 \mathrm{c} \\ & 77 c \\ & 86 \mathrm{c} \\ & 95 c \end{aligned}$ | $\begin{array}{r} 70 c \\ 81 c \\ 93 c \\ \$ 1.03 \\ 1.14 \end{array}$ |
| $\begin{aligned} & 11 \\ & 12 \\ & 13 \\ & 14 \\ & 15 \end{aligned}$ | $19 c$ $21 c$ $22 c$ $23 c$ $24 c$ | $\begin{aligned} & 19 c \\ & 21 c \\ & 22 c \\ & 23 c \\ & 24 c \\ & \hline \end{aligned}$ | $\begin{aligned} & 29 \mathrm{c} \\ & 31 \mathrm{c} \\ & 33 \mathrm{c} \\ & 35 \mathrm{c} \\ & 37 \mathrm{c} \end{aligned}$ | $45 c$ $49 c$ $52 c$ $56 c$ $59 c$ | $\begin{aligned} & 64 \mathrm{c} \\ & 70 \mathrm{c} \\ & 75 \mathrm{c} \\ & 80 \mathrm{c} \\ & 86 \mathrm{c} \end{aligned}$ | $\begin{array}{r} 82 c \\ 89 c \\ 96 c \\ \$ 1.03 \\ 1.10 \end{array}$ | $\begin{array}{r} \$ 1.04 \\ 1.13 \\ 1.22 \\ 1.31 \\ 1.40 \end{array}$ | $\begin{aligned} & 1.25 \\ & 1.36 \\ & 1.48 \\ & 1.69 \end{aligned}$ |
| $\begin{aligned} & 16 \\ & 17 \\ & 18 \\ & 19 \\ & 20 \end{aligned}$ | $25 c$ $26 c$ $27 c$ $28 c$ $29 c$ | $25 c$ 26 c 27 c 28 c 29 c | $\begin{aligned} & 39 c \\ & 41 c \\ & 43 c \\ & 45 c \\ & 47 c \end{aligned}$ | $63 c$ 66 c 70 c 73 c 77 c | $91 c$ <br> $96 c$ <br> $\$ 1.02$ <br> 1.07 <br> 1.12 | $\begin{aligned} & 1.17 \\ & 1.24 \\ & 1.38 \\ & 1.45 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.49 \\ & 1.58 \\ & 1 . .76 \\ & 1.85 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.80 \\ & 1.91 \\ & 2.02 \\ & 2.13 \\ & 2.24 \end{aligned}$ |
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1 -inch bakelite knob with wood 1 nsert. A
Both brown: take $1 / 4$ shaft.
A4717. Fig. A. For midget Receivers. A4Z18.iFig. B. Fluted for positive grip. 4 C

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| Ohms | Dhms | Ohms | Ohons |
| :---: | :---: | :---: | :---: |
| 100 | 800 | 12500 | 150000 |
| 150 | 1000 | 15000 | 200000 |
| 200 | 1500 | 20000 | 250000 |
| 250 | 2000 | 25000 | 400000 |
| 300 | 2500 | 30000 | 500000 |
| 350 | 300 | 40000 | 750000 |
| 400 | 4000 | 50000 | 1 Meg. |
| 500 | 5000 | 60000 | 2 Meg. |
| 600 | 6000 | 75000 | 3 Meg. |
| 700 | 10000 | 100000 | 5 Meg. | A4720. $1 / 2$ watt size. A4721. 1 watt size. ATTHER TYPE, YOUR PRICE EACH. 3 e Quantity Price - 100 FDR.

$\$ 2.25$
SPECIFY VALUES WHEN ORDERING


Valuable assortment of economy-type 100 carbon resistors. Color-coded. Most popular resistance values in $1 / 4$ and $1 / 2$ watt sizes. Buy several assortments 98. hand at all rimes. Wit. $21 / 2 \mathrm{lbs}$. A5 120. 100 Resistors. NET 98c A5121. Assortment of 50 Resistors. Smaller assortment of same quality resistors NET.......................................54c

## POWER

## TRANSFORMER

A special value in a power transformer 696 Pri., $115 \mathrm{~V} .50 / 60$ cycles. Sec. 650 V . at 80 M.A. C. T. Tveo filament windings- 6.3 V . at 3.3 A . and 5 V at 2 A . An outstanding buy, Wit., $41 / 2 \mathrm{lbs}$. With diagram. A11699. NET


## X-MITTING CONDENSER

A transmitting condenser bargain you can ${ }^{\prime}$ t $59 c$
afford to misk. These condensers are oil-impregnated in hermetically -sealed metal cases. Capacity, 3 mfd . Conservatively rated at 600 volts D.C. Exceptionally low leakage loss. Large lus type terminals protruding through insulated bushings in side of case. mounting in urright position Overall size: mounting in upright position. Overall size: A11478. NET


## DRY ELECTROLYTICS

A record value in dry electrolytic filter concensers. mountiny tabs and flexible wire leads. Ideal replacements.
A 3870 . Single 8 Mfd condenser with handy tabs for easy mounting. Cardboard container $1 / 4$ by $1 / 18$ by $1 / 6$. With long flexible leads. 10 for $\$ 1.22$. EACH
$15 c$
10 for 81.22. EACN
A3871. Dual 8-8 MId. 450 working voltage dry electrolytic. Same construction as above. sections
10 for $\$ 2.90$. EACH
3 10 for \$2.90.
A3872. AC-DC TYPE. Filter and by-pass block. Contains $1-16$ and $1-12$ mfd. section at 200 volts; $21 / 4^{\circ} \times 11 / 8^{\circ} \times 138^{\circ}$. Coded leads. $21 / 4^{\circ} \times 11 /{ }^{\circ} x^{13 / 6^{\circ}}$. Coded leads.
10 for $\$ 3.10$. EACH

346


## WET ELECTROLYTICS

Inverted Type. Special vaiue wet Wectrolytic condensers. Self-healing. orkung voltage 00 Vollo. Round aluminum containers. Can negative. A1 1475.8 Mfd. Size $13 /{ }^{\circ} \times 4^{*}$. 10 for $\$ 1.08$. NET EACH..... A 11476.12 Mfd. Size $13 / 8^{\circ} x$
10 for $\$ 1.17$. NETEACH. A11477.25 Mfd. Size $11 /{ }^{\circ} \times 5^{\circ}$

## dills

MIDGET $21 / 2$ M.H. R.F. CHOKE Universal type windiag, sectioned to
reduce distributed capacity. D.C.
resiatance, 60 ohms; will carry $\quad$ i25 esistance, 60 ohms; will carry 125 A2163. 10 for $\$ 1.15$. NETEACH. . 13 C

## G.E. ROTARY SWITCH

A very valuable item at a surprisingly low price. Comesequipped with $8^{\circ}$ insulated leads. $1 / 2$ n or set-d shart for push Underwriters' approved Ratedat 3 amps., 125 V . A.C A2915. 10 Lots 75 C . EACH.

MIDGET UNIVERSAL O.P. TRANSFORMER

## an extremely coin

 pact output transormer for matching 4, impedance of all existingtubes. For single or push-pull output stage. Tapped second-

ary matches all voice coils from 2 to 30 ohins thick. With instructions. 49 E

## BARGAINS



## BARGAIN SOCKETS

 Ae Fine quality tube sockets at A, amazingly low prices. Have lugs and standard $11 / 2^{\circ}$ mounting centers. RMA numbered pin holes. A real bargain for Servicemen or for the Radio Builder.


WAFER SOCKET KIT 2 E A upecial offer. Kit contalns 20 assorted wrafer sockets,
including $4,5,6,7 \mathrm{M}, 75$, and 8 prong. All have standard $11 / 2^{2}$ mounting centers. Laminated bakemounting centers. Laminated bakealigning contacts.
A4034 YOUR NET PRICE
$25 c$

## SERVICE TEST LEADS

22Special value popular test prods having wide varlety of service uses. Klnkless wire leads with solderless phone tips fitted into $3 / 0^{\circ}$ dia. handles, $21 / 2^{*}$ long. Leads are $36^{\circ}$ long. Prod wire securely tightened by knurled nut. A5493. Phone Tlps. A5494: Spade
$22 c$


## 10 CANDOHM UNITS

25Ten popular sizes-all standard equipment in
many present-day recelvers. Shielded, wire-wound reaistors with mounting flanges on each unit. Here is an outstanding value at an exceptionally low price. A4725. NET
25.


PILOT LIGHT KITS
25 Fc A popular assortment of shell pilot light socket for all radio requirements, offered at a special low price. Finest quality consitructlon. Have heavy-plated lugs for easy soldering. Spring contact in socket holds lamp firmly in place. Keep several aseortments on hand to speed up service work.

A472 Pistict. of 25 . 55 c

## BELDEN WIRE CLOSEOUTS!

Here's a real barkaln scoop 1 Natlonally-famous finest quality Belden lead-in and hookup wire at sensational low prices. Belden wire is known everywhere as absolutely the finest you can buy. This specia Quantities are 1 mited-buy now while you have the opportunity.


Finest quality general purpose lead-in wire. Stranded conductor covered with special rubber insulation for easy stripping.


## 2 CONDUCTOR RUBBER.COVERED

For double-button carbon mike circuits, low impedance transmission lines, or coupling a preamplifier to power amplifier. 2 conductor No. 20 wire, rubber-covered. Exceptional values!
 Coils. A474
NECH
s3.35


BRAIDED HOOKUP \& ALL-PURPOSE WIRE

## Finest No. 20 stranded tinned

 wire covered with cotton wrap $1 / 60^{\circ}$ rubber covering, and glazed cotton braid overall. For all hookup or general purpose use| 100 Feet | 1000 Feet |
| :--- | :--- |
| A4742. | A4743. |
| NETCH2 24 C | NET Feet |
| NACHR |  |

10 FOR NET EA. ${ }^{\$}$ $\$ 1.95$
\$1.70
NET
NET


## HIGH.POWER TRANS

## FORMER VALUE!

Every Amateur or Experimenter will find dozens of $\$ 2^{69}$ uses for this high-quality combination plate and filament price. Primary. $110 \mathrm{~V} .50-60$ cycles price. Primary. $110 \mathrm{~V} .50-60$ cycles C.T. 7.5 V . at $3 \mathrm{~A} . \mathrm{C} . \mathrm{T} .5 \mathrm{~V}$. at 3 A-C.T.; 2.5 V. at 10 A.- ${ }^{5}$.T. Fully enclosed case type in upright mounting style. Sunplied complete with flexible leads. Shps. wt.. 12 ibs. A fine value in a well-built transformer A11141. NET .... 2.69


SPECIAL 4 MFD. 1000 V . PAPER CONDENSER
Heres a real buy for the
Amateur. This 4 mfd . 1000 \$9 V . paper condenser is $\qquad$ ular size for use in transmitting power supplies. Working voltage, 1000 V D.C. 2000 V . test. In metal case; size: $41 / 2^{"} \times 41 / 2^{*} \times 21 / 4^{\circ}$. With porcelain etandoff type terminals. Shpg. wt., 5 lbs. Buy now at this special low price.
${ }^{5} 1.69$


## 'TIPNTOPPER" AUTO

 AERIAL BARGAINA special value in a versatile $\mathbf{\$ 2 5}$ auto aerial that fits any car
and offers exceptionally fine means of attractive streamlined insulator. Adjustable in threc positions from horizontal to yertical; telescopes from $26^{\circ}$ to $40^{\circ}$. Completely rustproof; triple chromium-plated over brass. Easily installed on any make or model car. Supplied complete with lead-in. Quality-built of finest wt., 2 lbs. A splend id aerial value. A1O4O5:

T PRICE.

## $\$ 1.25$

## SIDE COWL TYPE

Here's a bargain
value in a good- 45 looking, efficient

45 Ward aerial whi improve the performance of any auto set. Triple chromilum-plated- fully matproff. Mounts on side of cowl. 2 section telescoping type- $56^{\circ}$ total lgth. All fittings are of stainless steel. Equipned with bakelite insulators. Easlly installed on any make or model car. Provides noisefree operation. Shpg. wt., \& 2 lbs.

## GANG SWITCH KIT

 A special value assortity gang switches withmany uses. May be used to replace tone control switches, instrument switches, Amateur transmitter swltches, lab equipment switches, etc. All have standard $1 / 4^{\circ}$ shaft in varying Servis. A handy kit for the imenter an, Amateur, or Exper price. Quantities are limited. Buy now ! Leas knobs.
A4728. Kit of 5 Assorted Switches.
YOUR SPECIAL
PRICE PER KIT..... 35

PUSH-BUTTON KNOBS
Herc's a speclal value 90
assortment of pushbutton knots for sets
with automatic tuning. All are of bakelite in black, brown. and white. All are standard $9 / 16$ in height and are push-on self includes lnobs with ent tops for station call letter tab Keep several assortments handy to renlace mlasing buttons on sets coming into your shod.
A4Z29. KIt of ${ }^{25}$.
A4730 KIt of ${ }^{100}$
20
65.

## -8

## 2 BAND COIL AND CONDENSER KIT

75An excellent quality coil and condenser kit for 2 band set use at a smashing low price.
Condenter ie 2 gang TRF 410 mmfd Condeneer ie 2 gang TRF 410 mmfd . type with standard $1 / 4^{\circ}$ shaft. Has 2 low-loss high-galn eype coils cover standard broadcast band and 49 meter short wave band. This kit is idealfor replacement use in AC-DC sets or for set-builders' requirements. With diagram. Slipg. wt., $31 / 2$ lbs. A ATET 10 . Complete Kit 75.

## 2 GANG CONDENSER

A special offering of the 2 gang condenser only described above. Full 410 mmid. capacity, clockwise rotation. Standard $1 / 4^{\text {e }}$ shaft extends $13 / 8^{\circ}$. Has trimmers and mounting
 Shpg. wt., 2 bbs. A condenser of hlgh standard quality. AET 11.

29 .

## 2 BAND COIL KIT

A quality-buits set of low-loss highgain type coils covering bands mentioned above. Manufacturers' type for use with condenser above or any similar type unit. $23 / 4$ " high. 11 b . AET ${ }^{12}$.
59.


## BARGAIN 2 BAND SUPERHET COILS

4 Of of 2 duat-band Superhet of 2 dual-band Superhet high-gain type. Cover the standard broadcast and police call bands. Manufacturers type coils with solder lug conaections, Size: $3^{\prime \prime}$ high. Ideal for set-builders or experimenters requirements. Supplied
with wiring diagrams for auggested circuits employing these coils. Qualcircuits employing these coils. Quality coils at a money.
AET13.
49.


3 GANG CONDENSER

33.A high-quality, ruggedlybuilt 3 gang condenser with trimmers. Rated at 420 mmid.. full capacity. Rotation coun-ter-clockwige. Has standard $3 / 8^{\circ}$ shaft extending ${ }^{9 / 16}$. End shields measure $13 / 43 / 4$ in popular radio tuning condenser in popular radio magazize set-buiders its. An extional bargain price. Slipg. wt.. 31bs. AET14.
33.

## ULTRA-MODERN CONSOLE VALUES!



## POPULAR 2-TONE

 CONSOLEA beautifully bullt,
beautlfully finlshed
$\$ 4.95$ beautifully finished

95 pleasing moderndesign. Hand some matched butt-walnut veneer is used for the instrument panel face. Curved beaded pilasters enhance the appearance of the cabinet and increase its sturdiness as well. Recractive dull sold cloth and attractive duligold cloth and is fronted by three matched dimensions are: $37^{\circ}$ high, $20^{\circ}$ wide, $10^{\prime \prime}$ deep. Inside dimensions: $35^{\circ}$ high, $18^{\circ}$ wide, $91 / 2^{\circ}$ deep. Instrument panel area: $151 / 2$ wide; $111 / 4$ nigh. Shpg. wt. . 341 bs . A wonderfuivalue at this low price. A fine console for replacement purposes or for housing home-built sets.
A10920. 4.95

## "TILT.TUNER" CONSOLE

A handsome walmut- $\$ 775$
finished console ca- $\$ 1$ binet in the popular "tilt-tuner" style. Striped walnut instrument panel face is enhanced by beautifully V-matched inlay. Has rich. burnlshed gold grille cloth fronted by four matched walnut posts. Beautiful roll-top design with one-piece instrument panel and ton. Overal! wimensions: $12^{\circ}$ deep at botiom, $8^{\prime}$. deep at top. Inside dimendeep at top, Inside dimensions: $37^{\circ}$ high, $201 / 2^{\circ}$. wide. at top. Instrument panel area: $201 / 2^{\circ}$ wide. $12^{\circ}$ high. This graceful, quality-built cabinet is ideal for replacement purposes or for houning custombulte sets. Shpg. wt., 38 lbs.
A1O921.
$\$ 8.75$
DUANTITIES ARE HIMITED - ORDER NOW!


## AC-DC CABHNTT

 A wonderful bargain in 59. an attrucuve compact idcal for replacement purpores or for met-burlders use. Handsome walant finished wood with darker-tuned spealaer grille in: sel. Greralt dinnensions: \$1. wide, $7 / /^{6}$ high, $57,{ }^{\circ}$ " deep. Has two $1 / 2$ holet for eontrols a rilled at sideb of grille; boles ailled with plug luattons which rmay be removed if deshbec. The neat lines and trim appearance of this commact cabinet will add to the professional appearamce will make a fine replacement for Wh1 make a fine replacement for Alogz2. 59 C

SPECIAL CHASSIS BASE ASSORTMENT Here's a bargain scoop 4 for for the radio builder or $20 c$ experimenter! A special value assortment of $39 c$ four chassis bases at less than the usual price of one ! Substantially constructed of good quality radio metal with holes puached for tubes, coils, transformers, tuning and volume controls, etc. May be used for building all kinds of sets from small 3 or 4 tube jobs to big 7 or 8 tube receivers. Holes already dinched will save you hours of labor in your radio-building work. These bases are suitable for AC-DC or AC sets and are stamped from standard chassis base stock. Shipg. wt., 6 lbs. A15000.

39


## PRECISION DRIVE TUNING DIAL

 A very attractive and efficientprecision direct-drive dla at
a remarkably low price. Ideal nitters. etc. Dial is receivers, transmitters. etc. Dial is $21 / 0^{\circ}$ in diameter and fits standard $1 / 6^{\prime \prime}$ shaft. Calibrated in large, easily legible figures $0-100-0$ for clockwise or counter-clock wise rotation over $180^{\circ}$. Finished in black bakelite. A real buy for the Amateur, experimenter, or set-builde ASt 5 T.
19.


PLUG-IN COIL KITS
Special values in high-grade AOC
general coverage coil kits.
Suppliecl Supplied on 4 or 5 prong forms to suit requirements of most 32 to 64.57 to 115,107 to 217 meters. when used with 140 mmid. condenser.
5 PRONGS - 2 WINDINGS Kit of four coils to cover bands
described above. Have standard 5 prong bases. Each coil form measures

4 PRONGS - 2 WINDINGS Kit of four coils covering the same bands as above. Standard 4 prong A5660. NET Siz...... 7 Se


## RIBEED 5 PRONG COIL FORM

Genuine molded bakelite ribbed coil form or coils. Has molde handle for easy grip. Size handle for easy
$3^{\circ}$ high $x$ grip. $^{11 / 2^{*}}$ dia. Wize standard 5 prong base. A5664. NET.


RADIO BEGINNER BOOKS
These books are idealf or the TOc you can easily understand them, they answer your questions about rad io and will show you how to build and operate Short Wave equipment.
A4601. Alternating Current for A4602. All Aboul Aerials. A4603. How to Build 4 Doerle A4604. How to Make Popular A4605. Beginners' Radio DictionA4606. ${ }^{\text {Hom }}$

A4607. How to Read Diagranms 4608 . Radiu for Begvnuers
AE?
10.

4 FOR 35C. 8 FOR 65c

## Special FEATURE VALUES!



ELECTRIC TIME
SWITCH CLOCK
$\$ 344$ An aecurate electric clock electrical applic concer for switch radloctrical appliances. Will etc., "on' or " ${ }^{\text {" }}$ of ${ }^{-1}$ at predetermined time. Can be set for any period "on" or "off" from 10 minutes to 5 hours No special wiring is required, Easily adjusted by means of small dials on 'ace, Self-starting dependable motor. bakelite case. Actractive, effective Fakelite case, Attractive, effective. $31 / 21 \mathrm{bs}$.
A 7644 . NET...$\$ 5.4$. A7644. NET..... 1 . 5 , EACH... $\$ 5.07$


## RADIO SOUND EFFECTS LIBRARY

An instructive kit containIng sound apparatus to the patter of rain screaning sirems, rain whistles station chimes and many other combinations of radio sound effects. A good foundation for leaming the highly specialized art of "sound effects man." Also inclurtes a mintature set of elyimes tuned to the pitch of those used on a national radio network. Educational and amusing. Alse suitable for making "sound-cffects records, for school plays, etc. Comes complete with instruction booklet Shpg. wt.. $3 \mathrm{t} / 2 \mathrm{lbs}$.
A7075. MET.$\ldots 2.10$


CODE PRACTICE SET
\$ 03 This Signal-twin
wireless - code practice set is pracsigned; Invaluable for learning wire less code. Enables the operator, tlarough practice, to develop pro fessional speed and accuracy. Consists of two complete "stations." each equipped with key, buzzer and rasy-to-read code plate mounted on a sturdy, attractive base. 75 feet of wire supplied. May be operated up to 1000 ft apart by adding
more wire. Uses standard dry cell. more wire. Uses standard dry cell With instructions. Shipping weight. $21 / 2 \mathrm{lbs}$. Less dry cell.
A7700. NET EACH. $\$ 2.03$
LOTS OF 3, EACH ..... $\$ 1.91$

POPULAR LOW-COST MICROPHONES


DE LUXE MODEL
An efficient microphone for home radio use. Make your own broadcast and announcements. Does not interiere with radio recention. Equipped instant break-in on programs. Instant break-in on programs. Finished in attractive , yreen-
bronze finish. Size: 5 , Mounted on substantial notip pedestal. Complete with cord. Wt., 1 lb.
A7085. NET


HAND MICROPHONE
Similar to the Standard Model above but fitted with wooden handle. A low-priced phone. Will provide endless houra of real enjoyment when hooked to your receiver. Break in on regular radio programs with your own announcements and surprise your friends. Complete cord. Wt, 2 lbs. 98 e


## QUAM MIKE

Fig. E. A high impedance type pedestal mounted quality microphone. Ideal for "mystery", wireless phono players equipped with microphone jack, Covers frequency range of 60 to 8000 cycles 5 with -50 D.B. output. With 5 foot cord. Incrackle-gnished
metal case. $51 / 0^{\circ}$ high. Wt. A9172. NET $\$ 7.76$
2 91 bs.

## 59.

EA, LOTS
of 6

## THE "AIRMETER"

A necessity in every , home Tells at a glance the relative hany room. Unusually accurate. Attractively presented in a chrome case with black dial face and contrasting aluminum ${ }_{31 / 4}{ }^{\circ} \times 3$. and pointers. Size: A706O. NETEACH. 6


54

STANDARD MODEL
Similar in appearance to the De Luxe model listed at left but slighely smaller in size. In bronze metal case $33 / 4$ high. $^{\text {bill }}$ Will provide loads of fun and entertainment at partics, etc. Supplied complete with general construction as de general construction as de-
scribed for A7087 below, but mounted on pedestal. Felt base. Wi.. 1 lb . 54 c


STUDIO TYPE MIKE An extremely popular type use with any radio set or amplifier. Looks like a professional erystal type microphone. Includes on-off swlteh mounted on handle. Furnished with 10 -foot cord and connector prong adapter for easy installation. Complete instructions are furnished. hand, We., 2 lbs $\$ 1.18$
A7100. NET.


MIKE "BOOSTER"
A well-constructed and efficient unit which permits the connection of a singie button carbon microphone to any radio receiver. Increases the carbon mend volugne of any the button current to a safe value. Elliminates carbon "packing." Has brackets for permanent fastening to side of radio. Easy to install. Complete with instructions. Wt $11 b$.
A5731. NET
59.
 radio enjoyment.
Requiring no connection to radio met, the Remote Control can be used with Quarm mike above or with record player to reproduce voice or records through any radio set. Control plugs into any A.C. or D.C. electric outlet. Brown crackle cabinet. Wt. 4 lbs. $\$ 4.75$
A7230. NET...


## POWER LINE FILTER

End bothersome radio inter- 590
ference! Use this Tobe capacity type filter for effec-
tively eliminating line noises. No ground comnection required : No into any standard receptacis Hag acket for receiver plug simple to install. Ideal for elimination of noive rom home appliances such as electric razors, vacuum cleaners, hair dryers te line, AC or DC. $\$ 1.00$. NET. 59 C PER LOTS OF 6 $\$ 3.35$


AERIAL FILTER
 of interiering stations. Adjust able control for utmost selectivity permits setting which produces best results with your particular antenna and radio. May be installed in radio A2602. List. S1.50. NET
74.

## LOW-COST SLIDE RULES

A4195. Deluxe Madel Mann heim type rule with $A, B, C, D . C 1$ and K scales. A well-constructed precise instrument designed for unusual accuracy. Has sinc, log, and Equipped with removable magnitier In leatherette case. NET PRICE

79
A4194. An accurate, well-made multiplication, soiving problemis in of both, percentage and combination square, square root etc. Made o mahogany. Packed in carrying case With instructions.
NET PRICE
45.

A4193. Beglnner's Model. An unusually low-priced slide-rule for vides achor college student, etc. Procase and instructions.
NET
25.


MULTI-RULE \& GAUGE 4 -inch quick-reading 32 nds and 64 the scale, drill point gauge, square. bevel protractor. center hnder, and circle satile stainless stcel pocket tool tdeal for use in laving out templates. for panel, chassis, etc A7740. NET. 95.

## USALITE PENLITE

A handy new chrome-plated $53 / \mathrm{g}^{\circ}$ long vest-pocket flashlight. Will throx a with bulb and battery. 35 c 3 PENLITES FOR A8915. Extra 2 cell battery.

# Spacial FEATURE VALUES! 



## BRUSH "HUSHATONE"

An entirely new and efficient pillow-iype speaker. Exclusive reproduction of entire audiblerfect the user a more comfortable method of enjoy ing radio programs and allows complete relaxation at the same time. It may be placed under pillow on bud. couch, or chair. Permits perfect radio entertainment without disturbing or interfering with others in the room The volume is regulated by the volume con trol on the set. Measures only $3 / 8$ " $\times 23 / 8$ " $x 215 / 1 s^{\prime \prime}$ Supplied with ample length rubber-covered cord. Easily and quickly attached to any receiver. The Brush "Hushatone" pillow speaker is not only useful in the home but is an
invaluable aid and comfort in hospitals and invaluable aid and comfort in hospitals and available. Shipping welght. 1 lb . \$? A1203. NET
s2.94
A 1214 . Inseltutional Model. Housed in linouid for sterilization safely be dipped NET.

## AMERICAN-BELL SILENT RADIO HEADPHONE ATTACHMENT

A new radio headphone at tachment combining convenience with versatifity. Easily and quickly installed on any radio $\$ 95$ set. this unit permits you to silence your radio set loudspeaker and listen to any program by headphones without disturb ing others in the same room. Or, you can operate both the speaker
and the headphones simultarieously, thus giving the hard-of-henrin and the headphones simultanteously, thus giving the hard-of-hearing full radio enjoyment. Special low-impedance headphones assure finest tone quality. Supplied complete with heauphones, light weight hibs An exceptional value.
A2912. Complete with headphones. NVET
A2913. Adapter Attachment Only. For use with any good 'phones, but offers best re- 85 c
sults with low-impedance ( 11 ohm) "phones as supplicd above. NET........................

## CANNONBALL LOW-COST MASTER HEADSETS

An improved high resistance type headset of excellent quality $\$ 85$ Heavy bar magnet assures maximumsensitivity. Terminals are band is easily adjusted by means of handy spring pressure clips. Ha $41 / 2$ foot mercerized cotton-covered cord. These efficient phomes are fine for use in hospitals and institutions. Supplied with lightweight stain less-steel headband. Shpg. wt.. 2 ibs. A2804. 3000 OHMS. NET
${ }^{5} 1.85$
A2805. 5000 OHMS. NET
$\$ 2.35$
NOTE: Hospitals, Schools, and Institutions for the Hard-of-Hearing, Samatoriums, Prisons, etc., are invited to write for attractive quantity prices on Cannon bahl Headsets. Duthe your requirements, and prices
 will be sent promptly without obligation


"HOT DONUT" WATER HEATER Now you can have
allthe hot water you
need in a jiffy whenever you need it. Juat con-
nect the Hot Donut Water Heater to any 110 volt outlet, either $A C$ or $D C$, and immerse in a pan of water and you will have boiling Water almost immediately. This dependable little heater is inexpensive and portable, to tourists and travable to tourists and travspace. is light in weight, and space. is ight in weight, and
yet will keep you supplied with hot water for all requirements. Rusgedly built. Heating unit is thoroughly impregnated against moisture. Metal housing is finished in bright aluminum; will not rust easy to keep clean. Has heavy rubber cord 6 feet long, wlth plug, Priced exceptionally low;
buy them in quantities for buy them in
extra savings.

A9IGI. YOUR 7 Te
10 FOR ........ $\$ 6.65$


## STERRO ELECTRIC CLOTHES WASHER

A new Underwriters Ap- $\mathbf{\$ O}^{75}$ Washer; ideal lor the home or aursery. Bolls and sterilizes as washes everything from baby's clothes to wearing apparel and limen. Holds 2 full pounds of dry cluthen; washes thoroughly with swirling action. Has powertul air-cooled induction-typ notor and 3 fin cast-aluminum aki porcelain enameled steel tub and porcelain enameled steel tub and lvory. Cover has convenient handles and steam escape vents. Diammeter $16^{\circ}$. For 110 V. $50-60$ cycles A.C Shipg. wt., 18 lbs. Less wringer which s listed below. An exceptional value in an efficient utility-type clothes washer.
A10440. NET.... \$9.75
A10441. Portable wringer. Lightweight and compact: easily aflixed to washer tuh. Has soft rub-
ber rollers. NET.


ELECTRIC MIXER AND JUICER
The latest high-quality electric food mixer and juice extractor. A beautifully designed poweriul all-purpose klechen servant which will mix whip. stir or beat all types of bat ters, pastry dough, salad dressings eggs. cream, etc.i will also extract juice from fruits with special attach ment supplied. Equipped with set of 2 self-locking beaters with stainfess steel blades, casily renovable for cleantng. Base tray is revolving buped univeral type motor perates on 110 volts AC or DC; light and on itable for ACesy removal from base. Motor housing automatically locks self to frames; motor tilts back to drain beaters or for easy' removal of mixing bowl. The entire mixer is ivory-finished, attractive in appearance and easy to clean. Equipped with rubber-covered cord and rub. ber plug. Complete with 1-7 and L-9 bowl and juice attachment. Shpg. wt..9 lbs. . $\$ 8.50$


## HEATING PADS

 High-grade Under-writers Approved $\$ 45$
heating pad. Has
 automatic, non-radio interfering double thermostat control and three heating ranzes selected by 4 -position swirch. $15^{\circ} \times 12^{*}$; soft camel's hair finiah cover.
With 8 ft . cord. For 110 AC or DC. 55 watt A10442. .... $\$ 1.4$
de LUXE MODEL. Has 4 thermostats which main tain exact tempera lected. Offers 3 heats: Low $-125^{\circ}$, Med. $150^{\circ}$. High finish . Has snap-on sof finish cover and water re-
pellent interilning. 110 y A10443.
$\$ 2.15$
SUPER DELUXE MODEL A10443, but has removable washable type, quilted grain fleecette cover, and ivory ${ }^{\text {cordo }} 40$ anitech. and pluy.



## COFFEE-MAKERS

Unusually efficient $\$ \mathbf{2 5}$
and attractive cofree makers with improved fitering methor which produces coffee of superior flavor. Made of "Glasbake" full heat-resisting glass. Can be used on gas stove, electric stove or over open flame. Uses vacuum principle to extract full clear, delicious coffee; improves the taste of your fayorite brand with black molded handle. (IIIstrated with electric stove.)
A10295.6 Cup Model.
A10296 B Cup Model (Less
A10297. 12 Cup Model (Leun Sto 1.40
A10298. Electric Stove Only


CARRON CRYSTAL SETS
MIDEET

Midget mode crystal radio set solid walnut cabinet. Unusually intoa sturdy appearance. Average recepally attractive in about 25 mile area. Brings in programs clearly and distinctly without distortion. Reguires no tubes or batteries. Has spring action locato and station selector knob. Complete with special earphone and roll of ground wire. Size erystal set value that will sive enjoyable and crystal set value that will give enjoyable and surprisingly dependable reception within a tuning range
A9311. With Accessories
Y9310. Set Only.

JUNIOR
lics and acteris
lics and average
range of set at soinely designed and resembles small electric receivers. With spring action locator and easy-to-adjust crystal. Dellvers programs in a clear, enjoyable manner. Supplied with ear phone on metal head band and coil of ground wire. Size: $51 / x^{4} / a z^{3 \%}$. Slipg. wt. 5 lbs Remarkably efficient; a real "buy" at ou unusually low price.
A9313. With Accessories.
A8312. Soit onily

# Lou Cas lors HEADPHONES Cucesomizes 

## PHILMORE KITS



## 1 TUBE

 BATTERY KIT
## $\$ 7^{18}$

An efficient and gensitive 1 tube Philmore battery set in kit form employs plug-in from 13 to 530 meters covering Amateur Police Calls Shortwave Amateur, Police Calls, Sas ammzins Broadcast band. Especially olume ar use in camp, on farm, or suited for use in camp, on farm, or anywhere With coil for broadcast band (200 to 530 meters). Easy to assemble from clear instructions. Also available completely assembled and wired. Shpg. wt., 31 bs.
A 7237 Less Tube and Batteries. NETPRICE, ONLY, \$T. 3 A7238. As above $\$ 3.5$ A7239. Batterles. $1-11 / 2$ V/ 47245 . Kit of 4 coils $\mathbf{~}^{2} 3$ to 240 meters).
Knight Type 30 Tube

## 2 TUBE BATTERY KIT

Mounts on attractive panel. Uses 2 type 30 tubes. These Philmore set when assembled are poweritulenough to operate several sets of head phone at the same time. Wich plug-in Broadcast band coil. Quickly assem bled. With instructions. Wt., 4 lbs
A 7240 . Less Tubes and Batteries NETPRICE, ONLY. ${ }^{\$ 1.4} 49$ A7241. As above, but comA7242. Batterles, $1-11 / 3, V$. A7245. Kit of 4 colls $(13-240$ meters)
Knight Type 30 Tubes.
(2 required). EACH

## .

.32

## 2 TUBE A.C.-D.C. KIT

A reliable Philmore 2 tube electric receiver kit. Wlll operate from 110 volts, A.C. or D.C. Reception is strong and clear. Uses 2 type 76 tubee. Coil supplied is of the plug-in type covering Broadcast band. Coi kit permits tuning Short-wave Amateur bands. Police calls, etc. Also in assembled form. Wt., 5 lbs AR243. Less tubes.
NET PRICE OFPARTS ONLY $\$ 2.25$ A7244. As above but come A7246. Kit of 4 colls (13-240 A7246.
Knight Type 76 Tubes.
(2 required). EACH.


## FROST

 PHONESMany superior features are incorporated in Frost pbones which add greatency and quality of reproduction. They are inght in weight and comfit the head Head hand in double type with woven fabric covers. Units have aluminum shella and hord mbber caps. Cord terminala are inside of case, to prevent accidental shock. With cords, Shipping welght, 2 lbs .



## ACME FEATHERWEIGHT HEADPHONES



Sensitive, durable, and truly practical 'phones for every headset use. Light as a less than $11 / 2$ ounces; total
weight is only 5 ounces. Recommender especially for Amateurs. SWL'S, hard of-hearing, and multiple phone installations. Case is of non-breakable aluminum with lisht tension flexible headband. Cord is $41 / 2 \mathrm{ft}$. braid-cov ered. A real value leader. Wt.. 11 ib

A5250. 4000 ohms. (2000 per phone.) YOUR
YRICE
$\$ 20$
A5251. 20000
(1000 per phone.)
YOUICE
PRI.......
95
ACME SINGLE HEADSETS
A lightweight single unit 'phone with headband exactly as
 DIAPHRAGMS for Headphones Above. Replacement diaphragma for all Acme "phones. A5 252 . EAc RH......5c

## TRIMM QUALITY HEADPHONES



## FEATHERWEIGHTS

very compact phozes.
Welgh only 4 ounces.
Bakelite shells and Bakelite shells and $\$ 5^{88}$ caps. Forged magnets of best Cobalt steel. Adjustable spring stee! headband. Dlameter only $23 / 16^{\circ}$. Custom-built for Ama teurs. Aircraft, Hard-of-Hearing, etc. Ideal for general purnose work. Spela ( 24,00 ohms impedance) phones are ideal for use in short wave work and net. These phones have met the net. These phones have met the exacting requirements of disSWL's for many years, Shpg. wt. 2 lbs.

## A5270, 4000 Ohms

A5271. 24000 OHms Spe clal Featherweights List $\$ 10.00$. 5.88


## SINGLE UNIT TYPE

 LORGNETTE HANDLE Single unit Trimmfeatherweight phone $\$ 3^{97}$ With adjustable 14 ${ }^{97}$ inch telescoping metal handle Bakelite cased unit is adjustable to any angle. Terminals are adaptable for group hearins-aid church systems. Wt., 3 lbs. A5275. NET.
-
A5 527 H HEADBAND ith adjustable stee installat. Ideal for hearing-aid theaters, schs in churcies NET.


PROFESSIONAL TYPE A highquality standard type headphone, suitable for batery. $\$ 247$ crystal and shortwave sets, as well as for multiple installations. Used by Amateurs, SWL's, etc. Has bakelite case and cap. Per rectly matched unis assurelong are inside case A headphone of extraordlnary quallty at a low extraordinary ${ }^{\text {price. Wt. } 21 b s}$
A5276. 3000 Ohms. A5
NAC
EAC $\qquad$ $\$ 2.47$


QUIET RADIO HEAD. PHONE ATTACHMENT
Designed to be attached to the speaker voice coll of any radio receiver: permits operation o either head phones or speaker, or both at the same time. Adapte has built-in switch and phone. jack with four foot extension cord. Headohones are compact Forged nextremely bakelite shel and cap. Shpg. wt., 41 bs A5264.Model 643.\$3.50

A5267. Model 6a7. Similar to above but with less sensitive phones. Have stamped steel magnets. Wt., 4 lbs.
NET
$\$ 2.59$
HEARING-AID CONTROL BOX For multiple hearing-aid installations in
schools, theatres. churches, etc. Permits $\mathbf{9}$ adjustment of volume to individual hardSmall of-hearing needs. Resistance, 10. ivory or brown erystal finish. (Use Knight High Gain Amplifiers for group-hearing use. See P.A. A5280. Brown Crystal Finish. $\$$

## BRUSH 'PHONES

## CRYSTAL <br> TYPE A <br> 

High aensitivity headphones of new piezo-electric design. For Amateurs, Short Wave fans, monroring, measure ment work, etc rave unusualy high impedance and wide frebetween 60 and 10000 cycles. phones are ideal for all applications When used in circuits carrying direct current, a small blocking condenser is required. Weight including and and cord, only siz ounces. One Shpg. wt. 2 lbs. $\$ 5.29$
A1200. NET. .... 5.29

## NEW TYPE BJ

Finest quality high impedance communications type crystal phones. Hermetically sealed cartridge in luminum case with soft molded rubber jacket. With ad justable head Shpg. wt., 2 lbs. $\$ 7.06$

## SINGLE UNIT TYPE A

 A1201. Single phone with metal headband. 41202 . NET....... \$2.94 orgnette handle. \$3.82

## BRANDES SUPERIOR

A high quality, ruggedly- $\mathbf{~ b u i l t ~ h e a d s e t ~ w h i c h ~ h a s ~} \mathbf{\$ 7}$ been a favorite for years. Outside terminal type, with alum num cases and bakelite caps. Diaphragm diameter is $21 / \mathrm{m}^{*}$. Has double coils, two in each receiver; adjust able stainless steel 1 piece head band and $41 / 2$ toot cotton-covered cord Magnets are made of chrome mag2400 olems per pair Wt A2908.

RICE
\$1.79

## "ADMIRAL" PHONES

Simllar to the phones above, but with terminals inside case. Have aluminum cases, bakelite caps donble coils, chrome steel magnets etc. Sturdy and lightwel
lent for all-around use. A2909. 2000 Ohms.
51.89 A29 10. 3000 Ohms .
A2911.5000 Ohms.
$\$ 2.06$

CAPS AND DIAPHRAGMS A2801. Caps. EACH ...... 18 C A2802. Diaphragms. EACH 5C

[^5]
## hendphonis CRISTAL SIS accessories



PHILMORE "DWARF" 1 TUBE RADIO A new tiny self-contained complete ome airplane luggage type case which measures only $51 / 4 \times 45 / 8 \times 33 / 0^{\circ}$ complete sct welghs only 2 lbs . Easily carried anywhere; operates entirely from batteries contained in case. Covers standard broadcast band. Easy to tune and covers reception range of 50 to 100 milses. The "Dwarf" is supplied complete with one low-drain type 1 E 4 G tube, two 2-cell fashlight type batteries, and single earphon
A7232 NET
$\$ 3.90$

## CRYSTALS AND

CRYSTAL DETECTORS


OPEN TYPE DETECTOR
A7062, FIG. A. Universal Joint on swivel arm provides quick. ac curate adjustment on any point o crystal. Wi.. 8 oz. 10 for $\$ 1.10 .0^{8}$ EACH
12.

## FIXED CRYSTAL DETECTOR

A7063. FIG. B. Extremely sen sitive. Selected crystals are metertested and permanently adjusted Housed in compact bakelite case nminates bother of continual ad tested.
NET EACH


FEDERAL FIXED DETECTOR
A4154. FIG. A. This pre-tested detector wlll give more selectivity to crystal sets or reflex clrcuits. sensitivity is permanently fixed. In bakelite case.
53.

GLASS ENCLOSED DETECTOR A7061. FIG. B. A low-cost highgrade dustproof glass enclosed detector complete with supersensitive crystal. Standard in $90 \%$ of the
crystal sets made.
NET.

225


FIG. A. Genuine Galena crystals, aboratory tested on sensitive meter Fit all crystal cups
$12 c$
FIG. B. Carefully tested mounted crystal. Sensitive galena. Fits al Atandard crystal cups. A 451 . 10 for 42 c . EACH. Sc FIG. C. Cat-Whiskers, correctly designed and made of finest quality स4ise, Set of threc. 10 Sets, 10 c .1 set . . 8 e

## AMERICAN BELL HEADPHONES



These unusually sensitive and efficient headphones. produced by one of America's foremost manuracturers. are noted for aluminum shells and caps make them light in weight; one-piece stainless steel light-weight adjustable headband adds to comfort in wear and long.life utility. High - grade magnet glves extra retentivity. Ideal for use with crystal or battery sets as well as for all general-purpose require ments. Shpg. wt., 2 lbs. Real values in popular headphones

WITH BAKELITE CAPS A2812. Same phones as at right. but equipped with black num. 3000 ohms 1 NET.
${ }^{5} 1.32$
EXTRA DIAPHRAGMS

## WITH METAL CAPS

A2807. 3000
Olims. NET...... $\$ 1.25$
A2806. 2000 Ohms
NET,
97.

EXTRA ALUMINUM CAPS
A2808. NET EACH . . 12 C

## SINGLE HEADPHONE

A comfortable, dependable single unit headphone which is easy to wear. Has a single spring steel headbarld. Unit is of lightweight for phones: ideal for multiple hearing-ald installations. Complete with cord. An outstanding headphone value. A2813. NET

66
A2814.
NET....... 79


PHILMORE CRYSTAL SETS

"PETER PAN" SENIOR
A remarkably sensitive and efficient crystal set bulit into an attractive walnut cabinet. Features fixed crystal detector, single dial control, variable tuning condenser, spider web coll- etc. Supplied complete with aerial and ground wire and pair of quallty headphones. Size: A 7234 . Complete.
NET.
A7235.............. $\$ 3.75$
Set only. NET.


## THE "SELECTIVE"

Designed to give most efficient results and possessing unusua selectlvity. Built with a tapped coil matched with a . 00035 mid. variable condenser. The reception on this set is loud and clear, it is exceptionally sensitive and very easy to tune. It has double connection posts making possible the use of two pairs of head phones at one time. 25 milies. Contained in a crackle finish cabinet. Shps. wt., 31 bs A7053. NET. \$2.3. $\$ 3$

"PETER PAN" JUNIOR
An attractive new crystal set in a good-looking walnut cabinet. Brings in stations over 25 mile area with fine tone and clarity Has fixed crystal detector, per manenty sealed at sensitive tuning unusually simple Sup plied complete with aerial and ground wire and single head ground Wire and single head phone. Size: $4 / 8 \times 3 / 2 \times 2 / 8$ toooperate crystal set at a very low price. Shpg. wt., 2 lbs.

.$\$ 1.75$ AT248, NET \$1. 10


## THE "MONARCH"

A seasitive and attractive crystal set offering good reception over an average distance of 25 miled Hhen suitable acrial is enclosed crystal detector, solenoid coil, and engraved, calibrated dial with bar knob for strong reception and easy tuning. Built into crystalline case with clips for aerial and phone connections, Shpg. wt., 11 b . An exceptional value in a depend able crystal radio receiver,
A7236.
88.


## PHILMORE "SUPERTONE"

 CRYSTAL SET
## A ivell-constructed crystal set which

 will give unlimited service. Offers the utmost in entertainment on local stations over average distance range of about 25 miles when suitable aerial is used. A sensitive crystal is enclosed in a dustproof slass casing. In bakelite case. Shpg. wt., 21 bs .51. List, $\$ 1.50$. NET 8 C
I.C.A. "TOPNOTCH"

A super-sensitive crystal set which brings in many stations with excepin a handsome crystalline mensed case. Crystal is mounted under a dust-proof glass cover. Has beautifully engraved calibrated dial. Solenoid coil assures strong reception. A7148. NET............... 88c A7149. Topnotch Crystal Set Kit. A complete kit of parts for bullding the set described above. Ideal for radio newcomers. 80 e

## CRYSTAL SET

ACCESSORY KIT
Complete equipment for operat ing any crystal set. Includes headphones, aerial and ground wire. lead-in strip, 11 ghtning arrester, insulators, etc. Shpg. wt. 47054 . NET. $\$ 1.39$


## 1 TUBE "TINY TIM"

A complete one-tube battery set contalned in a compact airplane containe in a compact airplane luggage cioth finished cabinet, measweing only only $1 / \mathrm{lb}$. Uses $1-1 \mathrm{E} 4 \mathrm{G}$. wube. $1-2$ cell 3 voit flashlight type battery and single earphone-all contained in built-in compartment. With good aerial, range extends to 100 miles or more. Supplied complete (less aerial)-ready to operate. AET…..
${ }^{5} 3.23$

## EARPHONE CUSHIONS

Make head phones comfortable and easy to wear. Made of soft sponge rubber. Sanitary and practical. Will fit a 11 ey
phones.


A2810. $22 e$
$\$ 1.95$


## FAMOUS Crystal EAR HEARING.AID

 WEARABLE TYPE - LOW PRICED This new ultra-compact 3 -tube Crystal type Hearimg-Aid $\$ 1$ g enables you to sit where you please and yet hear lectures, sermons, plays, sound movies, conversations, etc., in perfect

Unusually efficient and practical twoway French style teiephones which operate on dry cell batteries. "Realphones" are a real economical operate on dry cel batteries. Realphones are a real econonical
convenience for use in homes or offces. They are exceptionally easy to
install and provide an efficient method of communication between two points. These phones are sturdy, compact, 'attractive, and modern. Furnialued in sets of 2 , they are intended for use only in pairs. Only two standard dry cells needed for operation up to 450 feet. For greater distances use more batteries. "Realphones" are especially convenient as room-to-room or house-to-garage telephones, in offices, schools, factories, public garages, restaurants. stores, eto. Full instructions for rapid con-
nection are included with each set. Shipg. wt.. 6 lbs .

## ACCESSORIES

The only accessories required for use either indoors or outdoors A8925. Dry Cells for use with Realphones. 2 required per set. 21 c A1984. 100 feet 3 conductor connector cable for outdoor use. Weatherproof type cable.
NET A1985. 100 feet connector cable for indoor use NET . . . . . .............. $\$ 1.65$

## COMPLETE SETS

Complete set consists of ${ }^{?}$ Realphones with buzzers and 35 feet of wire. Additional wiring may be
added. Available in choice of colors. For use only in pairs.
A1980. Black.
A1981: Green.
A1983. Chilver. Red.
s/12
Per set of 2. NE
Lots of 3 Sets,
53.82

Multiple Phone Systems for All Purposes. - We can supply inultiple telephone systems for all types of installations. Write to us for descriptive literature on Serv-U-Fone systems providing from two to ten stations. including common-talk, selective. and super-selective types. There is a system available for every requirement. Write us, giving full particulars concerning the type of installation you require, and we shall quote
promptly for the proper equipment at the lowest price.


# new! Knight 〔0MPLETE ELECTRIC PHONOGRAPHS 

## Che serenade

ALLIED is first with a line of superb new instruments designed exclusively for Phonograph Record Reproduction! Here it is a complete self-contained Electric Phonograph, a real musical instrument masterpiece that will play all phonograph records with flawless tone and surprising volume. Everything is completely built-in-powerful amplifier, speaker, turntable and pickpletely buiti-in-powerful amplifer, speaker, turntable and pick-up-nothing to add. Just plug in and enjoy thriling phonograph

- QUALITY PHONO EQUIPMENT. Only the finest phono components are used. Incorporates a dependable rim-drive silent phono motor for steady 78 R.P.M. operation; self-starting, with $9{ }^{\prime \prime}$ turntable; accommodates all 10 -inch and 12 -inch records. Has high-fidelity Astatic Crystal pickup.
- SUPERB TONE. The "Serenade"' will satisfy the most critical music lover. The secret of its lifelike tone is in the novel new R.C.A. licensed amplifier circuit which develops amazing output, fawlessly reproduced by the 6 -inch P. M. Dynamic speaker.
- BEAUTIFUL STYLING. You'll like the compact table cahinet of the "Serenade," Built of choice walnut veneers, in two-tone finish, it has a pleasingly curved end design and shaped speaker grille. Measures $121 / 4^{\prime \prime} \times 91 / 8^{\prime \prime} \times 71 / 2^{\prime \prime}$.
" "SERENADE" COMPLETE. The "Serenade" is offered as illustrated, complete, ready to play from 110 volts, 60 cycles A.C. Shpg. wt., 17 lbs. Code: LARGO.
${ }^{s} \mid 1 \underline{95}$ NET PRICE, EACH, \$12.45. LOTS OF 3, EACH.


## Che thoubador

Here is'another version of the Knlght Complete Electric Phonograph in a striking new style presentation. Has all the fine features described above but is offered in a new style cabinet with lid. Has novel triangular design with soft-roll corners and graceful grille opening; fashioned of choice walnut veneers and flawlessly finished-lustrous as a mirror. Measures $16^{\prime \prime} \times 12^{\prime \prime} \times 101 / 4^{\prime \prime}$. Plays $10^{\prime \prime}$ records with lid closed. Comes complete for operation from 110 volts, 60 cycles A.C. Shpg. wt, 18
lbs. Code: ROBIN. Al O9O1. Retail Value s. 56.95.

ง1565

## The sonata

The De Luxe model Complete Electric Phonograph 1 Plays $10^{\circ}$ and $12^{\circ}$ records with lid closed. Has all of the features described above. SuFeatures choice walnut veneers throughout; meticulously finished. Size: $16^{\prime \prime} \times 131 / 2^{\prime \prime} \times 103^{*}$. Complete for operation from 110 volts, 60 cycles A.C. Shing. wt., 22 lbs. Code: PARTY.
A 10902 Retail Value. $\$ 34.95$.
$\$ 185$

R. C. A.


Soo the Set Cimel Magnificent nallo-plovagnayn mill ord hitomatic meconi chaveer at a POPLLAR Phter!


Here, in this completely Automatic 1940 Knight 7 Tebe Radio-Phonograph, we büng you the greatest value in our history! We bring you Camplete Entertainmert-liexuserfectior of tone, tremendous new features and outs-arding cabinet beaut $\%$.
535 BAMD RANGE. The powerful Superhet circuit of the Kniglht 7 tunes twa fall bands: 535 to 1720 K.C. for all American Broadcast stations and important Police charunels; and play with the new plastic-molded Pearloid $51 / 4^{\circ} \times 4 \%$ Shlite-Rule Dial. And the Elertric Eye which is incorporated makes it even easler and more accurste to tune mechanically.

- PUSH-BUTTON TUNING. Entirely new Automatic Tsning for any four favorite staand there's your stationl You'll like the accuracy and cornvenience of Automatic Tuning. - BUILT-IN "AIR-MAGNET". No aerial muisance-no aerial or ground wircs to bother with. Just plug in like any appliance, and the Kniglit 7 is ready for perfect performance. - NEW 1940 CIRCUIT. You get radio's latest developments in the R.C.A. Licensed Knight
 Tuning Eye. This superb circuit assures completely enjoyable Home Entertainment.
* "EXTRA-VALUE' FEATURES. Just count them-Auteanatic Volume Control to assure uniform yolume; big 4 watts output for plenty of reserve perwer; Variable Tone Control for - MAGNIFICENT TONE. Whether you're playing Phoaosraph or Radio. you'll get endless pleasure listening to flawless, lifelike tone, brilliantly reproduced by a fuli 12 -inch Electrodynamic speaker of new design. You re never heard anything like it before!
- R.C.A. RECORD CHANGER. The last word in Automatic Record Changer equipment with self-starting motor and Gentle-acting feather-touch R.C.A. Crystal pickup. Plays eight 10 records or seven 12 records automatically at one loaning.
- SUPERE CONSOLE. You've never seen such cablnet beauty! Magnificiently pronorwalnut roll-around pilasters in rich, two tone fintsh. Has graceful grille design. Hand-rubbed to a hlgh lustrous finish. Size: $32^{\circ}$ wide. $34^{\prime \prime} \mathrm{high}, 153 / 4^{\circ}$ " desp.
- Knight 7 Phono-Radio Complete. The Knight 7 is ciffered complete in console illustrated above, with R.C.A. Changer, $12-$ inch Dyramic Speaker, and tubes. For operation from 110 volts,
A 10825 . Retail Value, $\$ 119.50$.
NETPRICEEACH,\$59.95.
YOURPRICE, LO'S'S ${ }^{\circ} \dot{F}^{95}$, EACH.

Tune any four favorite stations automatically, instantly, accurately. Perfected Push-Button mechanism has effortadjusted right at the buttons; button faces magnify call letters for easw reading.

Enjoy the world's most fascinating radio entertainment. Tune the two bands. Thrill to programs from the most exciting foreign channels, and enjoy all coast-tocoast American Broadcasi band stations.

WITH TELEVISION CONNECTION
The Knight 7 Radio-Phono is ready for Telsvision when it comes! Equipped with connection for Television sound, it's fully ready for future developments. Knight for 1940 is truly the Radio of Tomorrow, created for you Todayn to bring you complete enjoyment of both Radie or Phonograph Records!


[^0]:    A9145. 220 Volt Adapter for above set. NET
    A9153. Suedette Carrying Case, with zipper opening and bandie. NÉTシ......................... 89.5 c
    Entire Contents Copyrighted, 1939, by ALLIED RADIO CORP. Printed In U. S. A.

[^1]:    PAY-AS-YOU-EARN TIME PAYMENT PLAN. Don't delay your purchase of meeded equipment because you lack the full puryou in keeping your tent equipment up-to-date without an extensive cash outlay. Send down payment with order, and application blank will be promptly supslied.

[^2]:    Meets every servicing requirement for the visual study and adjustment of circuit problems. The 3 -inch cathode ray tube with ex-
    clusive Triplett turret-type mounting can be moved up or down or to either side for easy readings. Provides an extremely brilliant pat-resistance-coupled. horizontal amplifiers are resistance-coupled. Linear sweep range from
    15 to $20,000 \mathrm{cycles}$. Positive locking of Metal case measures $141 /{ }^{\prime \prime} \times 85^{\circ} \times 73^{\circ}$. Patern. silverand black. For $110-125 \mathrm{~V}$. k . F . 25 60 cycles. Shpg. wt.. 301bs.
    A9960. NET CASHPRICE....
    $\$ 6.13$ down, $\$ 7.58$ monthly for 8 months.

[^3]:    HAMMARLUND S.W. MANUAL Glves complete constructlonal details for building 13 of the most popular low-cost Short Wave recedvers. These sets have been buit and operwith splendid results Hans and experimenters and 5 Meter designs. 70 illustrations. 32 A5386. YOUR PRICE.
    10.

[^4]:    *Exact Duplicate Control. tElement only.

[^5]:    ## HEADPHONE CORD

    A3254. Standard lengeh double headphone cords. $\mathbf{~ t o n - c o v e r e d . ~ N E T . . . . . . . . ~} 33$

    HEADPHONE PLUG A3252. Takes 2 phones.

