

RADIO RETAILING

McGRAW-HILL PUBLISHING COMPANY, INC.

25 CENTS PER COPY



At Last! a really
SILENT
Volume Control

of course . . . It's a

YAXLEY

"No foolin'" — it's really here. They said it couldn't be done. But here it is—a triumph of Mallory-Yaxley engineers—the new SILENT Yaxley Replacement Volume Control.

Here is silent operation with a capital "S". You Can't Hear It! There's not the slightest sound—not even a whisper.

Consider these features (and there are many more):

- 1 Perfect Smooth Tapers, feather edged to insure electrical smoothness, and applied to promote mechanical smoothness — and silent operation.
- 2 Pure Silver Shortouts for Switch Action — and silent operation.
- 3 Silver to Silver Contacts. No corrosion — but silent operation.
- 4 Highest current carrying capacity; uniform characteristics, long life — and silent operation.

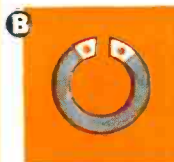
5 Perfect Contact between moving arm and carbon element through the special Yaxley "M" roller (that doesn't roll). Perfect contact for silent operation.

6 Low humidity and low temperature coefficients. Never fear "damp spots" or "hot spots." Depend on Yaxley for silent operation.

7 Universal Application — equipped with the famous Yaxley attachable switch — and other exclusive universal features.

Here's a golden opportunity for you! Take the lead in your locality! The Yaxley "Silent" Volume Control builds reputation and builds business. Get in touch with your distributor today and place your order.

- A Yaxley Volume Control—Patent applied for.
- B Perfect Smooth Taper.
- C Pure Silver Shortouts for Switch Action.
- D New Spring Wedge Prevents Loose Terminals.



**YAXLEY
MANUFACTURING
DIVISION**
of P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA
Cable Address — PELMALLO

RADIO RETAILING

SEPTEMBER, 1936

In This Issue

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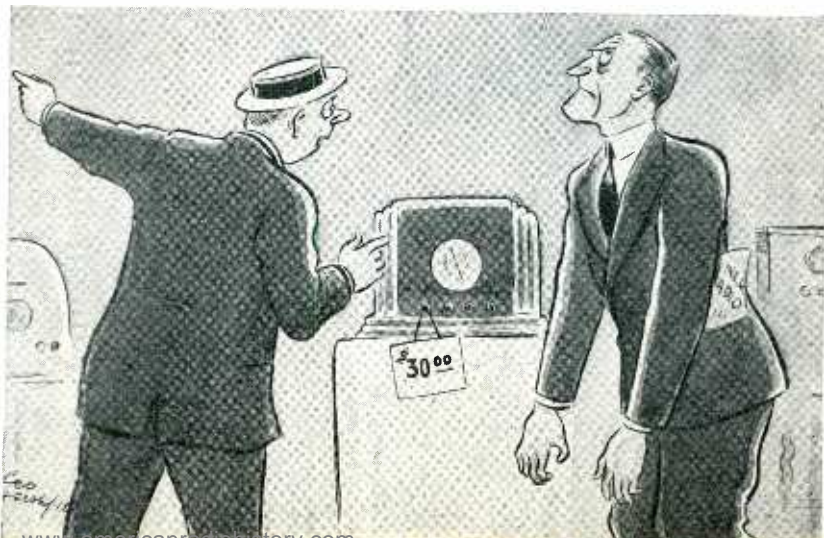
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SALES STATIC "I SAW IT DOWNTOWN FOR \$29.85!"



A-ALL ABOARD for PROFIT LAND



Here is the season's choicest group — "Labyrinth" radio, with its marvelous tonal quality, now available for every kind of prospect.



Never has the industry seen such distinctiveness in table model radios. Women are buying them for decorative effect in their homes; men for a performance not previously known in this kind of radio.

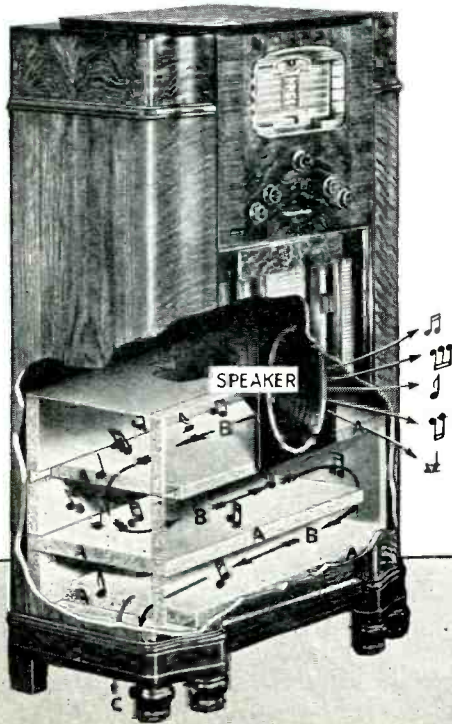


Radio sets that have the famous Stromberg-Carlson quality. Radios that out-point competition, price for price, in every instance. Wonderful sellers—for everybody wants a Stromberg-Carlson, and these are models anybody can afford.

"There is Nothing Finer Than a Stromberg-Carlson."

LABYRINTH RADIO

The long, winding passageway of the Acoustical Labyrinth takes the place of the usual box-like cavity in the cabinet which is the source of the exaggerated boom in low tones. It gives you deeper bass notes, with a new fidelity and increases the volume capacity and accuracy of the loud speaker. (A) Special acoustical material absorbs unwanted sound waves from back of speaker. (B) Arrows indicate path of air column which is tuned to increase bass response (C) Exit for lowest bass notes.



THERE'S joy in the hearts of dealers and distributors who join the Stromberg-Carlson group. Sales are mounting—popularity is spreading. It's the season's great profit line!

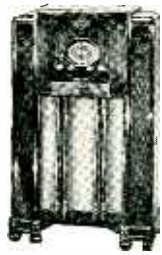
The Acoustical Labyrinth has shown people what radio tone really can be! Features such as Tri-focal Tuning, Carpinchoe Leather Speakers, Indexed Knobs, Automatic Sensitivity Control, Free-floating Phonograph Pick-up, have shown them that these Stromberg-Carlsons set a new pace in easy and effective operation.

The wide price range—from \$49.95 to \$985.00 now puts Stromberg-Carlson quality within the reach of practically everyone. All prices slightly higher in Southeastern States and West of the Mississippi.

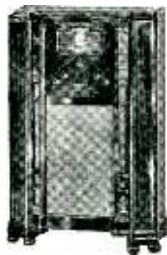
Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y.

Stromberg

12 MODELS WITH ACOUSTICAL LABYRINTH from 149.⁵⁰



No. 140-L



No. 150-L



No. 160-L



No. 180-L



No. 84



No. 70



No. 145-L



No. 140-P



No. 145-P



No. 160-P



No. 72

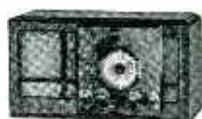


No. 74

6 TABLE MODELS - THREE with ROSEWOOD CABINETS from 49.⁹⁵



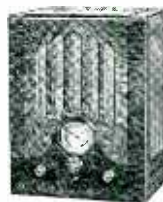
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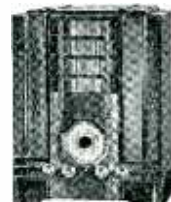
No. 130-H



No. 130-R



No. 58-T



No. 130-U



No. 140-H

9 BEAUTIFUL CONSOLES WITHOUT LABYRINTH from 78.⁵⁰



No. 65



No. 58-L AC
61-LZ AC-DC



No. 130-L



No. 62



No. 63



The No. 4 Automatic Frequency Selecting Antenna Kit makes possible maximum sensitivity and noise reduction on all standard and short wave reception. Automatically adjusts to tuning range in use. More flexible than a "built-in" system.



No. 115



No. 130-M



No. 140-K

- Carlson

STROMBERG CARLSON TELEPHONE MFG. CO.
141 Carlton Road, Rochester, N. Y.

Send me the illustrated Broadside showing the new line.

Name

Street

City State

SWEEEPING ON TO

AND HERE ARE SOME

FADA Streamline RADIO

The
RADIO OF
TOMORROW
TODAY

Featuring the Sensational
PHANTOM

FLASH-O-GRAPH
TUNING SYSTEM

The sensational new Fada Phantom Flash-O-Graph Tuning System is the greatest advance toward obtaining perfect reception under all broadcasting conditions. It is an exclusive Fada feature that makes possible a new standard of excellence in radio reception heretofore not found in any receiver regardless of price.



Reason No. 3

FADA "STREAMLINE" RADIO 212C
12 tube All-Wave AC Superheterodyne with all metal tube chassis. Tunes American, Foreign, Police, Aircraft, Amateur and Ships at Sea. 12" acoustically fitted Dynamic Speaker. Phantom Flash-O-Graph Tuning System. All Walnut cabinet. List \$149.50.



Reason No. 4

FADA "STREAMLINE" RADIO 290C
9 tube All-Wave AC Superheterodyne with all metal tube chassis. Tunes American, Foreign, Police, Aircraft, Amateur and Ships at Sea. 12" acoustically fitted Dynamic Speaker. Phantom Flash-O-Graph Tuning System. Walnut and hardwood cabinet. List \$109.50.

NEW SALES RECORDS

OF THE REASONS WHY!

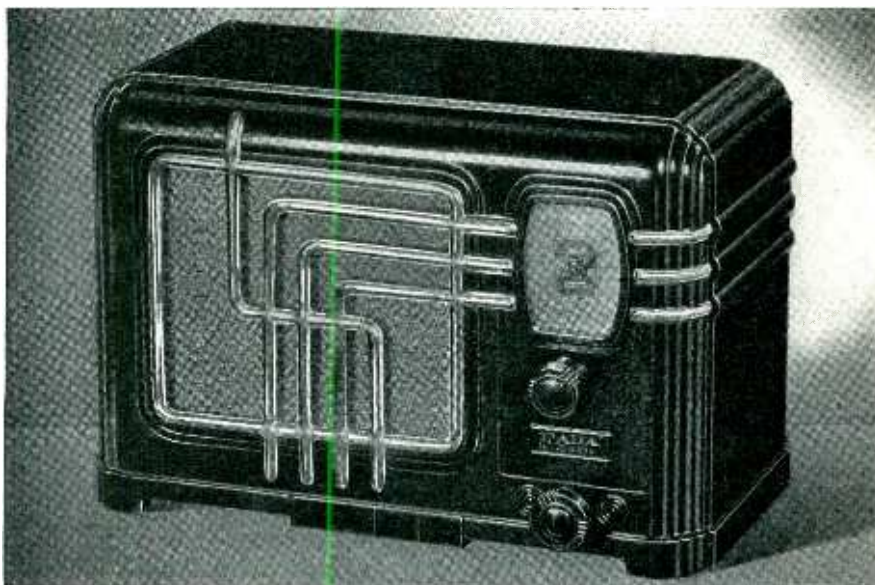
Reason No. 1

FADA MODEL 260B
6 Tube Universal Superheterodyne
In Black Bakelite Cabinet

\$19⁹⁹

A fitting companion radio to the Ivory model. The breath taking beauty of the black Bakelite cabinet wins immediate consumer acceptance. Tunes American and Police. 8 tube performance. 5" acoustically fitted Dynamic Speaker. Built-in Antenna. Illuminated Aeroplane Dial. Operates on AC-DC.

Model 260D:—Identical radio in black Bakelite Cabinet trimmed with Chromium \$24.95



THE LINE TO SEE AT THE SHOW

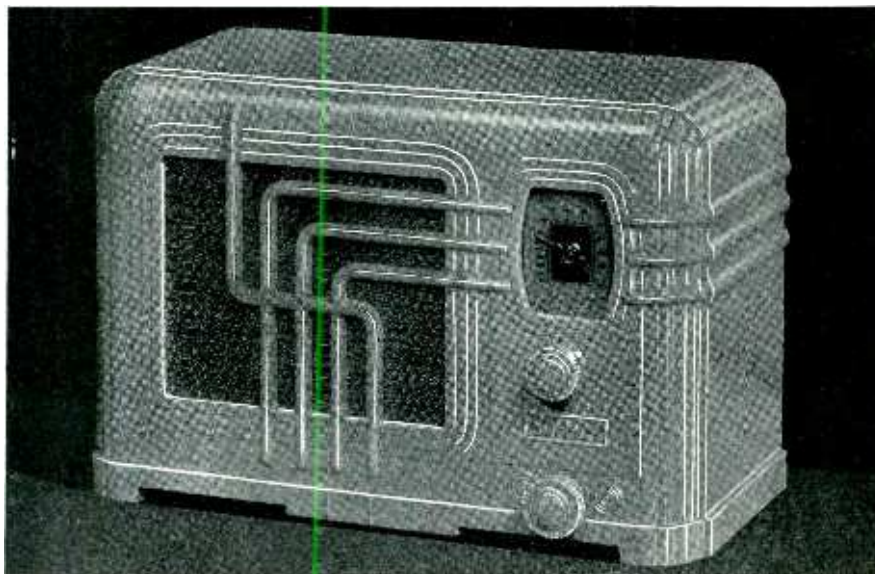
Reason No. 2

FADA MODEL 260V
6 Tube Universal Superheterodyne
In Ivory Plastic Cabinet

\$24⁹⁵

No other radio in its price range offers such enthralling beauty, unsurpassed performance and thrilling features. Tunes American and Police. 8 tube performance. 5" acoustically fitted Dynamic Speaker. Built-in Antenna. Illuminated Aeroplane Dial. Operates on AC-DC.

Model 260G:—Identical radio in Ivory Cabinet trimmed with Gold . . . \$24.95



Fada offers the radio dealer the most complete line of Bakelite and Plastic models, ranging from \$19.99 to \$49.95. Fada table and console models range in price from \$24.95 to \$169.50 and offer the dealer a real "profit maker" in every price class.

FADA RADIO and ELECTRIC COMPANY
Long Island City . . . New York

RADIO INDUSTRY SEETHES WITH INTEREST AS



NOON ADJOURNMENT of General Household's recent two-day Executives' Conference. "Floor traffic" was terrific as distributors, amazed at sensational new radio values, crowded around models on display. Even radio veterans couldn't help twirling TELEDIAL! Sure proof here of the drawing power this amazing "self-tuning" feature will have with your prospects.



THE EARNEST GENTLEMAN in the white suit is E. E. Forbes of Birmingham. The camera caught him telling Harry Alter of Chicago: "We'll sell 'em faster than they can build 'em." Next day Harry showed the line to Chicago dealers and took immediate shipment orders for over 1700 sets.



AMONG FIRST RETAILERS to inspect new Grunow line was Dave Reddaway (center) of People's Outfitting Company, Detroit. He came via plane after hurry call from Leonard Turnbull (right) Grunow distributor in Detroit, advised him Grunow had lifted the lid on radio values. Mr. Reddaway pronounced new Grunow sets exactly the kind of merchandise retailers need to overcome mail-order chain competition.

NEW GRUNOW "TELEDIAL TWELVE" . . .
Automatic Tuning . . . Accurate to A Hairline, 15 Stations in 15 Seconds! A Twelve-Tube Set . . . Metal Tubes, 12-Inch Speaker . . . All-Wave, All-World Reception . . . Patented "Violin-Shaped" Cabinet

AND NEW GRUNOW "ELEVEN" . . .
An Eleven-Tube Radio At The Price Of A "Six"! All-Wave, All-World Reception . . . Metal Tubes! 12-Inch Speaker . . . "Violin-Shaped" Cabinet

ALSO . . . *New 1937 Grunow Radios For Farm . . . Boat . . . And Camp Use*

TWIN SENSATIONS THAT



Grunow
"ELEVEN"
ONLY \$69.95

GRUNOW PRESENTS "TELEDIAL 12" AND "ELEVEN!"



LEADING CHICAGO STORES rush to display TELEDIAL—Almost before the Executives' Conference was over Chicago's biggest department stores were devoting whole windows to Grunow "Eleven" and "TELEDIAL Twelve." The above photo shows how one famous Loop store went into action. Sales zoomed within 24 hours after the display was put up.

SHIRLEY TEMPLE WAS THERE! This cutout of the beautiful little 20th Century-Fox star, in natural-color, astounded distributors with its lifelike attractiveness. This display and a smashing tie-up plan featuring Shirley and her forthcoming picture, "The Bowery Princess," are now available to all Grunow dealers.

GRUNOW has done in radio what Ford did in the automobile business! With a revolutionary new policy of *concentrated mass production!* A line composed exclusively of proved price and quality leaders.

SHOOK THE RADIO WORLD!



Grunow dealers can now concentrate on a few fast-selling strongly-advertised items—four console sets, one table model! Priced \$19.95 and up!

And—Grunow gives you TELEDIAL! Radio's hottest feature sensation for 1937. Nationally advertised as the "self-tuning" radio—with Shirley Temple as the TELEDIAL ad-girl!

With TELEDIAL—record-breaking values—and powerful promotion, Grunow will make radio history in 1937. Let us give you the details. Get in touch with your nearest Grunow distributor, or, mail us the coupon below. Do it today!

WIRE DISTRIBUTOR OR MAIL THIS COUPON

General Household Utilities Company
2668 North Pulaski Road, Chicago, Illinois

Please have my nearest Grunow distributor get in touch with me at once. Meantime send big counter catalog of new 1937 Grunow radios showing all selling features.

Name.....

Address.....

City.....State.....

Your market measured— Our promise kept



Ten years ago this November, the National Broadcasting Company was launched with this statement of its first Chairman of the Board, Mr. Owen D. Young:

"THE market for receiving sets in the future will be determined largely by the quantity and quality of the programs broadcast.

"We say *Quantity* because they must be diversified enough so that some of them will appeal to all possible listeners.

Listen to the RCA Magic Key Program on the NBC Blue Network. Sundays 2 to 3 P. M. Eastern Daylight Saving Time

"We say *Quality* because each program must be the best of its kind.

"The purpose of the National Broadcasting Company will be to provide the best programs available for broadcasting in the United States."



Through ten years, the National Broadcasting Company has hewed to its purpose without swerving. *Programs still come first.* And NBC network programs have won the largest audience in the world, as proved by countless polls among radio listeners.

These programs have done more to sell the better types of receiving sets than all the high-powered salesmanship we could command. Dealers know this, and are alert to use the appeal of the "Big Name" NBC network stars in putting over the sale of a higher-priced set.

So we say now, "Get the line-up of the great NBC Ten-Year Anniversary Feature Programs. Familiarize yourself with the finest all-star schedule of radio programs ever offered to your prospects. Talk them up—and watch your sales of fine sets step right along with them!"

NATIONAL BROADCASTING CO., Inc.

A Radio Corporation of America Service

NEW YORK

CHICAGO

WASHINGTON

SAN FRANCISCO

AMERICAN BOSCH *Personal* RADIO



★
"Radio's greatest demonstration display"—dealers call this 11 color salesman. Provision is made in lamp shade for electric lighting. Display accommodates any American-Bosch Personal Radio. Flanked left and right by an American-Bosch Console, it's a radio department in itself.

Lovely to look at.
DELIGHTFUL TO HEAR

PICTURE THIS SET-UP...in your store

WHAT do you need for greater Success in the Radio Business? *Strong selling helps!* American-Bosch offers you such dynamic helps as the amazing 11 color demonstration display illustrated above—it sells radio sets. *Sound merchandise!* American-Bosch CentrOmatic Radio headlines 24 all-star features, with the spotlight on the "Automatic Maestro." *Beautiful cabinets!* American-Bosch brings you radio sets that are captivating in every detail of line and finish. *National and local advertising cooperation!* *Intelligent pricing!* *Unquestionable dependability!* American-Bosch brings you these and more! You want sales—mail coupon at right for your "Success in the Radio Business."

American-Bosch Radio is licensed under patents and applications of R. C. A. and Hazeltine Corp.



**SEND THIS
COUPON TODAY**

UNITED AMERICAN BOSCH CORPORATION
SPRINGFIELD, MASS. Dept. RR-9

Please send copy of "Success in the Radio Business" containing complete information about the new American-Bosch line.

Name.....

Address.....

No Headaches over

HIGH SURGE

P. R. MALLORY & CO. Inc.

MALLORY

Replacement Condensers are Surge-Proof

Surge-Proof — because an exclusive Mallory development makes use of the “Constant Wattage” characteristic of radio power packs to keep surge voltage well below the danger point.

That’s a big help! You will never “get a pain in the neck” from high surge troubles when you use Mallory for replacements.

“Surge-Proof” is only one of the many features of Mallory Replacement Condensers — they have greater efficiency; are humidity-proof; built to meet high temperatures; easy to install because of smaller sizes and the exclusive Mallory Universal Mountings — a combination of advantages that *only* Mallory can offer.



Twenty Minutes Reading Saves You Hours of Servicing

Read the Mallory Replacement Condenser Manual! A 94-page book — but only twelve reading pages (reading time: 20 minutes) gives you the complete story, — shows you just how the Mallory Universal Replacement idea saves you hours of servicing and insures real profits from the finest servicing any man can do. You owe it to yourself to study this manual.

Everywhere service men are saying — “a swell help — the Mallory Manual and Mallory Parts”... “Invaluable for the best service”... “Worth its weight in gold”... “Mallory Condensers can really take it”... “I can depend on Mallory”... We receive thousands of such letters from satisfied service men. It is proof positive that Mallory Replacement Condensers for universal replacement service have what it takes to produce quality service, solid profits and satisfied customers.

Use Mallory Replacement Condensers — ask your distributor now!

Two Examples of New Mallory Universal Replacements

UR 189

200V 25V

RED RED BLUE YELLOW YELLOW

BLACK BROWN GREEN

NOTE: UR 189 = UR 188 EXCEPT FOR CARTON

UR 188

P. R. MALLORY & CO. Inc.

MALLORY

P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA
Cable Address—PELMALLO

YAXLEY

September

1 9 3 6

THE RADIO MONTH

TRADING UP TREND

Better grade radio sets are selling faster to the consumer than the low-priced numbers on which dealers had to build sales volume at this time last year. That news is really more significant and more encouraging than the mere report that numerically more sets have been taken by distributors and dealers, particularly so because it applies not just in isolated spots, in big cities or boom centers, but seems to hold true quite generally throughout the country.

In fact, that trading-up trend was evident throughout a swing around a circuit which embraced such large cities as New York, Chicago, Philadelphia, Baltimore, Cincinnati, Indianapolis, Milwaukee, St. Paul, Minneapolis, and perhaps 30 smaller cities and towns in between and which included visits to manufacturers, distributors and no less than 100 dealers of every type, large and small.

PROFITS RISE

To put it in bold figures, the price range of the most popular sellers has moved up about 50%, namely from the \$25 to \$50 bracket to the \$50 to \$75 level and many dealers report that this summer it was easier to sell sets in the higher price range than last summer at the lower figures.

With the average of selling prices definitely up, profits on sales of course are up in proportion and seeing a chance to *get profits* in bigger chunks, more dealers seem to be determined to *keep them*. There is one place where manufacturers and distributors still have a

gigantic job to do,—in that matter of helping dealers to *keep their profits*.

Too often it is overlooked that in business today as always PROFITS MAKE THE MARE GO and consequently the manufacturers and distributors who help their dealers *keep* the profits also help themselves because they will get more efficient and effective selling, more satisfied consumers and incidentally they will have less shifting of dealers which means lower selling costs and higher net profits.

TRADE-INS TRIMMED

Trimming trade-in allowances is one means of keeping profits that many wide-awake dealers are adopting right now with good results. When the public switches from cheap goods to the better grades its a sure sign of optimism and optimism always is accompanied by a softened resistance when it comes to the amount of a trade-in allowance. That holds true whether a radio set, a piano or an automobile is involved and no smart dealer overlooks this fact, but simply trades up on new sets and trims down on trade-ins.

SNIFFS AT SPIFFS

Spiffs, a skeleton of the industry that *Radio Retailing* (May 1936) dragged out of the proverbial closet, bids fair to be rattled to pieces and clatter into oblivion as the result of the timely exposé and the discussions that have fol-

lowed. And it looks as if that is going to happen quite without the benefit of the new set of Fair Trade Practice rules which the radio receiving set industry has propounded in cooperation with the Federal Trade Commission and which will come up for public hearing late in 1936.

A field survey just completed by *Radio Retailing* indicates that not only every honest and wide awake dealer but also the conscientious salesman resents the practice that has been forced upon them.

Here are some of the candid comments, made by dealers who were asked to give their opinion, "I don't like that kind of dealing."—"They should let us run our own business and deal with our men as we want to."—"Why don't they give us the discounts they can afford to give in a straight above-board manner."—"I went to Cuba with the crowd because I had the chance but for the good of my business I would rather have seen that money spent over my name in the local newspaper."

And dealer's salesmen, who had been getting distributors' or manufacturers' hand-outs in cash or in checks mailed to their house, frankly admitted that they took them because they needed the money but that they would much rather get such "extras" or "bonuses" straight from the boss instead of through round-about channels.

Yes, wherever we went we heard plenty of sniffs at spiffs.

But—more of that anon.

O. FRED ROST

Editor

BAIT

A SAILOR, broke after a few days shore leave, was asked what he did with his money. "Some of it went for liquor—some of it went for women—and the rest I spent foolishly," was his reply.

Within a few weeks radio dealers will start their major 1936 promotions. How many will let their promotion money slip through their fingers on foolish propositions? How many, like the sailor, will spend their funds on things that eventually will result in their own ruin.

Recently the Chicago Better Business Bureau listed 29 Chicago radio and electrical dealers whose advertising had plainly a bait flavor. All too well it called attention to a growing tendency that promises to foul the major appliance field if continued. For bait propositions carry the kiss of death. What has become of the real estate salesman? The gold mine specialist? Gone, all gone, because the public came to regard their activities as a racket. So will it be with major appliances, if we are not careful.

Take Easiest Way

It was simply a case of bait advertising being the easiest way with these Chicago dealers. Most of these firms were manned by aggressive, worthwhile men. They never figured, as in Charles Lamb's story of roast pig, that they were burning down their own houses for kindling wood.

Bait advertisers, like the noble redskin, bite the dust. In a few years they are themselves scalped. And the sad part is, the smell they leave behind spoils business for everyone else.

A belief that the public is 100% sucker misleads many a good merchant. We're all suckers for the other fellow's racket until we catch on. Fortunately, it so happens that the public catches on to bait propositions and wholesale selling quicker than anything else.

Many a merchant, whose personal word is as good as gold, gives his O. K. to a shady promotion because he simply does not understand what advertising is. He never thinks he is



**If cheap merchandise is all you
advertise that's what you'll sell!**

ADVERTISING BOOMERANGS

Strictly price appeal hammers down industry's level, starts quarrels on the floor over nailed-down merchandise and eventually takes the snap out of all promotion

says

W. M. EGAN

President, Illinois Radio & Electrical Dealers' Ass'n.

Interviewed by Tom F. Blackburn

soiling his own front porch. He does not know that advertising is merely an economical means of putting his own personality in many places in a short space of time. One authority has summed up advertising as something like this:

| | Cost | Number per day |
|-------------------|------------------|---------------------------|
| Personal calls... | \$2 per call.... | 8 to 10 a day |
| Personal letters. | 35¢ per letter.. | 50 per day |
| Direct mail.... | 5¢ per piece.... | 5,000 per day |
| Advertisements. | 1/100¢ per adv. | 1,000,000 or more per day |

In short, what a man puts in print is simply an extension of his own personality. He will be personally blamed or praised in the same proportion.

Whole Applecart Upset

Any man who runs a store has been tempted to run a little bait copy. He says to himself, "This will get me some cash quickly." Unfortunately he doesn't foresee the headache in every bottle. The minute a house starts shooting phony propositions, it can definitely count on this:

1. Hostility from other merchants.
2. Quarrels on the floor over "nailed down" merchandise.
3. Dissention among salesmen who carry the burden of making the "switch."
4. Unpleasant relations with prospects, who grow suspicious of the store.
5. Attraction to the store of the least desirable prospects, such as shoppers and sharps who hope to trim the merchant at his own game.
6. A money loss on every customer who "takes the bait."
7. Eventual failure of all promotions as word gets about and disbelief in store's integrity grows.

Wholesale selling, while not having the unpleasant kickback of baited propositions, eventually results in a merchant not being able to get list prices on anything. Once he cuts, he must always cut, for the "sucker" public passes the fact along via the grapevine telegraph.

It is doubtful whether "bargain"

(Please turn to page 44)

The Trade's Experience With

'LEADERS'

USERS

- (41% of all radio dealers have used bait advertising)
- 90% consider the practice destructive but a competitive necessity
- 87% say promotion of cheap models increases store traffic
- 11% advise that the public no longer responds in any number
- 23% have discontinued use of ads in the last year

METHODS

- 44% use discontinued models of standard lines, make a slight profit
- 34% obtain merchandise manufactured especially for this purpose
- 22% deliberately advertise sets near cost to attract trade

NON-USERS

- (59% of all radio dealers have avoided bait advertising)
- 29% refuse to hammer down the consumers' idea of what radio should cost
- 23% contend that standard lines now offer all the value needed
- 18% believe that widespread use of leaders robs idea of sales value
- 16% are frankly afraid of backfire on the sale of cheap merchandise
- 14% feel that leaders cannot produce a business profit

SUBSTITUTES

- (To increase store traffic, dealers make the following suggestions)
- 35% say more national and local advertising of standard brands is essential
 - 22% believe emphasis on large sets and better allowances will do the job
 - 22% think more effective sell-up effort is the soundest answer
 - 11% advise that annual or semi-annual clearances are effective
 - 10% feel that more attractive time-payment terms solve the problem

* August survey by "Radio Retailing"

GRIEF BEGINS WITH SLOPPY SELLING

Salesmen should be rewarded for contracts particularly profitable to the house, penalized for costly deals

By George M. Solomon

A SHORT time ago I received the following telegram from a radio and appliance dealer of my acquaintance operating four stores in an eastern city of 500,000 population: "Business running in red despite good volume. Can you come at once to advise?"

Responding to this SOS, I arrived next day. A survey of the operation revealed the following facts:

1. Mark-up appeared too low and collections on accounts receivable were poor. Further investigation showed that this condition was brought about by excessive trade allowances and long terms on time-payment sales.
2. Down-payments were too small and cash sales in proportion to time sales too few. The ratio of cash-to-time sales was almost 1 to 10 whereas 1 to 5 is considered a normal condition.
3. Monthly collections were coming in at the rate of 10 to 11 per cent on the outstanding receivables when, due to the small average unit of sale, they should have been 3 to 4 per cent higher.
4. The condition brought on by facts 2 and 3 made it necessary to secure outside financing continuously and permitted no opportunity to build up a cash reserve outside of that held by banks and finance companies.

Immediately apparent was the fact that this state of affairs was directly attributable to either laxity in selling methods or too intensive competition. Shopping tests of competitors disproved the latter assumption. This "put the finger" on selling practice, the root of most retail operation evils.

All salesmen were paid a salary of \$20 per week and a straight commission of 2 per cent on sales, regardless of the type or quality of such sales. The total average remuneration was \$140 per month. There was no incentive other than the boss' ap-

probation to induce the men to turn in a better grade of sale. And no penalties were attached to the consummation of poor sales. The quality of the sale was not important to the salesmen, only the size. For remuneration was based solely on volume produced.

I set about immediately to correct this condition at its source by instituting a scale of commissions which would reward the closing of good, clean and profitable sales and penalize indifference and carelessness. The scale set up is reproduced in these pages. It is so featured because I believe it to be essential in the retail radio and appliance business.

Now, to analyze the reason for individual incentives:

Down Payments Increased

Previously, when a sale was about to be closed the salesman virtually let the purchaser make his own terms. Salesmen were instructed to ask, henceforward, for 25 per cent down. In many cases this was acceptable to the customer. Where the buyer demurred the required payment was gradually scaled down, the salesman resisting all the way.

The natural result was to secure numerous large down payments, whereas previously almost no down payments of over \$5 were secured. Why should salesmen exert themselves to get a substantial down payment? The incentive offered for doing it hit the men right at the most vulnerable spot . . . the pocketbook!

It is almost axiomatic that when a large down payment is secured there is less chance of default on the part of the purchaser. At any rate, when

a large part of the purchase price has been paid in, it is not a total loss-to-replevin the merchandise when such steps become necessary. Credit managers know that when less than 35 per cent is paid in it involves a loss to revert the sale due to obsolescence and attendant expenses.

A strenuous effort to secure substantial down-payments weeds out many otherwise undesirable risks and, if secured, induces the credit manager to look much more favorably upon applications which might otherwise be rejected. It has been my experience that when down-payments over 15 per cent are secured the credit is almost invariably good. People who lay so much money on the line generally have good intentions.

After the salesman has taken the order with a very small or no down-payment it is almost impossible to raise the purchaser to a higher sum. The damage is done. In many cases the buyer, under such conditions, goes away in a huff and, as a gesture of revenge, buys from a competitor, making a *substantial* down-payment!

The following actual figures indicate the effect of the incentive method when applied in the case under discussion to correct credit and collection losses:

| | Before | 6 Mos. After |
|--------------------------------|--------|--------------|
| Credit applications re- | | |
| jected | 24.0% | 19.5%* |
| Reverts (all types) | 8.0% | 6.2%* |
| Losses (skips, etc.) | .9% | .6%* |

* Figured against accounts receivable.

Terms Shortened

When a time-payment purchaser is left to select his own terms he will,

This Scale of
EXTRAS and DEDUCTIONS

Induces Salesmen to Produce Clean Business

Basic commission—2% Net sales

DOWN-PAYMENTS

Sales \$50 to \$99—over 20% down 1% extra
 Sales \$100 or higher—over 15% down 1% extra
 All sales—under 5% down 1/2% deducted

TERMS

Balances \$36 to \$59—6 months or less 1/2% extra
 Balances \$60 to \$99—9 months or less 3/4% extra
 Balances \$100 and over—12 months or less 1% extra
 Balances \$100 or less—over one year 1% deducted
 Balances \$101 or more—less than \$8 monthly 1% deducted
 Balances \$150 or more—less than \$9 monthly 1% deducted
 No payments accepted less than
 \$4.50 per month or \$1 weekly

DELIVERY

Delivery in less than 48 hours 1/2% deducted
 Out of town deliveries on wrong days 1/2% deducted

TRADE ALLOWANCES

Where the excess allowance over the appraisal value exceeds 10% of the total sale 1% deducted
 Where the appraisal value of the trade-in is 10% or more greater than the trade allowance (figured against total sale) 1% extra

CASH SALES

Calculated same as time sales (discounts considered trades) 1% extra

of course, select the longest possible time to pay and the smallest monthly or weekly payment. Many people are well able to pay cash, or to clean up a transaction in from three to six months. If the salesman is indifferent to this fact almost every contract written will be of the long-distance type.

The effect on the finances of any business is obvious. But . . . when the salesman knows that by exerting a little extra effort to reduce the time of repayment he will be rewarded by one or two dollars extra he will be his own policeman, continuously on guard. Many smaller sales with balances of about \$50 will be paid in less than 90 days, making it unnecessary to rediscount them. They will be, in effect, cash sales.

The following chart aptly illustrates the effect of the incentive system six months after its introduction. The average results are, obviously, well worth the effort. Volume did not, in this case, suffer:

| | Before | After |
|-----------------------------|--------|-------|
| Down payments | 5.25% | 11 % |
| Collections (accts. rec.) | 11 % | 14.5% |
| Excess allowances | 5 % | 4 % |

Trade Allowances Reduced

The trade-in is the bugaboo of the radio industry today. No two merchants handle this problem in exactly the same way. Some set an arbitrary maximum and others try to allow the actual appraisal value and no more.

Allow what you must for trade-ins to get the business but, also, have a limit determined by the discount on each item of new merchandise. It is my opinion that unless the cost of the new item is received, plus the cost of doing business, leaving the trade-in as the potential profit, a loss is certain to be incurred. Two sales to make one profit is bad enough. There should, really, be a net profit on the new item as well as on the resale.

Trading down and taking part of the cost of the new item in the form of the trade-in is highly dangerous

practice. It is, indeed, gambling.

The salesman, in his anxiety to make a sale and get a commission, frequently goes overboard on his initial offering for the trade-in. By the time the manager is called in to appraise the trade it may be too late to save the profit. That is why a halter in the form of a penalty is necessary. When a salesman knows that his commission will be cut because of an excessive allowance he will be extremely cautious in his opening offer. And when he finds it neces-

sary to bargain around a bit in order to meet competition there will still be room to go.

A conservative offer for a trade will be prompted by the chance to gain an added commission. Remember this fact . . . *Every cent of the trade allowance over the actual value of the trade comes out of the net profits.* There is no dodging this very important fact:

Study the following actual record:

Only sales figures are here shown. These figures are directly affected by

(Statement for the month of July, Store No. 4)

| | Sales | Gross Profit | Percentage |
|--------------------------------------|--------------------|-------------------|-------------|
| Home sets | \$3,276.55 | \$1,498.98 | 45.7 |
| Auto radios | 5,443.04 | 2,322.33 | 42.7 |
| Refrigerators | 894.15 | 321.56 | 36. |
| Auto service (lab. & mat.) | 1,519.25 | 911.55 | 60. |
| Other allowances | | (440.90) | |
| Bad debts reserve | | (480.69) | |
| Totals | \$11,132.99 | \$4,129.83 | 37.1 |

the type and quality of sales made by the men. Their efforts are directly reflected in the gross profits. Of course, it is possible to lose money on the above type of business if other cost factors of the business are out of line.

Because of the chain method of operation some of these figures may not fit a single operation but no matter what the type of operation they illustrate that each individual sale directly affects the gross mark-up.

The service item may be left out entirely as the percentage of profit shown does not include this figure. It is mostly labor and in succeeding months will fall off in this individual instance due to the necessity for rendering free service for ninety days on the auto installations.

Delivery Cost Cut

Some dealers may wonder why it is necessary to penalize a salesman for rush delivery promises. The answer is indisputable.

Credit checking is a vital part of every radio and appliance dealer's business. In some cases the finance company assumes this function. Time is essential in credit investigation. Many credit agencies make an additional charge for special, rush reports. This charge rapidly mounts into important money, coming as it does on all types of business, both acceptable and reject.

If a salesman promises a rush delivery it becomes necessary for the credit manager to do one of two things:

1. Reach a hasty conclusion or,
2. Hold up delivery until additional information can be secured.

In the first case an unworthy risk may receive the merchandise or a worthy applicant may be rejected due to lack of sufficient credit information. Further investigation may show that a good sale was turned down and both the house and salesman are out this much business. After all, a credit man is human and when in doubt, he is liable to turn down an application rather than jeopardize the firm's money and his own record.

To hold up delivery until additional information can be secured is risky business. The customer has been promised delivery and a broken word is rarely forgiven. Nothing antagonizes a purchaser more than failure to deliver as promised. Very often cancellations result. Strange as it may seem, a man may be without a radio or a refrigerator for

years but after he has placed his order he wants it at once, refuses to tolerate delivery delay.

And when deliveries are made out of town it is very often prohibitively expensive to go long distances every day just to truck one or two pieces. Trucking costs plenty of money. Very few organizations can let it run wild. In order to hold down delivery expenses it is necessary to have regular days for out-of-town runs. Unless the salesmen cooperate this is impossible. Of course, there are unavoidable exceptions. But you may be assured that if the salesman is penalized he will make every effort to cooperate with the house in this matter. The resultant saving will show up in the P & L statement.

Figures shown in store four's statement for July indicate a healthy percentage of gross profit. The unusually large mark-up is caused by the profitable re-sale of trade-ins on both auto and home radios. It is visible proof that salesmen have now proceeded both sensibly and cautiously in the matter of allowances. The mark-up on refrigeration is about normal. Trades in this item have not yet become a serious problem but the very small volume in comparison with other types of business would seem to indicate a definite sales shortcoming in this particular store. It happens, however, that it is normal as this store is located in a downtown center, in the heart of automobile-row. Location also accounts for the heavy sale of auto-sets.

Note the substantial sale of service. This store took care of the auto installations and service for the other three, for which it charged \$3.50 each. Outside installations were solicited and paid service done for individual car owners.

Overhead, Another Story

Some may say that the batch of facts and figures included herein will not indicate net profits. They are right. That is another story. However, to discuss expenses before sales is putting the cart before the horse. And we are concerned, in this instance, with reduction of costs controlled largely by selling practice.

Direct selling expense should not be over 50 per cent of the entire payroll, which, in turn, should not be more than approximately 50 per cent of the total cost of doing business. In the retail specialty field the other half of the operating expense should and must cover everything else and, believe me, it is a lot. With an av-

erage mark-up of 37 per cent and a reserve of about 5 per cent for bad debts and other incidental items added to at least 5 per cent taken out for profit, there is permitted a total cost of doing business of 27 per cent, of which the direct selling cost should not be more than 6½ per cent. Total payroll should not exceed 13 per cent.

"What about the outside sales department?" you may well ask. "Outside men must be paid up to 10 per cent straight commission." True enough. But in this case don't figure rent, light, heat insurance, window display, etc., in the estimate. It will be found that these items overbalance the 3½ per cent differential.

Remember this: The sales department controls expense only to a point. Beyond turning in good, clean, profitable sales it cannot control the other functional expenses of a business. However, most good things . . . or bad . . . originate at this point.

Trouble of the variety here described is a daily occurrence and is not only widely neglected but rarely considered in terms of dollars and cents per man on the floor. Where the organization is not cognizant of such figures it must compare the performance of two men solely on the basis of volume produced. Yet one man might be saving money for the house and the other throwing it away. Take the following record, for example:

| | Salesman X | Salesman Y |
|----------------------------------|------------|------------|
| Volume (per month, \$) . . . | \$3000 | \$3000 |
| Down-payments (\$ & %) | \$ 300 10% | \$ 150 5% |
| Terms (average) | 8 mos. | 11 mos. |
| Excess Trade allowances . . . | \$ 120 4% | \$ 150 5% |

Under the old system of remuneration both men would receive the same monetary reward for sales. However, Salesman Y is obviously lagging, riding along with the tide. Salesman X, because of higher down-payments, saves the firm the discounting of \$150 at 6 per cent. This amounts to \$9. Because of his shorter terms Salesman X also saves discounting of \$2700 for three months at 1½ per cent. This adds another \$35. And his lower trade-in allowances save \$30. The total saving of X as against Y is \$74.

Under the incentive system Salesman X would receive bonuses for better quality sales while Salesman Y would be frequently penalized. After one or two months of the system Salesman Y would see the light. The house would be the beneficiary.

*Still they Come
To the sensational 1937 Kadette Models
already announced, we add...*

The New KADETTE Classic RADIO

JUST AS BEAUTIFUL-FRONT OR BACK



JUST AS BEAUTIFUL-FRONT OR BACK



Beauty heretofore unheard of in radio—beauty from any angle—front or back—places the new Kadette Classic high among the world's finest products.

Entirely new form, color and texture combine to produce the most beautiful compact radio of all time... beauty created with crystal-like translucent grilles of Tenite, set off by backgrounds of Plaskon and Bakelite in harmonious colors. Three different plastics used in radio design for the first time.

Four distinct color combinations fit the Classic into any room in any home. For the boudoir there is a particularly unusual color scheme—delicate ivory with top of canary yellow and amber grille. For the modern room there is a striking combination of black body, brilliant red top and grille in ivory. These are but two of the four color combinations—others are equally attractive.

Truly, in the realm of fine design the new Kadette Classic merits a high place.



\$29.50
COMPLETE

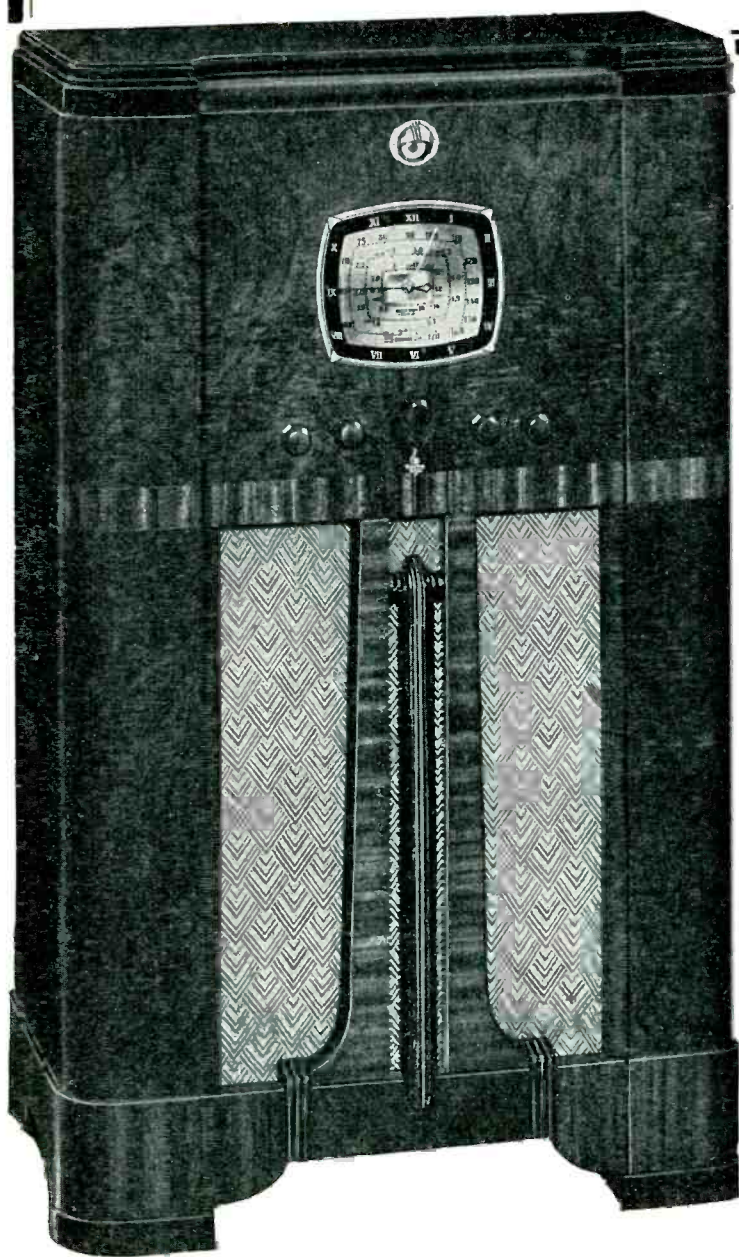
EQUALLY BEAUTIFUL, FRONT OR BACK • • SIX TUBES • • SUPERHETERODYNE
• • AC OR DC OPERATION • • ILLUMINATED ENCLOSED DIAL • • SEVERAL
EFFECTIVE COLOR COMBINATIONS • • AUTOMATIC VOLUME CONTROL

On Display—Radio Exposition, Grand Central Palace, N. Y.

THE KADETTE LINE FOR 1937 COMPRISES 23 FAST-SELLING MODELS—FROM COMPACTS TO CONSOLES

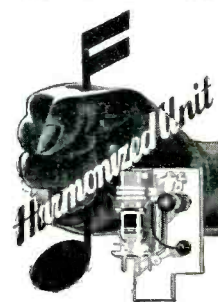
INTERNATIONAL RADIO CORPORATION • 513 Williams Street • ANN ARBOR, MICHIGAN

Did YOU Know that
THE WORLD'S LARGEST MAKER OF SMALL RADIOS
Now Produces the World's Greatest Values in
CONSOLES?



*EMERSON Model D-146 — 10 Tubes — High Fidelity
 — 15 Watts output — 15" Dynamic Speaker —
 Gemloid Time-Tuning Dial*

Emerson



Radio

"RE-CREATES THE ARTIST
 IN YOUR HOME"

**9 Console Models —
 \$44.95 to \$129.95**

**4 Radio and Phonograph
 Combinations —
 \$59.95 to \$149.95**

**20 Compact and Table
 Models —
 \$14.95 to \$89.95**

**4 Battery Receivers —
 \$29.95 to \$54.95**

Longer Discounts — and a more liberal advertising proposition than ever before is only ONE of the many attractive features of the 1937 Emerson Dealer Proposition. Consult your nearest Emerson Jobber or write to us for details.

EMERSON RADIO AND PHONOGRAPH CORPORATION, 111 Eighth Ave. New York, N. Y.
 The EMERSON Line Also Comprises Models for Every Foreign Market. Cable Address: EMPHONOCO, N. Y.

FIGURES

RADIO RETAILING'S MONTHLY BUSINESS BAROMETER

BROADCAST MONEY

Seventeen advertisers bought more than \$500,000 worth of NBC, Columbia and Mutual broadcast advertising during the first 6 months of 1936, according to "Printer's Ink". Here is a listing of the heavy money spenders:

| | |
|------------------------|-------------|
| Proctor & Gamble | \$1,399,962 |
| Standard Brands | 1,123,360 |
| Ford Motor | 1,013,051 |
| Colgate-Palmolive-Peet | 885,204 |
| Sterling Products | 863,749 |
| American Home Products | 755,726 |
| Pepsodent | 721,789 |
| General Foods | 676,763 |
| American Tobacco | 639,980 |
| Campbell Soup | 633,653 |
| Miles Laboratories | 595,491 |
| Wrigley | 579,856 |
| General Motors | 548,516 |
| Lady Esther | 544,511 |
| Liggett & Myers | 540,685 |
| Reynolds Tobacco | 526,595 |
| General Mills | 509,245 |

These figures represent time charges alone. Talent costs were extra.

THREE COMPANIES GAIN

From RCA Victor comes word that set sales in the first seven months of this year, just tabulated, tripled vol-

ume obtained during similar period of 1935. In July this company shipped three times as many receivers as were put in the cars during July 1935.

Cornell-Dubilier reports an increase of 300 per cent for the first three months of 1936.

Kelvinator shipped 297,435 units in the ten month fiscal period ending July 31 as compared with 222,336 for the corresponding period last year, an increase of 33.8 per cent.

MAINE, MONTANA, ARIZONA

The Department of Commerce, now compiling a retail summary of sales, all classes of business, all states, furnishes the following preliminary figures:

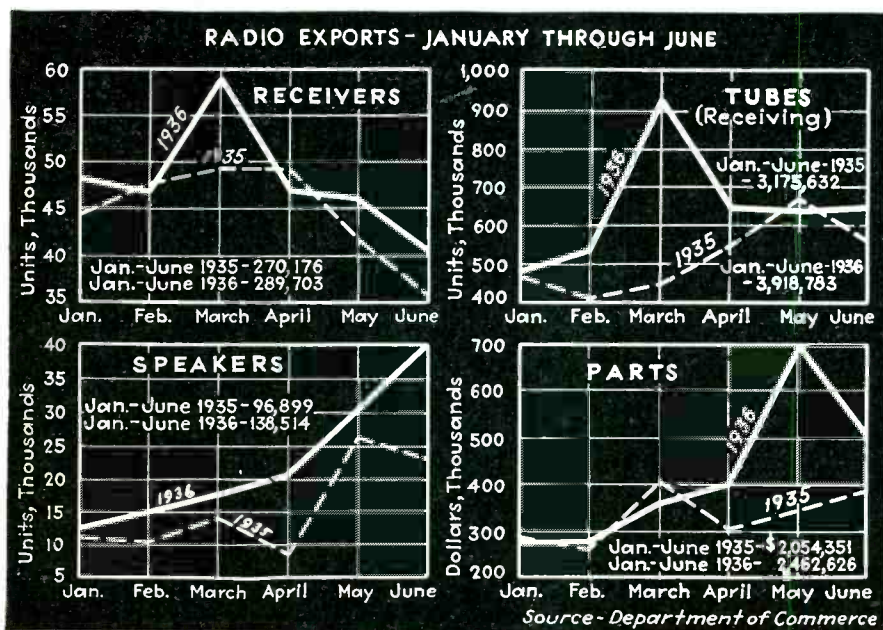
In Maine 101 household appliance and radio stores sold \$2,487,000 worth of merchandise in 1935, employed 398 full and part time, paid these employees \$515,000. There were 33 additional outlets classified as radio dealers, selling \$378,000 worth of merchandise,

FARMS ON POWER LINES

(June 30, 1936)

| STATE | TOTAL FARMS | ELECTRIFIED FARMS | PER CENT ELECTRIFIED |
|----------------------|-------------|-------------------|----------------------|
| TOTAL U. S. | 6,482,227 | 860,038 | 13.3% |
| Maine | 40,662 | 14,621 | 36.0 |
| New Hampshire | 17,394 | 10,205 | 58.7 |
| Vermont | 26,071 | 8,205 | 31.5 |
| Massachusetts | 33,363 | 20,923 | 62.7 |
| Rhode Island | 4,113 | 2,779 | 67.6 |
| Connecticut | 29,913 | 18,114 | 60.6 |
| NEW ENGLAND | 151,516 | 74,847 | 49.4 |
| New York | 170,141 | 65,333 | 38.4 |
| New Jersey | 29,201 | 15,351 | 52.6 |
| Pennsylvania | 188,048 | 50,797 | 27.0 |
| MIDDLE ATLANTIC | 387,390 | 131,436 | 33.9 |
| Ohio | 246,056 | 58,383 | 23.7 |
| Indiana | 195,093 | 29,013 | 14.9 |
| Illinois | 226,627 | 32,269 | 14.2 |
| Michigan | 190,595 | 56,466 | 29.6 |
| Wisconsin | 196,067 | 41,635 | 21.2 |
| EAST NO. CENTRAL | 1,054,438 | 217,766 | 20.7 |
| Minnesota | 197,437 | 14,420 | 7.3 |
| Iowa | 215,407 | 33,676 | 15.6 |
| Missouri | 268,961 | 19,168 | 7.1 |
| North Dakota | 77,664 | 2,051 | 2.6 |
| South Dakota | 79,579 | 2,960 | 3.7 |
| Nebraska | 130,129 | 10,279 | 7.9 |
| Kansas | 163,844 | 14,685 | 9.0 |
| WEST NO. CENTRAL | 1,133,021 | 97,239 | 8.6 |
| Delaware | 10,267 | 1,882 | 18.3 |
| Maryland | 43,216 | 8,371 | 19.4 |
| District of Columbia | 82 | 62 | 75.6 |
| Virginia | 187,629 | 16,556 | 8.8 |
| West Virginia | 100,856 | 7,036 | 7.0 |
| North Carolina | 281,869 | 12,343 | 4.4 |
| South Carolina | 155,749 | 5,118 | 3.3 |
| Georgia | 239,981 | 7,434 | 3.1 |
| Florida | 59,979 | 7,794 | 13.0 |
| SOUTH ATLANTIC | 1,079,628 | 66,601 | 6.2 |
| Kentucky | 259,762 | 9,102 | 3.5 |
| Tennessee | 250,507 | 11,975 | 4.8 |
| Alabama | 259,799 | 13,859 | 5.3 |
| Mississippi | 296,108 | 3,446 | 1.2 |
| EAST SO. CENTRAL | 1,066,176 | 38,382 | 3.6 |
| Arkansas | 244,006 | 3,900 | 1.6 |
| Louisiana | 164,913 | 3,782 | 2.3 |
| Oklahoma | 203,015 | 6,061 | 3.0 |
| Texas | 464,826 | 13,812 | 3.0 |
| WEST SO. CENTRAL | 1,076,760 | 27,555 | 2.6 |
| Montana | 46,940 | 3,134 | 6.7 |
| Idaho | 42,750 | 16,005 | 37.4 |
| Wyoming | 16,843 | 558 | 3.3 |
| Colorado | 61,006 | 7,461 | 12.2 |
| New Mexico | 38,675 | 1,900 | 4.9 |
| Arizona | 18,178 | 5,921 | 32.6 |
| Utah | 27,072 | 18,133 | 67.0 |
| Nevada | 3,415 | 988 | 28.9 |
| MOUNTAIN | 254,888 | 54,100 | 21.2 |
| Washington | 82,061 | 40,924 | 49.9 |
| Oregon | 62,033 | 19,859 | 32.0 |
| California | 134,316 | 91,329 | 68.0 |
| PACIFIC | 278,410 | 152,112 | 54.6 |

Source—E.E.I.



Source—Department of Commerce

employing 52 full and part time, paying these employees \$57,000.

In Montana 109 household appliance and radio stores sold \$2,395,000 worth of merchandise in 1935, employed 399 full and part time, paid these employees \$437,000. There were 20 additional outlets classified as radio dealers, selling \$184,000 worth of merchandise, employing 18 full and part time, paying these employees \$17,000.

Active proprietors and firm members are excluded from the payroll figures in both Maine and Montana summaries.

In Arizona the Department's survey of strictly service establishments showed a total of 14 radio repair shops whose 1935 receipts were \$21,000. There were 14 active firm members, 4 full and part time employees paid \$3,000.

DISPLAY MANAGEMENT



The one-man office is now a prospect

Demonstrators can be easily carried about

Packaged Sound Clicks

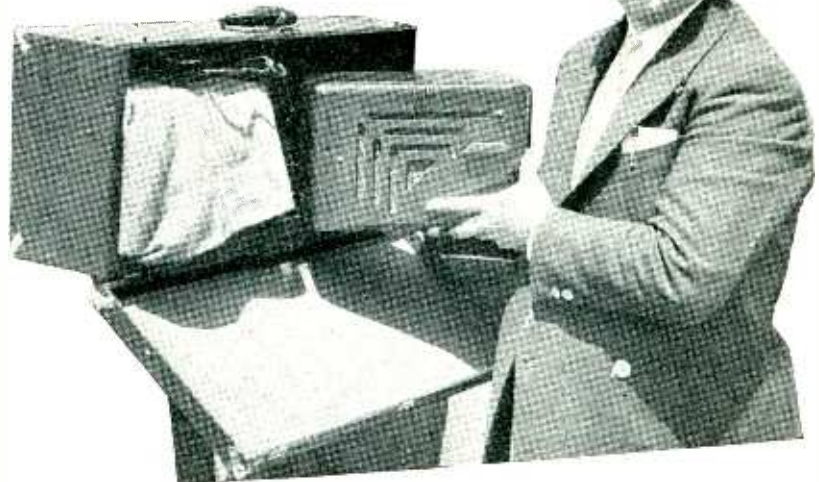
CHICAGO—Walking into the office of a doctor the other day, a friend found the reception room deserted. On the desk was a gadget which looked like a radio. Near it was a sign which read, "If you wish to speak to the doctor, press the lever."

She did this and immediately was in conversation with the physician, who was with a patient in his private office. Without being interrupted he was able to direct reception room visitors with perfect ease.

Thus sound equipment has been scaled down until it is useful even to one-man concerns.

Dealers who have been imagining sound installations as a frenzy of blueprints, engineering and a contracting job, would have been surprised to hear what the physician said about his layout: "About two weeks ago a radio salesman showed up with a suitcase containing some sound equipment. All he did was plug it in and place the instruments about the office. He showed me how I could eliminate the nuisance of running out to meet visitors, and save money on a reception girl. It costs no more than a good radio and I use it continually."

Sound equipment is no longer a proposition for basement engineers. It is



emerging as a package proposition, made by licensed, reputable firms, and carrying the same discounts as radio. Gun-shy salesmen, always afraid of heavy demonstrators or mechanical requirements, will be interested in how simple sound equipment has become.

| Type | Weight | List Prices |
|-------------------------------|---------------|----------------|
| 1. Portable type sound system | 25 to 55 lbs. | \$125 to \$300 |
| 2. Intercommunication system | 10 to 20 lbs. | \$75 to \$300 |
| 3. Paging system | 45 lbs. | \$150 to \$500 |

Dealers absorbed in selling domestic radio sets to the 21,204,354 wired homes in the United States often forget that there is a business market which is also worthwhile. According to "Business Week" (McGraw-Hill) there are:

- 12,312 Businesses rated at \$1,000,000 or more
 - 25,714 Businesses rated at \$200,000 to \$1,000,000
 - 47,352 Businesses rated at \$75,000 to \$200,000
 - 2,175,065 Businesses rated at less than \$75,000
- 2,260,443 Total

If you take the number of firms and individuals listed in Dun & Bradstreets—2,028,000—as prospects for sound equipment, you have quite a creditable field to conquer.

Sound equipment is traveling over the course followed by water coolers. Down in Kansas City some five years ago a smart salesman asked his firm to let him sell water coolers exclusively. He let

ADVERTISING SELLING

the other boys go after the domestic refrigerator business and spent his time calling on offices—and made a record. That the water cooler business can be quite tidy is evidenced by these sales figures for the industry:

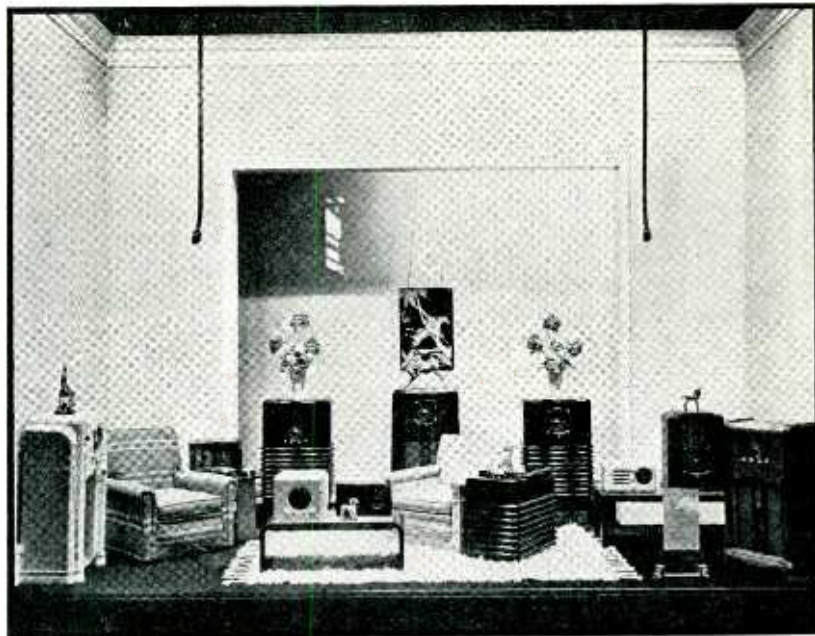
| | Water coolers sold |
|-----------|--------------------|
| 1928..... | 14,500 |
| 1929..... | 31,000 |
| 1930..... | 35,600 |
| 1931..... | 23,200 |
| 1932..... | 11,500 |
| 1933..... | 14,700 |
| 1934..... | 16,800 |

Offices that catch a lot of long distance calls are pushovers for intercommunicating systems. Talking long distance costs money, and the man who is doing it has his 'phone tied up. A sound system permits him to get dope from all over the plant in a jiffy and relay it to his customer, without loss of time.

Trend of the business is toward exclusive dealerships and distribution through jobbers. A recent survey showed that 89 per cent of electrical and radio jobbers were interested in handling this new type of package merchandise. Its portability, its ease of installation, makes the industry feel that it is right down the alley for a radio salesman.



EYE-STOPPER—Made of plywood and mounted on a heavy base, this sign in the shape of a tube pulls people from a block away to Grant's, Los Angeles. The tube is painted in black and aluminum



BY MARSHALL FIELD—This radio display pulled so well that it remained in the Chicago firm's most valuable position for three and one-half weeks

Contests That Get Results

POMPTON LAKES, N. J.—Salesforce contests that get results may be projected more readily after study of the following pointers gleaned by Fred Merish for "Radio Retailing" following a field study. Reports Merish:

"The success of a sales contest depends upon the intelligent handling of 6 factors:

"1:—*Purpose.* The ultimate purpose is to build volume but those experienced with such promotions find that better results are obtained when goals are more specific, such as building sales in slow seasons, maintaining a low level on trade-in allowances, obtaining a larger volume on higher priced products.

"2:—*Duration.* Ninety per cent of all contests conducted by dealers run from 1 week to 2 months. Under 1 week the time is too short for contestants to hit their stride, over 2 months too long. The contestants lose interest.

"3:—*Scoring.* The 3 most successful plans studied were:

"a:—Increase in straight dollar volume. High men were given prizes.

"b:—Increase in specific product or group of products, such as a contest to build volume on car radios.

"c:—Giving points to the different units, the lowest priced units with low margins receiving fewer points than

higher priced units carrying longer profits. This puts the selling emphasis behind higher priced units.

"4:—*Quotas.* Offering a prize only to the high man is not always wise. The less capable men or those with less lucrative territories have no chance. To give all a fair chance these four methods have been found effective.

"a:—Figuring quotas individually for each man based on his sales record for 3 months prior and the same months for the previous year.

"b:—Quotas are established for teams, groups or departments. Usually men working in the same section, contacting the same class of accounts and getting the same volume, are placed in the same group. This method is more effective with two sets of awards, one for the winning group to be divided among the contestants, the other for the high men. Otherwise, a topnotcher may get no award because his efforts are nullified by too many laggards in his group.

"c:—Setting a quota and time limit, then paying off as soon as quotas are reached, usually with added bonuses for quick consummation. Those not making quotas at the contest expiration receive no awards.

"d:—Departmental quotas which establish dollar volume and unit volume. In some departments the average unit

DISPLAY....MANAGEMENT....ADVERTISING....SELLING....

sale is lower than in others and these departments cannot hope to compete on a dollar volume basis alone.

"5:—*Dramatization.* This makes a sales contest more play than work. Methods of dramatization are so varied that we cannot chronicle them here.

"Unless interest is maintained with some ballyhoo, however, a contest will lag. This play-up is mostly for the stragglers. The topnotchers will keep the pace because they sniff the prize money. If the race lags a special prize for high man of the week is a re-vitalizer.

"6:—*Awards.* Usually big prizes suggest a long contest, small prizes a short one. Salesmen will not work 2 months at contest speed to win \$5. Top prizes should be substantial enough to make contestants work to win high money, yet, runners-up should have a chance to win something. Awards should be split up so that as many prizes as possible may be given in addition to top prizes. The more contestants with a chance to win, the greater the enthusiasm. Cash, travel and merchandise in the order given are the most popular."

Ad Drawing Gratis

CHICAGO—Writes Charles Phillips: "Trick headlines, pictures that tell your story at a glance, eye-stoppers that catch the casual reader as he thumbs through the newspaper, bring results you can measure on your cash register.

"I've used illustrations in my ads for years, much to the mystification of my competitors who wonder who makes the drawings and how I can afford to have the engravings made. Actually, it doesn't cost me a cent! It's a free newspaper service. Here's how it works: Practically all newspapers subscribe to one or more syndicates that supply pressed cardboard sheets called 'mats.' These mats serve as a mold over which type lead may be readily cast. The lead casting is machined to fit in the regular type forms. Above or below the illustra-

tion the paper will set your advertising message in type. This results in an advertisement that has pictorial snap and pulling power.

"How about the cost? All you have to pay is the price of the space your ad requires, at regular space rates! Your paper will tell you when fresh mats are received that seem suitable to the radio business. You can pick out the ones you like as much as a month in advance. The syndicates anticipate coming events such as the World Series, football, political campaigns, etc., by a good margin. Thus the mats are always timely. Personally, I prefer comedy headings for service and more dignified illustrations for set advertising."

Sales Insurance

INDIANAPOLIS—When you have a man's tongue hanging out for a radio, when he has a job and is getting along in the world, and still won't buy, what can it be that is holding him back?

L. T. Davis, manager of the radio department for Hudson & Company, thinks he has the answer. It is Fear—Fear of losing one's job—Fear of sickness—Fear of undertaking something that may not be accomplished.

"We formed Hudson's radio club," Mr. Davis explains. "Anyone paying \$5 extra above the price of his radio gets the following proposition:

- (1) Installation of all-wave aerial.
- (2) One year radio service.
- (3) Tubes guaranteed a year.
- (4) Guarantee of radio against defective parts or workmanship.
- (5) One year replacement guarantee if there is a fire.
- (6) Instant replacement of tubes damaged by electrical disturbance in the home.
- (7) In event of death unpaid balance is cancelled, radio becomes heir's property.
- (8) Special protection in case of sickness or unemployment.
- (9) Privilege of exchanging radio for different model within 30 days of original purchase.
- (10) Foreign broadcast book.

"All risk on the Hudson policy is carried by the house, it being a sales feature rather than an insurance policy. Paragraph 8 covering sickness or unemployment is really an offer to string along with the unfortunate purchaser for a while.

"We sell the same makes of radio at the same price as many other stores here. This special policy gives us extra talking points."



EXHIBIT STUNT—Here's an idea for local radio and appliance shows. Use the shop oscilloscope to put punch in the booth display. Phil Harris, orchestra leader, and Leah Ray of broadcast fame use a "voice recorder" in Frigidaire's Texas Centennial exhibit

there is only **One** **WEBSTER ELECTRIC**

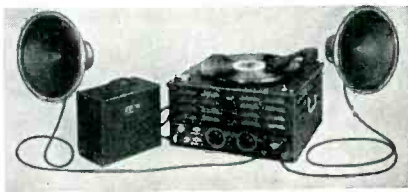
*This name identifies the
Quality Sound Equipment
demanded by these markets* →

● In the column at the right you will find a partial list of the many markets which exist for high quality, high fidelity sound equipment . . . The field offers you no better line with which to meet the requirements of these markets than WEBSTER ELECTRIC Sound Equipment . . . It is good-looking equipment . . . It is built to exceptionally precise standards . . . It is priced right for the quality it embodies . . . It is sold through legitimate channels—the channels that insure dealers the right profit. The four models illustrated below are typical of the line as a whole . . . Write for information regarding them.

[Webster Electric Sound Systems are licensed by agreement with Electrical Research Products, Inc., under patents owned by Western Electric Company, Inc. and American Telephone and Telegraph Company]



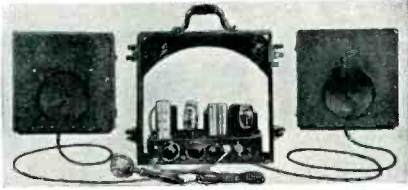
The Webster Electric 15 watt, Class "A" all-purpose, semi-portable sound system includes virtually the same equipment as the 30 watt system.



Dual mobile sound system operates from a 6-volt battery or on 110 volts. It includes spherical type microphone and two 12" heavy duty dynamic speakers.



The Webster Electric 30 watt, Class "A" all-purpose, semi-portable sound system handles two crystal microphones, phonograph unit and two 12" dynamic speakers.



The compact, portable Webster Electric 7 watt system includes hand or lapel type crystal microphone, carrying case and two 10" dynamic speakers.

WEBSTER ELECTRIC COMPANY
RACINE, WISCONSIN, U. S. A. • ESTABLISHED 1909
Export Department: 100 Varick Street, New York, N. Y.



You can sell
Sound
in these locations

†

- Auditoriums
- Band Stands
- Colleges
- Churches
- Conventions
- Dance Halls
- Golf Clubs
- Gymnasiums
- Hospitals
- Hotels
- Lodges
- Advertising Trucks
- Amusement Parks
- Arenas
- Armories
- Athletic Fields
- Banquet Halls
- Baseball Parks
- Bathing Beaches
- Orchestras
- Parks
- Playgrounds
- Restaurants
- Schools
- Stadiums
- Theatres
- Vaudeville
- Undertakers
- Lecture Rooms
- Memorial Parks
- Summer Resorts
- Swimming Pools



NEW!
**Webster Electric
Teletalk**

Here is a new product that you can sell to 78% of all businesses. A two-way intercommunicating system that sells on sight. Ask your jobber about it.

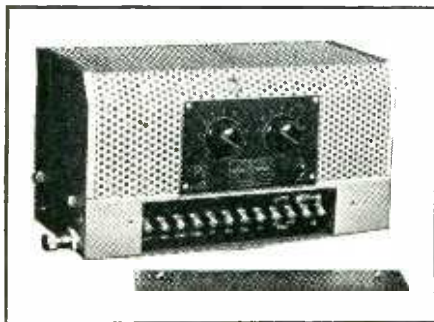
WEBSTER ELECTRIC SOUND EQUIPMENT

RCA SOUND EQUIPMENT...FINEST FOR EVERY PURPOSE...YOURS AT MODERATE COST!

IN sound equipment—as in all other fields of radio—RCA leads! For RCA's background of years devoted to research and development has produced equipment that stands the most rigid testing—equipment made specially to do a fine job for its user.

On this page you see a few of RCA's sound equipment products. There are many others—a complete line for every purpose—and all are modestly priced. Remember—when you buy RCA sound equipment you not only gain the benefits of quality and dependability—but you centralize your responsibility as well. For RCA's sound equipment is standardized and interchangeable. And, since RCA manufactures everything from the microphone in the studio to the loud-speaker in the home, all units are matched for superb performance.

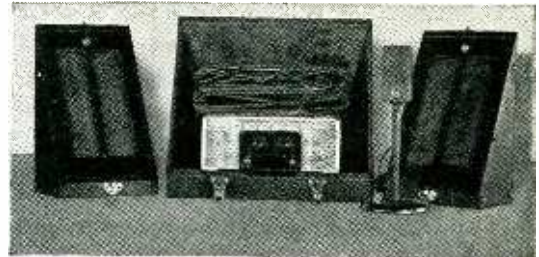
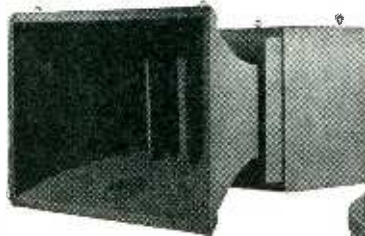
RCA AMPLIFIER MI-4283... for general sound reenforcement purposes, such as amplification of public address, radio and phonograph programs. 4 stages with 16,000 ohm input impedance, for use with



MI-4010A Velocity Microphone or equivalent. 15, 7½ and 40 ohm output impedances. Built-in powersupply. 12 watts Class A, undistorted output. Frequency range from 50 to 10,000 cycles. Has tone control, volume control, music-speech switch, radio and phonograph input. List price (less RCA tubes) \$76.95. Tubes \$5.84 extra.

RCA MICROPHONE MI-4010-A AND STAND MI-4068. Highest quality, low cost Velocity Microphone ever made available to sound engineers. Excellent frequency range. Highly favorable directional characteristics; high sensitivity and faithfulness of response. List price \$43.50... Studio floor stand accommodates all RCA microphones. Heavy base. Height adjustable from 37" to 67". List price \$18.75.

RCA WOOD Baffle MI-4428... a new RCA development for use with both 8" and 12" dynamic speakers. Semi-weatherproof, with high frequency equalizer. Distribution angle 90° horizontal, 50° vertical. Acoustically treated. List price \$22.50.



RCA STANDARD PORTABLE SOUND SYSTEM... embodies all sound amplification equipment qualities... plus new, exclusive improvements, setting higher standards of performance and dependability. For outdoor or indoor political meetings, orchestras, amusement parks, auditoriums, cabarets, colleges, restaurants, etc. Power output furnishes sufficient volume for auditoriums seating as many as 1600 persons. PG-98 \$179.50 list price, complete with RCA Radiotrons all in one case, operates on 110 AC, 50-60 cycles.



RCA LAPEL VELOCITY MICROPHONE MI-4001... a small, highly efficient unit for attachment to coat lapel of speaker. Has 30-foot cord permitting speaker to move over wide radius. Excellent for classrooms, lecture halls where charts or blackboards are used, cooking schools, style shows, sporting events, etc. List price \$44.35.

RCA ELECTRO DYNAMIC SPEAKER MI-6243... with aluminum voice coil and greatly increased frequency range. Field coil enclosed in metal housing, forming base for mounting. Handles 10 to 15 watts of power continuously. Excellent low frequency response, smooth overall response. Specially suited for use with RCA Baffle MI-4428, also illustrated on this page. List price \$22.50.



See your RCA Sound distributor for latest RCA Sound Equipment Catalog, No. 210



Public Address Systems

RCA Manufacturing Co., Inc., Camden, N. J. A service of Radio Corporation of America

KEYS TO SOUND SALES



How to create interest by stressing
buyer benefits, quality, comparison
and reputation

By Harvey P. Rockwell, Jr.

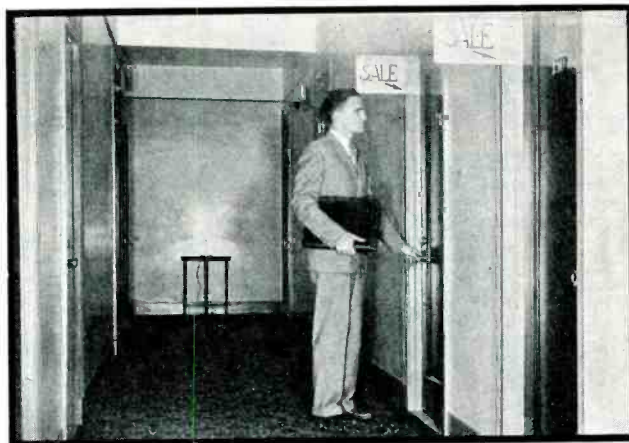
“THE key to successful selling is, primarily, to assure the buyer that he will receive real values from the purchase of a quality product that has won a good reputation.” This definition was made many years ago by a successful salesman.

There are, in fact, a whole chain of “Master Keys” which enable us to open the doors to selling sound equipment. Let’s have our key chain always ready for use.

Last month, we saw how the sale of sound equipment would increase our present business, our prestige and our field of service. We found that before any direct selling could begin, it was necessary to know our product and the prospect’s requirements. We learned how to make the most favorable approach in order to arouse the prospect’s interest. Most important, we proved that any radio serviceman

with determination and the will to learn could sell sound equipment. With this knowledge, our next step is to—CREATE INTEREST.

This is done, first, by carefully searching the literature and catalogs describing the equipment and making a list of each *buyer-value*. Such a list, carefully prepared, will automatically become part of our sales talk. It isn’t difficult to find buyer-values, as this simple test will show. See how many values you can list in three minutes to interest a Hotel



BEHIND MANY DOORS lie sales. But each represents a distinctly different selling problem

Manager in a record-reproducing system for his cocktail lounge.

Now, let’s follow the key statement “the purchase of a quality product—” and change from a shotgun effort to a planned attack. Naturally, a well built system will give better service. *Quality* is, then, our second sales key. The opening statement tells us to assure the buyer that he will receive real values from the purchase of a quality product—Let’s watch a salesman combine the two keys to arouse interest:

Salesman: Mr. Manager, your patrons will be entertained, business will be increased, and your Cocktail Lounge will be a more attractive meeting place when you install an automatic high fidelity Royal Record Player.”

First, he showed the buyer-values and then the quality that would make the values possible. The Manager is intrigued by the values, but is interested only in the *idea* of a sound system. To him, the Royal is no better than any other, because he is not as familiar with the various systems.
(Please turn to page 44)



ESSEX HOUSE, Newark, a modern hotel recently equipped because the manager was convinced that sound would increase his business

Sentinel

28 A.C. MODELS!

The finest—most complete
—line in Sentinel's entire
history. Models in every
classification under one
hundred dollars. Every
sales feature known to
radio science. A fast-
selling, profitable VOL-
UME line—PRICED

from
\$18⁹⁵ to
\$110⁰⁰

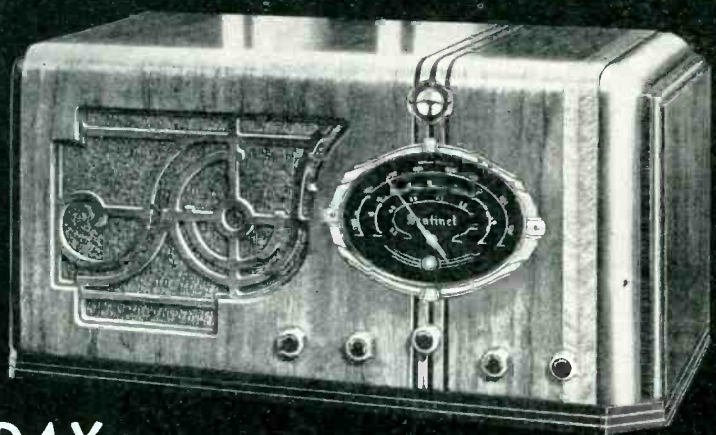
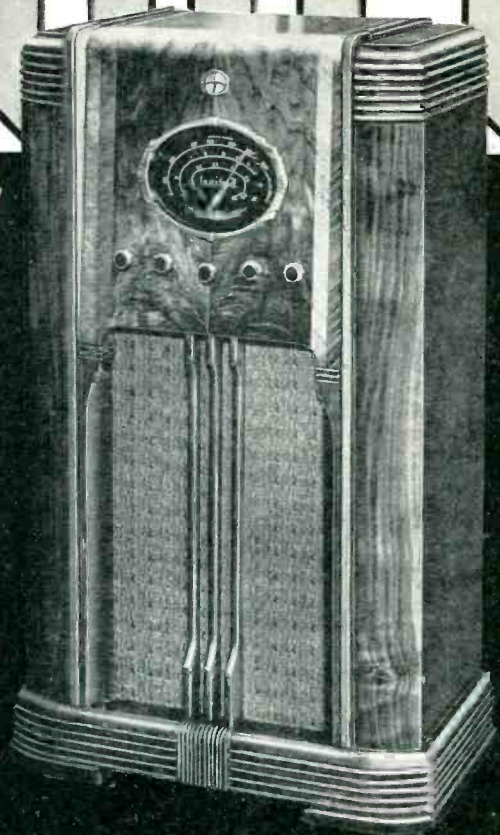
MAIL THIS COUPON TODAY

Sentinel Radio Corp., Dept. RRS
2222 Diversey Parkway,
Chicago, Illinois

RUSH full details Sentinel A. C. line.

Name.....

Address.....



Sentinel

2222 DIVERSEY PARKWAY
CHICAGO, ILLINOIS



6,000,000 FARMERS KNOW SENTINEL!

It has been the outstanding farm radio line for 17 years.

It is being nationally advertised to 5,158,000 farmers in the leading farm magazines.

It is built by the company who pioneered farm radio.

It is designed by engineers who know the requirements of good farm radio.

It is known by the performance of hundreds of thousands of Sentinel Farm Radios already in service.

It brings "City" radio performance to the farmer for the first time.

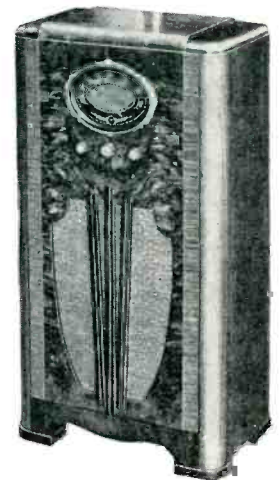
It is priced to suit the farmer's purse.

It is the Accepted Farm Radio!

Sell the farmer the radio he knows! The 1937 Sentinel Farm Radio line is even more outstanding this year than it has ever been. It brings "real" radio performance to the farm for the first time, with all the convenience, splendid tone, beauty of appearance of the finest city receivers at amazingly low prices. There's a profitable market of over 6,000,000 farmers that want to be sold this newest and finest of farm radios. Make this your job and build your profits with Sentinel! Mail the coupon for complete details.

- 2, 6 and 32 Volt Models
- Prices start as low as \$29.95, complete with batteries
- New Permanent Magnet Dynamic Speakers
- Tel-Eye Tuning
- New Console Cabinet
- Foreign Reception
- Attractive modern cabinets
- Distinctive new Oval Multi-colored Dial
- Farm Powr Gas Engine Generator and Wincharger Deal

The Sentinel Console is the newest thing in farm radio cabinets, exclusive with Sentinel. A miniature console that has taken the field by storm, priced at only \$34.95, radio's outstanding value.



Sentinel
RADIO CORPORATION
2222 DIVERSEY PARKWAY CHICAGO ILL.
"THE PIONEER OF FARM RADIO"

MAIL THIS COUPON TODAY

SENTINEL RADIO CORPORATION, 2222 Diversey Pkwy., Dept. R.R.-S, Chicago

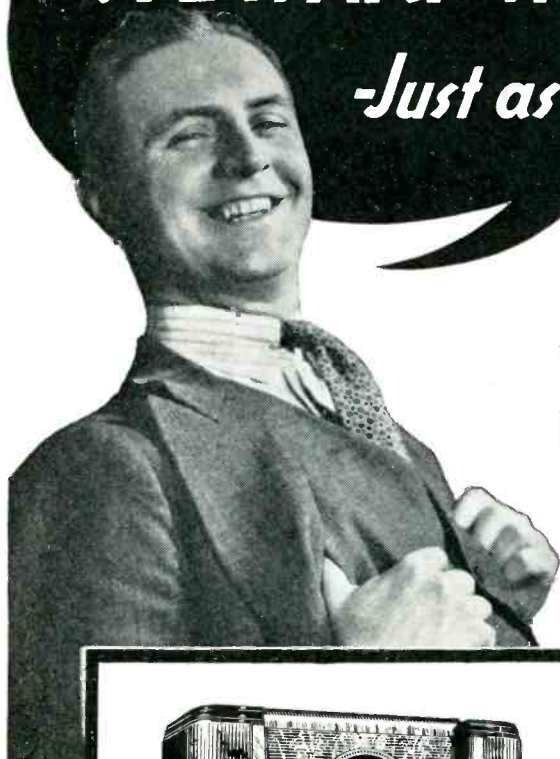
Gentlemen: Please rush me complete details of the 1937 Sentinel Farm Radio Line.

Name

Address

Yes, Sir! We're Already Cashing in on
STEWART-WARNER RADIOS

-Just as We Did On Refrigerators



**And You'll Know Why When
 You Hear That New Copper
 PHOTO-TONE SPEAKER**

WE weren't fooling when we promised Stewart-Warner dealers a radio line just as hot as those 1936 refrigerators. Those dealers had marked up a 127% gain in refrigerator sales over 1935 — and we determined to help them do the same in radio.

The way they're going to town already with the 1937 radio line proves that they got what we promised.

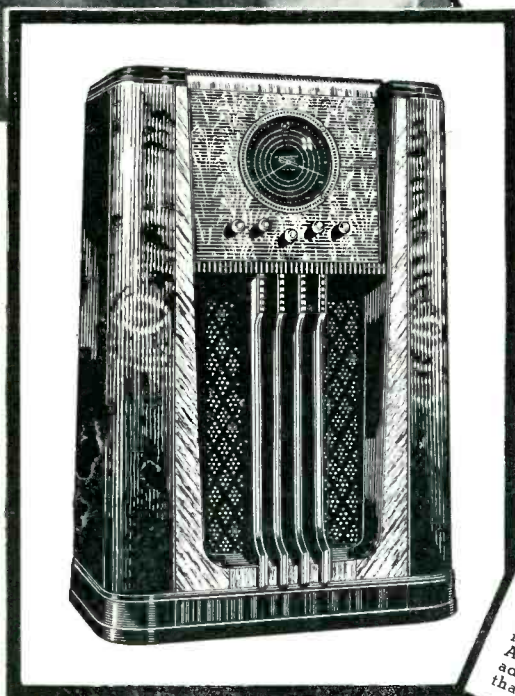
Never before have we packed so much real value into any year's models. The great new Copper Photo-Tone Speaker for instance. It's built a brand new, better way, and anyone can tell by listening! There's a new, appealing mellowness

—new photographic realism—on every note.

But that's just a start. New tubes, new circuits, new features—all add up to entirely new, easy-to-sell performance.

Tie up with this money-making Stewart-Warner line now. You'll be backed by the greatest merchandising drive in our history. It includes everything you need—newspaper ads, a coast-to-coast radio series with Horace Heidt and his famous Alemite Brigadiers, a brand new store display service and many other sales getters.

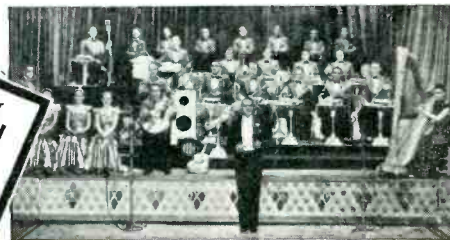
Get the facts from your distributor now—and ride the bandwagon with Stewart-Warner.



A record value! Twelve-tube Ferrodyne round-the-world radio with Twin Copper Photo-Tone Speakers, Shadow Beam Tuner and many "scoop" features.

**Ask About This Amazing
 NEW FINANCE PLAN**
 Something brand new in the business. Planned solely for Stewart-Warner dealers to help them scoop the field. As different as our special refrigerator plan last spring. 100% ADVANCE—NON-RECOURSE—administered through all the more than 150 C. I. T. offices.

Horace Heidt and his Alemite Brigadiers. On the air, coast-to-coast, selling Stewart-Warner radios for you.

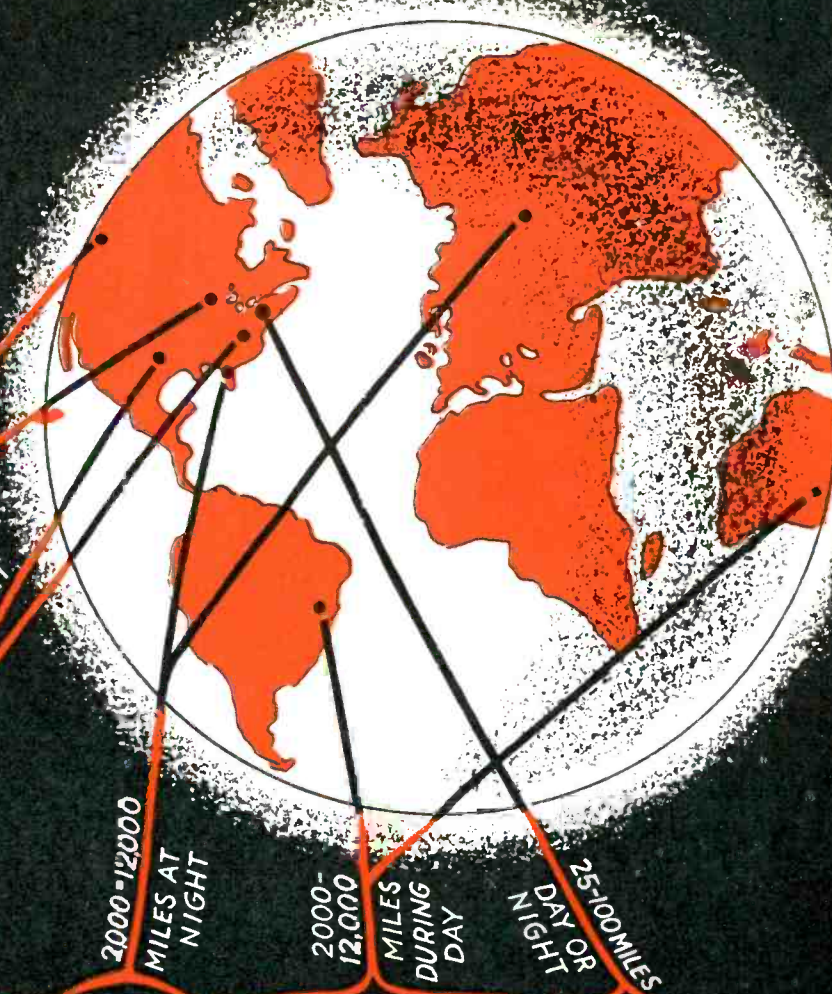


STEWART-WARNER

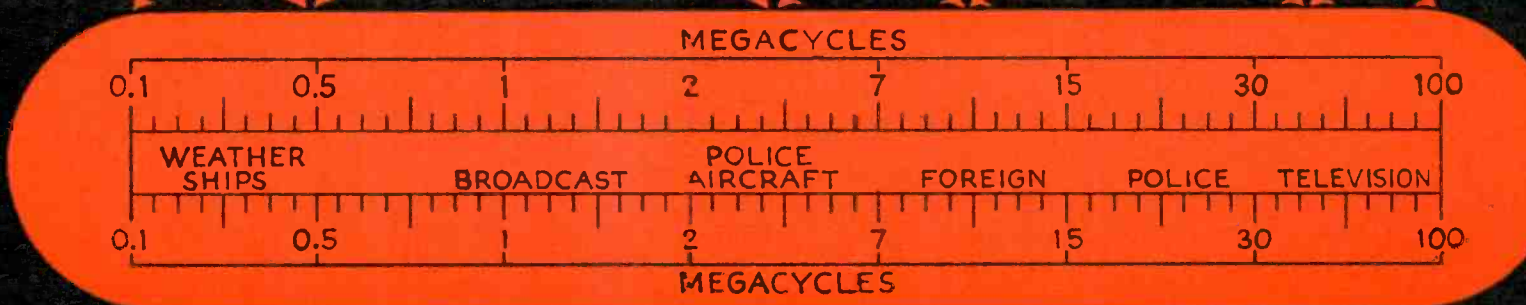
CHICAGO, ILLINOIS

How to Get the Most out of SHORT WAVES

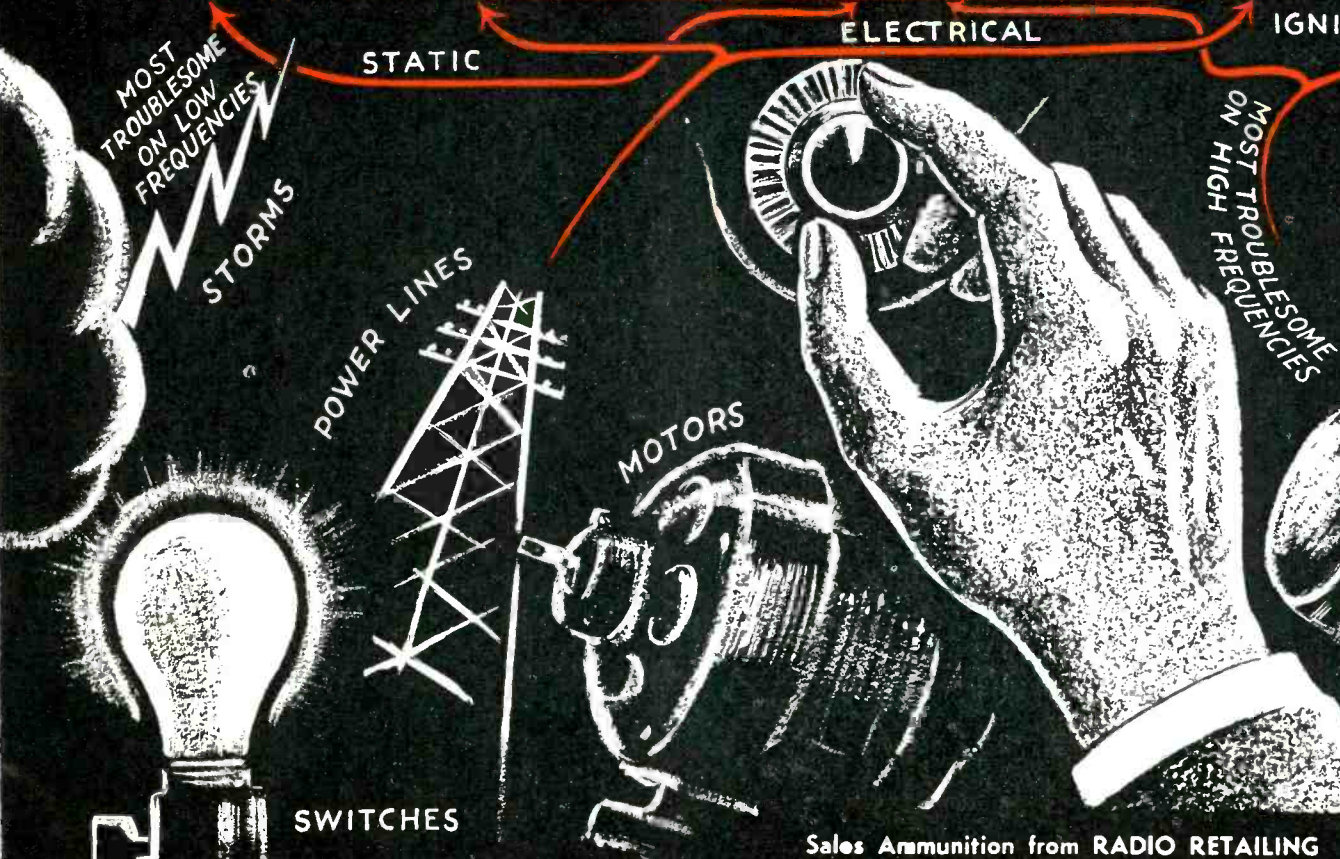
TIME may vary as much as 12 hours from ours in distant countries
 FADING is minimized by tuning in the right "bands" at the right times
 NOISE is reduced by modern, two-wire downlead antennas
 AMATEUR PHONES are found near 2, 3.5 and 56 mc. day and night, dx near 14 and 28 mc. in daylight



HOW WAVELENGTH AFFECTS DISTANCE



HOW NOISE AFFECTS WAVELENGTH



MOST TROUBLESOME ON LOW FREQUENCIES
 STORMS

POWER LINES

SWITCHES

MOTORS

ELECTRICAL

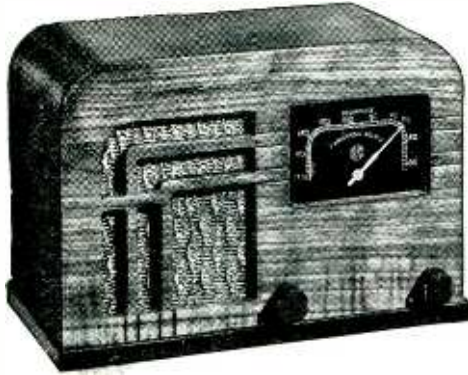
IGNITION

MOST TROUBLESOME ON HIGH FREQUENCIES
 CARS

Sales Ammunition from RADIO RETAILING

COMPLETE LINE OF FAIRBANKS-MORSE RADIOS GIVES YOU EVERYTHING

See the Fairbanks-Morse Line at the National Electrical and Radio Exposition, Grand Central Palace, September 9th to 19th—Space 45

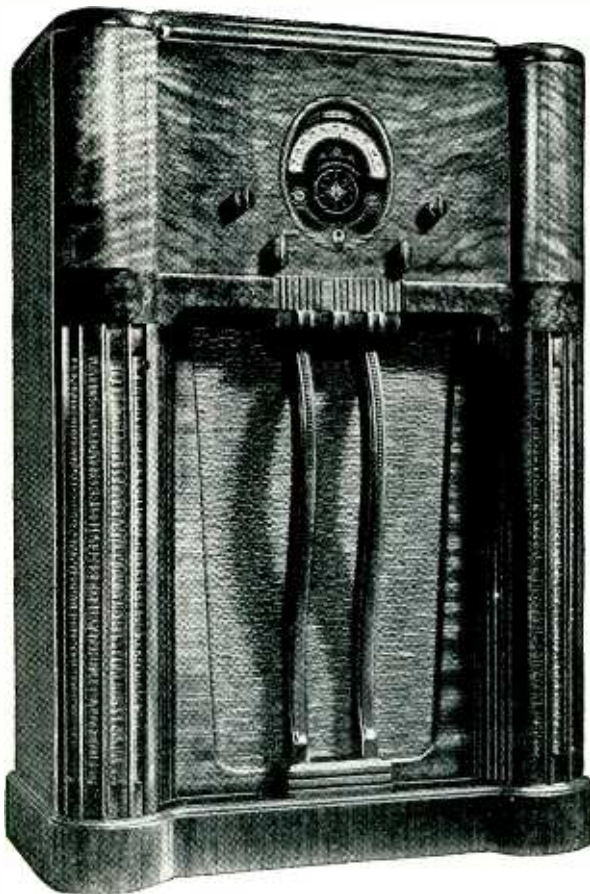


F-M model 69-T-7. 6-tube AC-DC superheterodyne. Band range 540 to 1750 kilocycles. Attractive walnut cabinet, 12 $\frac{1}{4}$ " long by 8" high by 6 $\frac{1}{4}$ " deep. Price \$19.99.

17 models • Priced from \$19.99 to \$149.95 plus sales-clinching exclusive features

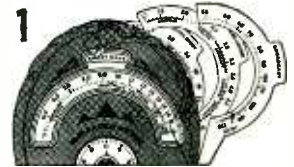
No matter what size or priced radio your customer wants—no matter whether he lives on or off the high lines, in AC or DC areas—you have it with the Fairbanks-Morse line. And you also have the radio that has what 3 out of 4 buyers want. Easy short-wave tuning. Quiet reception. True-to-life tone.

Hundreds of men and women representing a cross section of the radio prospects of the entire nation recently inspected the new Fairbanks-Morse radio and three other sets—all leaders. Asked which they would investigate if buying a radio, 3 to 1 voted for the Fairbanks-Morse.



F-M model 12-C-6. 12-tube superheterodyne. Turret Shielded. Semaphore Dial. Tone Projector. Five bands including ultra short-wave and long-wave weather band; 540-1720 kc., 1720-5500 kc., 5500-18,500 kc., 18,500 to 70,000 kc. Balanced perspective cabinet. Price, \$149.95.

1 *New Semaphore Dial makes short-wave tuning easy.* No puzzling array of numbers on this dial. One set of numbers at a time is placed in the band window automatically by turning the wave-band control. Widely spaced figures are easily read. Every tuning operation is visibly indicated. A child can tune it!



2 *See this Turret Shielded Chassis.* Note the neat appearance it gives the set. What it *does* is more important—and just as easily explained. Turret Shielding, an exclusive F-M feature, with other improvements enables this radio to give clear reception in even the so-called "noisy" locations and permits signals from foreign stations to come in clear and strong.



3 *See that new, exclusive Tone Projector.* Show it to a prospect and you've started a sale. Let him *listen* to it and you've closed a sale. The tone of most radios except Fairbanks-Morse is best when heard directly in front of the speaker. F-M Tone Projector, permitting largest baffle used on any radio today, diffuses all tones to all parts of the room. Gives tonal purity your prospects have never heard before in any radio.

Write for details of the F-M radio franchise—maybe it is available in your community. If so, you can "go to town" with this line just as other F-M dealers everywhere are doing. Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Ave., Indianapolis, Ind. Other F-M products: Conservador Refrigerators, Washing Machines, Ironers, Automatic Coal Burners.

FAIRBANKS • MORSE

RADIO

NEWS

PEOPLE • PRODUCTS • PLANS

Unions Invade Service Field

A. F. of L. Local President and I. R. S. M. Secretary State Independent Objectives in Midwest Hotspot Interviews

CHICAGO—Interviewed by *Radio Retailing*, Earl T. McGrew, president of the Radio Workers Federal Labor Union, Local 19774 of Chicago, chartered by the American Federation of Labor, stated his organization's objectives as follows:

"The object of Radio Workers Federal Labor Union, Local 19774, which is composed of radio servicemen and soundmen, is to increase the earnings of both employed and independent servicemen.

"Some men have asked the question: 'Why a Union, instead of an Association?' In the past, several organizations sprang up in Chicago. One of these, known as the 'Radio Servicemen's Association,' in 1929 lasted two months, in which time it 'racketeered' several thousands of dollars out of the Chicago servicemen. This was possible only because of the fact that it was not directed by a larger body. On the other hand, this Union is directly controlled by the American Federation of Labor. Under our charter our books are

subject to inspection by the American Federation of Labor at any time. We have no permanent secretaries or officers. Elections are held once a year by secret ballot, at which time every member is entitled to vote.

"Two of the evils which put the radio business in the deplorable condition that existed from 1930 to 1935, namely the 'Free Inspection' and '50c Service Call' types of advertising, have practically been eliminated in this city, by the Union. Instead of using bait methods of obtaining business our policy embodies a labor charge on all service offered the public. Today, material is a small part of the cost of a repair job. If you attempt to give your labor away and charge exorbitant prices for the parts, your customer usually has a wholesale catalog with which to confront you. If you have already agreed to practically give away your labor then what have you left as an argument to back up a five to fifteen-dollar repair bill? On the

Union Man



Earl T. McGrew of Local 19774

other hand, lay stress upon your skill as a technician and forget about trying to make one thousand per cent profit on a ½ mfd. condenser, and you will find the public will have respect for your knowledge.

"The following rates are rapidly becoming standardized in Chicago. A one dollar inspection charge in the home, a fifty-cent bench charge for checking a set in the shop and a two dollar an hour labor charge, material extra. Sound equipment, with the services of an operator, two dollars per hour minimum. Wage scales for employed men vary from \$25 to \$45 per week, depending upon the type of work.

"In the short space of a year and a half this organization has grown to the point where we have an active membership of 420 men. Such remarkable success has been obtained only because of the results this Union has shown in its fight for better conditions in the radio service and sound fields.

"Radio Workers Federal Labor Union, Local 19774, is not restricted by any subsidy of manufacturers either in direct gifts or through the sale of membership lists, advertising, or 'spiffs'. The money required to operate this organization is obtained from the \$4.00 initiation fee paid by each new member and the dues of \$1.00 a month."

Hathaway Boosts IRSM

Contacted at his Chicago office, Ken Hathaway, executive secretary of the Institute of Radio Service Men, outlined the

Union Shop



Chicago Radio Service, operated by Mr. and Mrs. H. H. Fisher. Note Union card

objectives of the organization with which he is affiliated as follows:

"The Institute of Radio Service Men, commonly referred to as the IRSM, was founded along the lines of the professional engineering societies that have done so much to maintain the standings of their respective fields. Its basic purposes are to serve the interests of all radio service men, those employed and those working in their own behalf, by providing technical information through a Journal, and through well-informed lecturers; to establish standards of competency and ethics in the profession and industry; and to bring the members together in meetings for the mutual exchange of ideas.

"The IRSM is in no way to be confused with labor organizations. The training and study required to adequately service modern radio receivers compares more closely with the training of professional men than the loose requirements of common labor guilds or price-fixing unions of radio workers. In order to see the relationship more closely, one has only to compare the relationships of professional men with the constant bickering and agitation found in many of the labor unions.

"Since the organization of the IRSM in 1931, the standards of service, business ethics, and business practice in the radio service profession and industry has been raised to a level which already commands the respect of the entire industry. The exchange of technical information, the fellowship resulting from the meetings, and the large conventions held in New York and Chicago each year, have brought together men from all parts of the country—unquestionably benefiting the individuals.

"In order to render the maximum service at the lowest possible cost to the members, the IRSM is set up on a national basis which provides for a larger membership, and therefore, enough income to defray the cost of conducting the affairs of the organization at minimum individual expense. The nationalization of scope permits a low initiation fee of \$2.00, and a yearly membership fee of only \$3.50. The funds are used to pay the cost of maintaining a staff that collects data, compiles statistics, makes plans and effectuates them, conducts conventions and trade shows, edits, publishes, and distributes The IRSM News and The JOURNAL, maintains contact with other branches of the radio industry, and many other things, all subject to the direction of the Board of Trustees, a governing body elected by the membership.

"The IRSM has recently brought about the launching of what is considered to be a most important move—a means to definitely and effectively define a radio service man. This move, known as the Qualification Project, was developed by the IRSM, and when it neared completion the effectuation of the program was placed in the hands of especially created and regularly constituted bodies. Essentially, the Qualification Project consists of two elements, the determination of technical ability by examination and the establishment of ethical business practices. Various effective means to familiarize the public with the purposes of the Qualification Project have been arranged.

"In its capacity, the Institute renders

First Of A New Trailer Fleet For Pioneer



Dave Bright, president of Pioneer Gen-E-Motor Corporation, and adman Ken Ford examine the first of a new fleet of streamlined trailers designed to demonstrate the advantages of the company's gasoline driven generators to dealers and consumers in the Southwest and Pacific coast areas. Number 1 is ready for the road

greater service to its members, to the radio industry, and to the public than any other sort of radio service organization. Its policies are constructive, and its members are neither obligated to resort to destructive methods, participate in strikes or unwarranted violence, or to attack their problems in ways that are either violations of the statutes of the land or that would be detrimental to the welfare of the radio service profession and industry or anyone else."

Cornell-Dubilier Moves

SOUTH PLAINFIELD, N. J.—The Cornell-Dubilier Corporation is opening a new factory here containing 210,000 square feet of floorspace, with 33 acres of land, plus its own power plant. The plant will be devoted exclusively to the manufacture of condensers.

New Stancor Booster



Jerry Kahn, president of Standard Transformer (left), exhibits enthusiasm as Eugene Carrington, formerly with Utah Radio Products, starts work as Stancor's sales manager in charge of the distributor's division

MAJESTIC ON 24-HOUR SKED

CHICAGO—Orders for new Majestic radios made by Majestic Radio & Television Company of 600 West Adams St. (915 Broadway in New York) placed at private showings held in key cities throughout the country have been so heavy that the plant is now working on a 24-hour schedule, according to the management.

Fifteen receivers and samples of new refrigerators are being shipped to New York for exhibit at the Grand Central Palace as we go to press.

Former Majestic dealers in some number have contacted the company to obtain the line, planning to use as the nucleus of 1937 business the list of 5,000,000 people who already own equipment carrying this brand name.

Emerson Shindigs Held

NEW YORK—From E. F. Solow of Emerson we hear that two distributors of this company's radio line staged successful dealer meetings during the month of August.

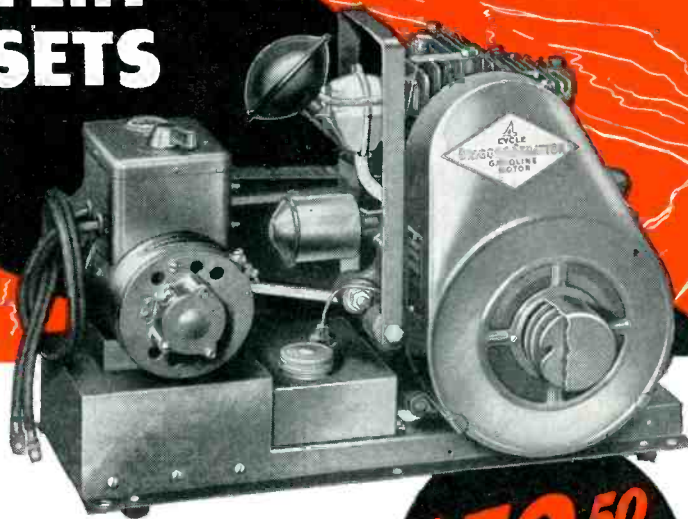
Peaslee-Caulbert threw a party at the Oxford Hotel, Enid, Oklahoma, reported excellent attendance. And The Sutcliffe Company of Louisville pulled them in from Kentucky and southern Indiana for an Evansville (Ind.) Emerson trade show held at the Hotel Vendome.

Fada Well Received in Chi

CHICAGO—From Joseph Gerl, midwestern salesmanager for the Fada organization, we hear that new sets made by this company were well received by the trade of this city and that aggressive efforts will be immediately made by Messrs. Getke and Mandel, Metropolitan Electrical Supply, to make 1937 a banner year in the section for the new streamline models.

SALES MAKER

for BATTERY RADIO SETS



Here's the sales maker for Battery Radio Sets—definitely answers the problem of dependable electric power to assure full-time, high quality radio performance . . . Eliminates "run-down" batteries — the nuisance of distant charging.

It's the new Briggs & Stratton POWER-CHARGER. Fully engineered—designed and built as a unit — this electrically started gasoline-motor-powered plant keeps 2 and 6-volt batteries fully charged *all of the time*. In addition, it provides electric light up to 200 watts and direct motor power take-off for driving small equipment. Compact, dependable, efficient, fool-proof and moderately priced. Furthermore, you make a worth-while profit on the POWER-CHARGER, plus your regular trade profit on radio sales.

POWER-CHARGER Alone Has All These Features

Gasoline Motor — Famous Briggs & Stratton 4-cycle, air-cooled gasoline motor. Nearly ¾ million in use. Trouble-free — low cost operation.

Electric Starting — gasoline motor is electrically cranked by turning switch. Generator acts as powerful starting motor through special series winding — cranks even with low battery.

Generator — Specially designed 6-volt, 200 watt high efficiency unit with ample overload capacity.

Power Take-Off and Emergency Pulley — Equipped with standard V-belt pulley to drive small equipment direct from motor. Pulley is notched for easy emergency starting with rope.

Multiple Control Switch — 4 settings — start, neutral, low and high. "Low" delivers trickle charge in final charging stage — conserves battery life.

Voltage Regulator Terminals — for easy installation of voltage regulator — available at small extra cost. Automatically controls generator output to charge battery at correct rate under all conditions.

Ignition Shielding — all motor ignition electrically shielded — no radio interference.

Rugged, Safe, Vibrationless — substantially built, fully enclosed wiring and moving parts — perfect balance — rubber mounting pads.

The POWER-CHARGER is serviced by the nation-wide Briggs & Stratton Authorized Service Distributors operating under factory supervision . . . Write or mail coupon today. Learn more about the new Dual-Profit opportunity which the Briggs & Stratton POWER-CHARGER offers you.

BRIGGS & STRATTON CORP., Milwaukee, Wis.

\$59.⁵⁰
F.O.B.
MILWAUKEE

Standard Equipment

Electric Starting — multiple control switch — cut-out — ammeter — battery leads — voltage regulator terminals — ignition shielding — motor power take-off and starter pulley — air cleaner — muffler — stop button — choke knob—emergency starter rope — carrying handle — tools and complete instructions.



BRIGGS & STRATTON CORP., Milwaukee, Wis.

Send complete information at once on the 6-volt, 200 Watt POWER-CHARGER.

Name of Radio handled.....

Dealer..... Distributor.....

Firm.....

Street Address.....

City..... State.....

Signed..... RR-4

Scruggs-Vandervoort-Barney Bans Spiffs

Radio Distributors Requested to Abide by Firm's New Regulation

ST. LOUIS—Scruggs-Vandervoort-Barney Dry Goods Company has banned the giving of spiffs to salespeople by radio distributors whose lines are sold in the firm's radio department. Distributors are requested to sign a letter that they will abide by the company's anti-spiff policy.

Failure to live up to the agreement, it is stipulated, will result in Vandervoort's throwing out the offender's radio line.

Said J. C. Laurie, vice president of Vandervoort's to "Radio Retailing's" reporter: "We are against the paying of spiffs to any of our salespeople. Whatever Clarence Amos (radio and electric appliance department manager) says is okeh. Talk to him."

Said manager Amos: "We ruled out spiffs in our electric appliance department three years ago, and now that I have taken over radio we extend the rule to radio salespeople. When we make an agreement with distributors for merchandising their lines on our floors we stipulate that it be placed in writing that no spiffs or p.m.'s will be paid to our salespeople.

"It is understood that failure to comply with our rule will result in the line being thrown out. When one company starts paying spiffs a competitor follows suit and the next thing done is to increase the amount of the spiffs. Discounts are shortened and advertising allowances cut because of spiffs.

"We do not want our salespeople switching a customer from one line to another when he comes in and asks for a certain brand of radio. We have sets for the price he wants to pay. It is bad business to try and interest him in another line. You create indecision and the salesperson wastes his time."

Joins Raytheon



Earl S. Dietrich, who will manage Raytheon's distributor sales under the supervision of general sales manager Edgar S. Riedel

Zenith On Parade



A. A. Schneiderhahn, Des Moines distributor, brought this snappy band to Chicago to compete in the city's recent Music Festival, shot their picture in front of the Zenith Distributing Corp's display room on famous Michigan Avenue

LYONS JOINS FADA

LONG ISLAND CITY—J. M. Marks, president of the Fada Radio and Electric Company, announces that George A. Lyons, formerly sales promotion manager for Atwater-Kent, has joined the Fada organization in a like capacity.

Lyons is well known throughout the trade for his ability to produce merchandising ideas of definite and practical value to distributors and dealers.

New Branch for C. I. T.

CANTON, OHIO—The C. I. T. Corporation, leading finance house, has opened an office here at 120 Tuscarawas St. C. Vance Anderson from the Youngstown office is in charge. Associated with him will be N. W. Pope, also of Youngstown.

Meissner Has New Plant

MT. CARMEL, ILL.—From Chicago to this city comes the Meissner Manufacturing Company, into a new plant with increased floor space and facilities. G. V. Rockey, vice president, reports production running smoothly after the move.

THREE IMPORTANT TRADE SHOWS . . .

1. National Electrical & Radio Exposition
GRAND CENTRAL PALACE,
N. Y. Sept. 9-19
2. Institute of Radio Service Men
HOTEL PENNSYLVANIA
N. Y. Sept. 18, 19, 20
3. "Radio Retailing's" Fall Show Section
ON PAPER . . . SEPTEMBER ISSUE

CLOUGH-BREngle EXPANDS

CHICAGO—Ken Clough, president and chief engineer of the Clough-Brengle Company, this city, has snapped up the plant at 2815 W. 19th St., just vacated by Meissner for larger quarters at Mt. Carmel. Acquisition of this entire building will double Clough's manufacturing space.

RCA Records Boom

CAMDEN—Ted Wallerstein, RCA Victor's record sales manager, announced just as he left for a six-week's business trip to England that the company's disc sales were up 64 per cent for the first seven months of 1936.

Wallerstein informed us, also, that the entire Bluebird list would henceforth be issued on a weekly basis.

Simpson Studies Shot



Ray Simpson, maker of Roto-Ranger instruments, takes time out to look over the line

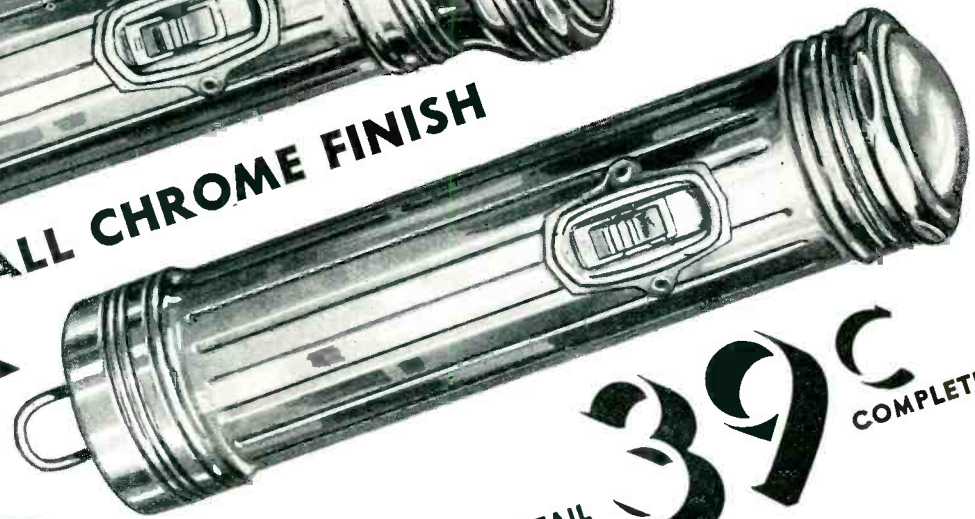
RETAIL **49c** COMPLETE

← No. 502 Two-cell Focusing Spotlight →



ALL CHROME FINISH

No. 2122 Two-cell Spreadlight →



RETAIL **39c** COMPLETE



New High-Power VALUES!

Super-Speed Turnover and Profit

EXTRAORDINARY quality by Bond, to retail at chain and mail-order prices. All-metal, *full-chromium finish*, Two-cell Floodlight and Two-cell Focusing Spotlight. Buy now. Bring customers back home with Bond timely *Leaders*.

NO. 502 BOND SPOTLIGHT

Comes packed in TWO displays of SIX each, and priced to retail at 49c each complete, when purchased with 48 No. 102 Bond Mono-cells in Deal No. 490.

NO. 2122 BOND SPREADLIGHT

Comes packed in TWO displays of SIX each, and priced to retail at 39c each complete, when purchased with 48 No. 102 Bond Mono-cells in Deal No. 390.



DEAL NO. 490
 12 No. 502 Two-cell Spotlights with 48 No. 102 Bond Mono-cells.
 Retail value \$8.28
 Deal net cost \$5.52
 Your profit \$2.76



DEAL NO. 390
 12 No. 2122 Two-cell Spreadlights with 48 No. 102 Bond Mono-cells.
 Retail value \$7.08
 Deal net cost \$4.76
 Your profit \$2.32

BOND ELECTRIC CORPORATION
 New Haven, Conn. • Chicago, Ill. • Houston, Texas • San Francisco, Calif.

Ask your wife

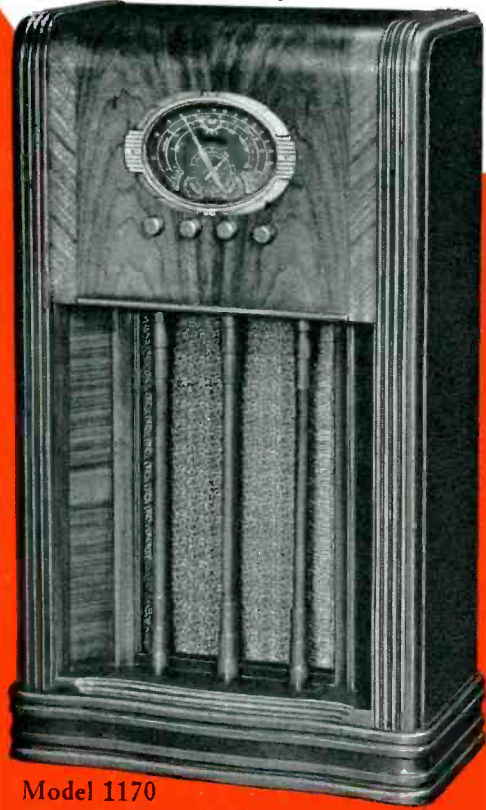


What would most influence your choice of a new radio?

“Appearance — tone quality!”

These are a woman's first thoughts about a new radio—how the set will look and sound in her own living room.

Belmont receivers satisfy the feminine desire for attractive furniture, and the rich, full tone of the Belmont confirms the initial impression of quality. *Women average 58.2% of the daily radio audience.* Their approval is usually essential in the sale of home radio receivers.



Model 1170
40" high, 24" wide, 11-1/2" deep



Model 878
Described in the August, 1936, issue of Radio Retailing; uses 8 tubes and many of the features of Model 1170.

Check these features of Belmont Model 1170:

- All-wave, 3-band, metal tube superhét.
- Average sensitivity, 1 mv on all bands.
- Composite oval dial, diffused lighting.
- Split-second, band-spread tuning scale.
- Three-gang condenser used on all bands.
- Hissless suppressor-injection oscillator.
- Efficient r-f stage lowers noise level.
- Delayed avc assures steady reception.
- Optional high fidelity band expansion.
- Acoustic compensation in volume control.
- Transformer coupled 16-watt power stage.
- Full 12" dynamic speaker, 1 1/4" voice coil.
- Recessed tone chamber in sturdy cabinet.
- Tubes: 6K7 r.f., 6J7 mix., 6C5 osc., 6K7 i.f., 6H6 avc-det., 6F5 a.f., 6F6 driver, 2-6F6 in. A prime, 5Z4 rec., 6G5 tun. eye.

BELMONT RADIO CORPORATION
1257 Fullerton Ave., Chicago, Illinois
Cable Address: Belrad

BELMONT
THE DEPENDABLE
RADIO

Grunow Execs Eat, Work, Play



Left to right: Fred Schnell, M. W. Kenney, reinforce engineering constitutions. H. J. Shartle, W. L. Eckhardt and Bill Grunow take care of the inner sales-man



Tod Reed discusses advertising plans



Jim Davin flirts with a cut-out of li'l Shirley Temple

Magnavox Appoints Dempster

FORT WAYNE—Burgess Dempster has been appointed manager of the Philadelphia area for The Magnavox Company, with headquarters at 401 North Broad St. J. C. Koonz, formerly handling the Philadelphia territory, moves to the factory to manage the company's new etched and printed glass dial division.

New Sales Setup for RCA

CAMDEN—Effective immediately, G. K. Throckmorton, executive vice president of the RCA Manufacturing Company, announces the following changes and appointments in the RCA Victor executive sales organization:

Paul C. Richardson is appointed manager of field activities, with headquarters at the plant. Henry C. Bonfig, formerly manager of the western division, is transferred to Camden to take up new duties in the sales department. Vance Woodcox, formerly in the sales department, has been appointed manager of a newly created central division, with headquarters in Chicago. James E. Francis, formerly in charge of Hollywood operations, has been made western division manager, stationed at Hollywood. John W. Griffin continues as eastern division manager.

Auto Radio Ban Shelved

MILWAUKEE—The much discussed local ordinance prohibiting the use of sound

POLITICAL AIR-TIME

Here's NBC's tabulation of time used by Federal officials over its network during June:

| | |
|----------------------|----------------|
| President | 1 hr. 16 min. |
| Vice-President | 19 min. |
| Cabinet Members | 4 hrs. 35 min. |
| Democratic Senators | 5 hrs. 30 min. |
| Republican Senators | 1 hr. 42 min. |
| Dem. Representatives | 3 hrs. 27 min. |
| Rep. Representatives | 2 hrs. 24 min. |

amplifiers and auto radio on the streets of this city has been shelved for the moment because of a Common Council ruling which prohibits re-introduction of an ordinance within 90 days after it has been rejected. A similar ordinance was rejected a short time ago.

The ordinance was proposed by the city's Police Department.

NEW FURNITURE EXCHANGE

SAN FRANCISCO—This city is to have a new Furniture Exchange and Merchandise Mart building, the largest mercantile structure built since 1900. According to Harry J. Moore and Frank K. Runyan, president and vice president of the Western Furniture Exchange. This new building, to be located at Market and 10th Streets, will cost \$2,500,000.

Another Hygrade Plant

SALEM, MASS.—Completion of Hygrade-Sylvania's latest tube plant here is rapidly nearing conclusion. A total of 91,500 sq.ft. will be available for manufacturing, over and above that already provided by plants located elsewhere. Hygrade plants now boast a total of 527,000 sq.ft. of floor space.

Highway-Byway Trade Show



To familiarize crossroad dealers everywhere with Stromberg-Carlson radios this trailer, equipped with 12 sets, a built-in antenna and self-contained power supply takes to the road shortly with factory representatives aboard



Roadwa



SOUND ENGINEERING

Stretching from ancient Rome to Brindisi is the Appian Way. This famed Roman road, laid about 312 B.C., is still in use, having endured centuries of bloody warfare and the crushing forces of Time and Nature. Sound engineering built it... preserved it through the ages, just as sound engineering by RCA built a world-wide road that will endure... one through the sky... RCA's domestic and international communications services.

ys that Endure

"VIA RCA"... these words atop message blanks are familiar to millions who, each year, depend on the swift service provided by RCA Communications, Inc. This giant radiotelegraph system spreads across land and sea, linking 11 American cities with 47 foreign countries. It is another RCA service; a rapid, unseen roadway through the sky!

When you employ this service, you know that while home may be a thousand miles away, fast communication brings it within a few minutes' reach. You know that time and distance and the raging seas can be conquered with winged words sent "Via RCA." To you—and the other millions who use this service—RCA owes its standing as a large conductor of the world's radiotelegraph business.

Transoceanic and domestic communications are but one of the diversified activities of RCA. This organization is engaged in *every* phase of radio. When all its services are surveyed, RCA's intimate knowledge of all radio becomes apparent. And, because RCA knows radio so completely, it has the confidence of the American people.

It is with warm feeling that RCA regards this confidence. It supplies the incentive for still greater achievement and service, and makes RCA dealers in every American city, town and hamlet *busy* dealers. For confidence spurs sales.

Remember—in radio RCA ranks first. The Radio Corporation of America has pioneered the large majority of radio's most noteworthy advances—is, at this very moment, experimenting with facsimile reproduction by radio—and the sound engineering of RCA will some day pioneer *sight!*

RCA MANUFACTURING CO., Inc. • RCA COMMUNICATIONS, Inc.
NATIONAL BROADCASTING CO., Inc. • RCA INSTITUTES, Inc.
RADIOMARINE CORPORATION OF AMERICA

Listen to "The Magic Key of RCA" on NBC Blue Network every Sunday, 2:00 to 3:00 P. M., E. D. S. T.

RADIO CORPORATION OF AMERICA

Radio City, New York

EVERYTHING IN RADIO

FOR SERVICE IN COMMUNICATIONS, BROADCASTING, RECEPTION

Covering the World "Via RCA"

RCA Communications, Inc., offers direct radiotelegraph service between

11 AMERICAN CITIES

| | |
|--------------|---------------|
| New York | New Orleans |
| Boston | Detroit |
| Philadelphia | Chicago |
| Baltimore | San Francisco |
| Washington | Los Angeles |
| | Seattle |

—plus efficient, fast transfer service to hundreds of communities

and

47 FOREIGN COUNTRIES

| | |
|------------------------------|----------------------|
| Argentina | Italy |
| Belgium | Japan |
| Brazil | Macao |
| Chile | ("Via RCA" Manila) |
| China | Mexico |
| Colombia | Norway |
| Cuba | Panama |
| Curacao | Philippines |
| Czechoslovakia | Poland |
| Dominican Republic | Porto Rico |
| Dutch East Indies | Portugal |
| Dutch Guiana | Russia |
| Fiji Islands | Siam |
| ("Via RCA" Honolulu) | ("Via RCA" Manila) |
| France | Society Islands |
| French Indo-China | ("Via RCA" Honolulu) |
| Germany | Spain |
| Great Britain | Sweden |
| Guatemala | Switzerland |
| Haiti | Syria |
| Hawaii | Turkey |
| Holland | Venezuela |
| Hong Kong ("Via RCA" Manila) | |

—plus rapid transfer service to all other points in the world!

DOLLARS IN THE AIR

Census Chief Sandage Reveals 1935
Broadcast Revenue, Payrolls

CHICAGO—Speaking before the recent convention of the National Association of Broadcasters here, C. H. Sandage, Chief of the Division of Communications, Bureau of the Census, gave the following interesting advance figures pertaining to 1935 advertising revenue and payrolls of 517 time-selling broadcast stations, 90 per cent of the 560 total (68 additional stations are operated by schools or churches or are inactive):

Net revenue from the direct sale of time, plus the sums received from networks, amounted to \$47,957,501. Some \$24,000,000 of this was received from local advertisers. Of the remainder, almost half was derived from national and regional "spot" advertisers and the balance from networks. South Dakota and South Carolina showed the highest ratio of local advertising to total net sales, local business accounting for 71 per cent of total station revenue.

Employment data for broadcast stations outside Illinois and Louisiana (reports still in preparation) show that an average of 11,446 persons were employed in 1935. They received \$18,972,845. More than 90 per cent of this was to full-time employees. Total payroll amounted to more than 40 per cent of the stations' advertising revenue.

JOBBER APPOINTMENTS

Fada—For the normal Chillicothe (Ohio) trading area: *Spetnagel Hardware Company*, Chillicothe. For the Rochester (N.Y.) territory: *Kovalsky-Carr Electric Company*. For the Milwaukee area: *Real Radio Service, Inc.*

Sentinel—For Memphis and St. Louis: *Stratton-Warren Hardware, J. W. Davis*,

Goes with Bond



Bond Electric, New Haven maker of batteries for flashlights and other applications, has hired J. C. Calhoun, made him assistant sales manager

Sentinel Down On The Levee



H. E. Dunn, Inc., Sentinel distributor for western Iowa and Nebraska held an unusual meeting attended by 200 dealers early in August on the S. S. Levee, Diesel-powered excursion boat, sailing down the Missouri from Omaha to Kansas City and back

PHILLY SHOW DATES

Philadelphia's Electric and Radio Show will be held from October 5 to 10, inclusive, in the Convention Hall at 34th and Spruce. All permanent booths have been sold and temporary booths are being erected to take care of the overflow.

Brown Supply Company and *Shopleigh Hardware*.

Sparton—In Portland (Ore.): *Honeyman Hardware*. In Boise (Idaho): *Bertram Motor Sales*. In Amarillo (Tex.): *Williams Hardware*. In Raton (N.M.): *Thompson Hardware*. In Louisville: *Sutcliffe Company*. In Columbus: *Smith Brothers Hardware*. In Seattle: *Seattle Radio Supply*. In Oklahoma City: *Miller-Jackson*.

Egert Becomes Rep

NEW YORK—Samuel S. Egert, formerly of the Wireless Egert Engineering Co., has opened up an office in the Lincoln Building, 60 E. 42nd St., will henceforward be open for lines selling to manufacturers and jobbers in the servicing field.

GRUNOW DISTRIBUTORS RALLY

CHICAGO—If enthusiasm and orders placed are measures of success then the first distributors' rally of the rejuvenated General Household Utilities Company, held under the personal direction of William C. Grunow, president, at the Blackstone Hotel last month batted a high average.

Over eighty prominent distributors from

various parts of the country were present, enthused, among other things, about the company's startling \$69.95 console equipped with 11 metal tubes. Tod Reed, Grunow's director of advertising, mentioned a figure on the number of sets already sold which sounded like a freight car number.

The stock of this company, incidentally, touched a new high on the last day of the rally.

Electro-Acoustic Gets Scheel

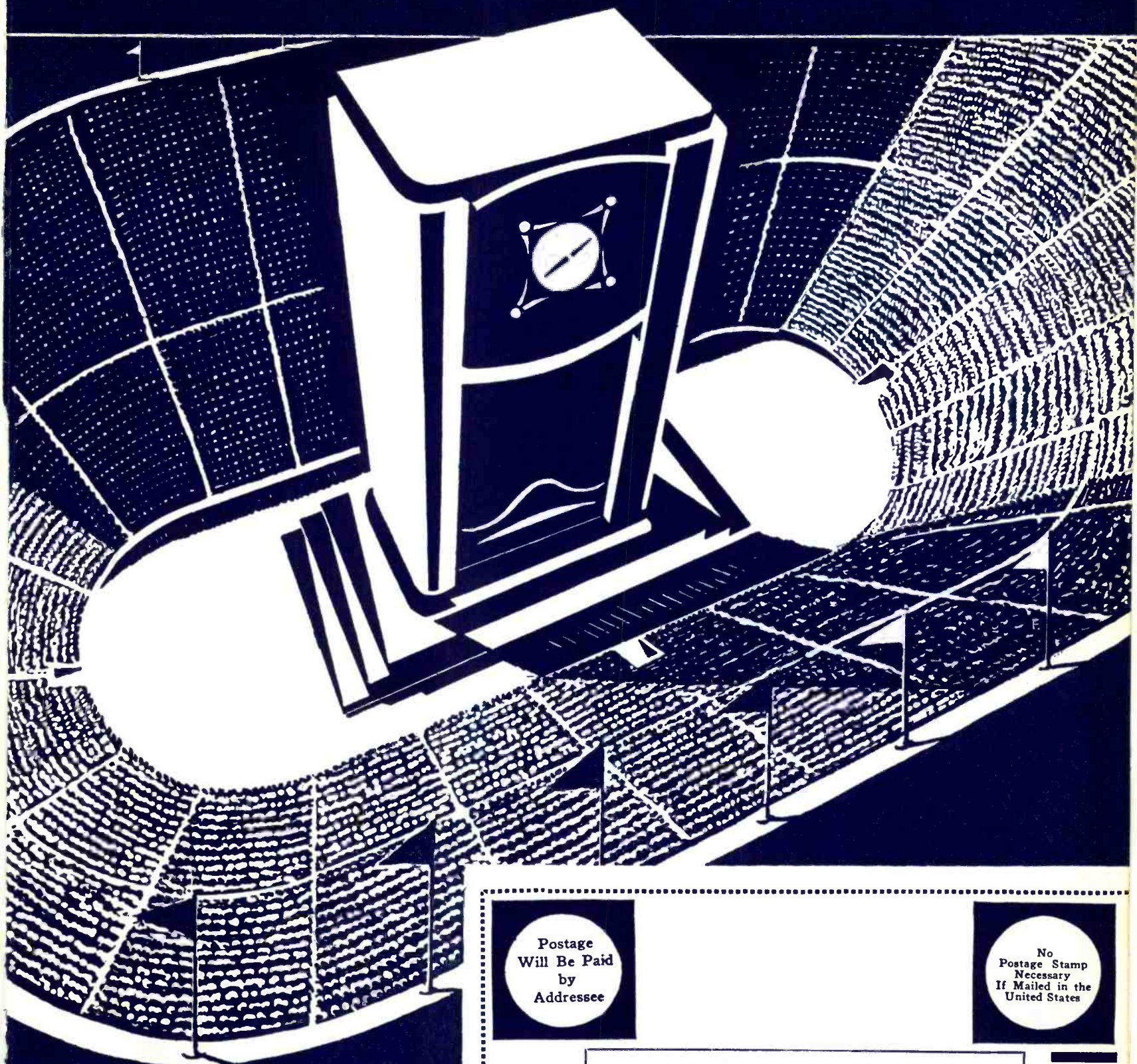
FORT WAYNE—Harry J. Scheel, former export sales manager for Grigsby-Grunow, has been obtained by the Electro-Acoustic Products Company, this city, to serve in a like capacity.

Capehart's Hunter



Three floors of pianos, saxophones and accordions tinkled and tootled at the convention of the National Association of Music Merchants. Capehart instruments played sweet music. And we snapped this shot of general sales manager I. C. Hunter

RADIO RETAILING'S FALL SHOW SECTION



**A Complete Review
of New Merchandise
and Current Literature**

Postage
Will Be Paid
by
Addressee

No
Postage Stamp
Necessary
If Mailed in the
United States

BUSINESS REPLY CARD

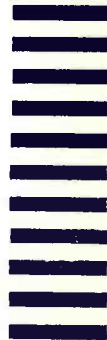
FIRST CLASS PERMIT NO. 64, SEC. 510 P. L. & R. NEW YORK, N. Y.

RADIO RETAILING

330 WEST 42nd STREET

30th Floor

NEW YORK, N. Y.



Know NEW Merchandise

IT'S YOUR MOST VALUABLE ASSET



▼ Never before in the history of the business has so much novelty, eye-appeal and genuine value been offered as in the new Fall Lines. So fast have manufacturers moved in an effort to give the trade New Merchandise designed to break down every last vestige of pre-holiday sales resistance that it has been impossible for the average dealer to personally view all the new products appearing on the market at any one point.

We've Gathered It All Together

▼ So, in the following special insert, RADIO RETAILING presents to its readers the most complete picture of Fall Merchandise it is possible to obtain. Photographs, prices, descriptions of new sets, accessories, parts and allied equipment are shown, cataloged and arranged for ready reference.

▼ The Editors have gone even farther. We include, too, news of new catalogs, booklets, circulars and other printed matter containing charts, listings and other practical data considered invaluable to the merchandiser, installer and servicer.

How To Use The Cards

▼ Obviously, it is impossible to list so many new items and to include every last detail concerning them. So we have numbered each item of New Merchandise, printed designating letters on each new catalog, booklet and sales aid reviewed.

▼ It costs you nothing but a minute of your time to secure, through RADIO RETAILING, complete New Product information and literature describing it. We even pay postage.

▼ Simply make note of the numbers on New Products about which you want more information. Circle corresponding numbers on the card printed on this page and mail the card to us. Then circle items identified by letters on the card appearing on the last page of this insert, mail it to receive new, useful literature.

▼ We will do the rest, without charge or obligation, sending you the most complete batch of material describing New Merchandise and new literature that the resources of the industry's leading magazine can secure.

CIRCLE NUMBERS - SIGN - AND MAIL

RADIO RETAILING
330 West 42nd Street
New York, N. Y.

Gentlemen: . . . We are interested in knowing more about the products identified by the numbers circled below:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113
114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141
142 143 144 145 146 147 148

SIGNED _____ TITLE _____

COMPANY _____

STREET ADDRESS _____ CITY _____ STATE _____



1 KADETTE

International Radio Corp.

Model: Jewel 40.

Description: 3 tube, a.c.-d.c., with balanced armature type speaker. 550-1600 kc. $5\frac{1}{2} \times 7\frac{1}{2} \times 3\frac{1}{2}$. Weight 3 $\frac{1}{2}$.

Encased in a polished Bakelite and Plaskon case with jewel-like grille resembling precious stones.

Prices: Brown Bakelite, \$10; walnut Plaskon, \$11.50; de luxe ivory or Chinese red. \$12.50.—*Radio Retailing*, September, 1936.



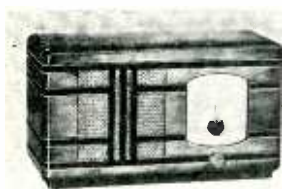
2 AMERICAN BOSCH

United American Bosch Corp.

Model: 670C.

Description: "Automatic Maestro" console, 9 tubes, all wave, metal tubes, supersize dial, split second tuning indicator, "band-stand" baffle, high fidelity modulator, Semaphore tuning.

Price: \$109.50.—*Radio Retailing*, September, 1936.



3 FREED-EISEMANN

Freed Manufacturing Co., Inc.

Models: FE-60.

Description: 6 tube, a.c.-d.c.,

superheterodyne covering 1740-540 kc. Large multi-colored illuminated tuning scale; housed in a hand polished two-tone cabinet, $14 \times 8\frac{1}{2} \times 6\frac{1}{2}$.—*Radio Retailing*, September, 1936.



4 DYNAPHONE

Ansley Radio Corporation

Model: D-17.

Description: Entire radio is mounted so that it falls back into the cabinet when not in use. While in operation it tilts forward with panel facing upward, bringing the controls to position for easy tuning. 7-tube, superheterodyne radio covering from 19-50 and 185-550 meters. Universal motor; 78 r.p.m. standard; two speeds furnished on order; 12-in. high fidelity speaker; crystal pick-up.

Price: \$125.—*Radio Retailing*, September, 1936.



5 GLOBE TROTTER

Globe Trotter Radio Co.

Model: Globe Trotter radio. **Description:** Receiver in the form of a world globe. Tunes by turning the globe. The map is up to the moment in every respect and is a six-color job. Ideal for office, student's den or home. 4-tube, a.c.-d.c. t.r.f. circuit and full size dynamic speaker. 175-550 meters.

Price: \$24.95.—*Radio Retailing*, September, 1936.

NEW SETS



6 STEWART WARNER

Stewart-Warner Corp.

Models: 1711, 1691.

Description: 1711, a.c.-d.c., 5 glass tubes, 5-in. speaker. Two-band American broadcast and police bands, also 49 meter band and from 2300-6400 kc.,

1691, all-wave duo circuit Ferrodyne chassis, 5 octal base glass tubes, 6-in. speaker, 6-in. airplane Magic dial.—*Radio Retailing*, September, 1936.



7 PILOT

Pilot Radio Corp.

Models: C-300, 150, X-73. **Description:** C-300, 11-tube, all-wave superhet console, a.c.-d.c., 525-23,600 kc., all important stations logged on dial, cathode ray tuning beacon, 12-in. concert range dynamic speaker, phonograph jack.

150, 5-tube, battery operated superhet in either black and walnut or ivory table cabinet.

X-73, 7-tube, battery operated allwave table set. Unusual sensitivity is obtained on all frequencies by the use of special stage of tuned r.f. preceding the heterodyne stage on the broadcast and shortwave band. 8-in. concert range speaker, phonograph jack.

Prices: C-300, \$139.50; 150,

\$39.90 in black and walnut and \$44.90 in ivory; X-73, \$64.50.—*Radio Retailing*, September, 1936.



8 GENERAL ELECTRIC

General Electric Company

Model: E-155.

Description: 15 metal tubes, 5 bands, Colorama dial, Personalizer, silent tuning, sentry box, sliding-rule tuning scale, 15-in. stabilized dynamic speaker, music-speech control, allwave. Cabinet is thoroughly custom in design and finished in two-tone walnut.—*Radio Retailing*, September, 1936.



9 RADIOBAR

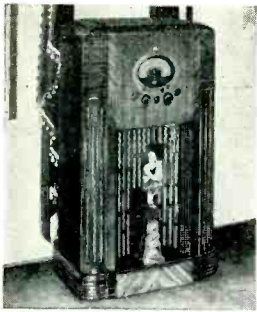
Radiobar Company of America

Models: Radios, phonograph combinations and automatics with cocktail equipment.

Description: Six standard models and two combinations. All standard models may be had in antique white trim finish at slight additional charge. Philco Radio chassis throughout. Complete cocktail equipment included.

Prices: 6 standard models range from \$140 to \$429 and the combinations are \$895 and \$795.—*Radio Retailing*, September, 1936.

These new items may be just the hypodermic your market needs



11 FAIRBANKS-MORSE

Fairbanks, Morse & Co.

Models: Farm Radios.

Description: 2-volt farm set, self contained, in a compact table cabinet. 4-tube superhet. 540-1,750 kc.

Model 73C3B, 6-tube, 6-volt superhet console, 540-1,750 and 2350-23,500 kc.

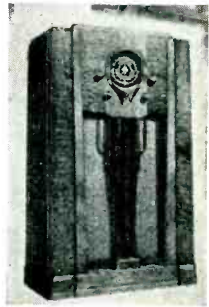
Model 43C1B, 4-tube, 6-volt superhet console, 540-1,750 kc.

Model 42C1B, 4-tube, 2-volt superhet console, 540-1,750 kc.

Model 43T1B, 4-tube, 6-volt superhet table set, 540-1750 kc.

Model 73T3B, 7-tube, 6-volt compact, 540-1,750 and 2,350-23,500 kc.

All farm radios have new Hi-Flux speaker. Cabinets are strictly moderne in line in a variety of finishes and woods.—*Radio Retailing*, September, 1936.



10 MAJESTIC

Majestic Radio and Tel. Corp.

Models: 1937 line of radios.

Description: Model 76, 7 tubes, 3 tuning bands, radio beam tuning on all bands, radio eye, illuminated tone control position indicator,



8 in. Super Coltura speaker, edge raylighted glass tuning dial, sterling chrome and black crystalline finished chassis, lay-down table cabinet.

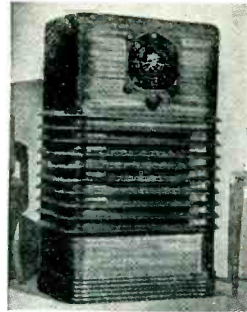
Model 1250, 12-tube console, 5 tuning bands, including ultra shortwave and long-



wave weather) radio beam tuning on all bands, radio eye, high fidelity, 15 in. auditorium speaker, edge raylighted glass tuning dial, Gyro rapid tuning 32 to 1 ratio, acoustically treated cabinet interior.

Model 85, 8-tube upright table set, 3 tuning bands, radio beam tuning on all bands, radio eye, high fidelity, 8-in. speaker, edge raylighted glass tuning dial, Gyro rapid tuning 16 to 1 ratio, acoustically treated cabinet interior.

Prices: \$14.95 to \$139.50 — *Radio Retailing*, September, 1936.



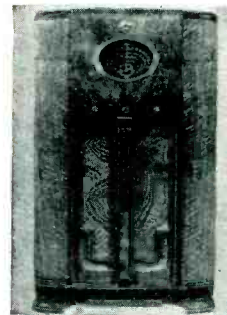
13 ZENITH

Zenith Radio Corporation

Model: 10S 157.

Description: 10-tube superheterodyne, triple filtering, metaglass tubes, 12-in. speaker, split second station relocater, lightning station finder, target tuning, over-tone amplifier.

This set features Zephyr streamlining which is used in several of the Zenith models this season. Also found in other sets in the line are: acoustic adapter, fidelity control. An arm chair radio is also included. Certain cabinets may be had in ebony, bone white and maple at slight extra cost.—*Radio Retailing*, September, 1936.



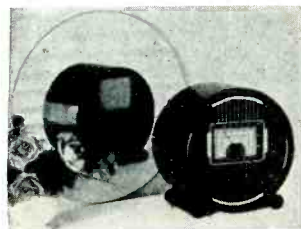
12 WILCOX GAY

Wilcox-Gay Corporation

Models: A17, A20.

Description: A-17, 6 tubes, 3 bands for a.c. or d.c. 6½ in. speaker. Ebony cabinet, circular design. Model A-20, 8-tube console, 12-in. auditorium speaker, eye-line tuning, a.c., metal tubes, triple tone dial, cleared channel selection.

Price: A-17, \$36.95; A-20, \$69.95. — *Radio Retailing*, September, 1936.



15 SPARTON

Sparks-Withington Company

Model: 1867.

Description: This is a Trio-lian model with 18 tubes, three speakers, all wave, in a gold leather and walnut cabinet.

The "Photochromatic" dial used on some of the sets blends perfectly with the cabinet when not in use, that is, not illuminated. This is due to the fact that the figures are photographed with crystal legibility on crystal clear glass. Tone expansion is another feature and the "Viso-Glo" tuning device facilitates accurate tuning. The round glass set introduced last year is being continued.

Price: 1867, \$300.—*Radio Retailing*, September, 1936.



16 MOTOROLA

Galvin Manufacturing Co.

Models: 50, 60, 60A, 80, Golden Voice auto-radios.

Description: 50, 6 tubes; 60, 6 tubes; 60A, 6 tubes; 80, 8 tubes; Golden Voice, 10 tubes.

All sets tune from 530-1600 kc. and have an intermediate frequency of 262.

Prices: 50, \$39.95; 60, \$49.95; 60A, \$54.95; 80, \$67.50; Golden Voice, \$89.50.—*Radio Retailing*, September, 1936.

14 WESTINGHOUSE

Merchandising Headquarters, Westinghouse Radio

Models: WR-214, WR-315.

Description: WR-214, 10-tube 4-band vertical table set, spectrum dial, precision tuner, eye and hand, station stabilizer.

WR-315 has improved precision tuner, eye and hand, spectrum dial, auditorium speaker, all metal tubes, and covers the standard police, amateur, aviation and principal short wave bands.—*Radio Retailing*, September, 1936.

17 HOWARD

Howard Radio Co.

Models: HA-6, 68.

Description: HA-6, auto-radio, 540-1,500 kc., 6 tubes. 68, table and console, 540-18,000 kc., 6 tubes.—*Radio Retailing*, September, 1936.

It costs you nothing to keep up to date. Circle the numbers, sign and mail



18 BELMONT

Belmont Radio Corp.

Models: 586J, 601F, 786, 1170, 878, 787, 778A.

Description: 586J, 5 tubes, 535-1,720 and 2,280-6,600 kc., table set.

601F, compact, 6 tubes, 535-1,720 kc.

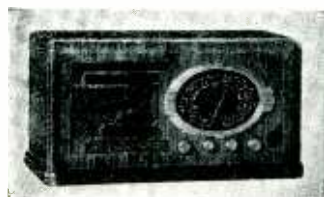
786, 7 tubes, 535-5,500 kc. and 5.2 to 18.3 mc., table set.

1,170, console, 10 tubes, 535-5,300 kc. and 5.2-18.1 mc.

878, console with recessed speaker tone chamber, 8 tubes, 535-5,300 kc. and 5.2 to 18.1 mc.

787 console, 7 tubes, 535-5,500 kc. and 5.2 to 18.3 mc.

778A, compact, 7 tubes, 535-5,300 kc. and 5.2-18.1 mc.—*Radio Retailing*, September, 1936.



19 ARVIN

Noblitt-Sparks Industries, Inc.

Model: 467.

Description: 4-tube, a.c. superhet, 550-3700 kc., 5-in. speaker. Available in walnut, antique white or maple for use in bedrooms, social rooms, offices, children's rooms, etc.

Price: \$24.95.—*Radio Retailing*, September, 1936.



20 CROSLLEY

Crosley Radio Corporation

Models: 699, 495.

Description: 699 console, 6 glass tubes, 540-18,000 kc., illuminated Magna ceramic dial, time log tuning, high fidelity, vibra acoustic sounding board, triple-twin output.

495, table set, 6 tubes, 540-18,000 kc., Magna ceramic dial, recess speaker grille panel of walnut.

Multivox control, fidelity control, vibracoustic floating sounding board, cardiamatic units are to be found in many models.

Prices: 699, \$69.95; 495, \$49.95.—*Radio Retailing*, September, 1936.



21 SIMPLEX

Simplex Radio Company

Models: Z, Z De Luxe, NT.

Descriptions: Model Z comes in a burl walnut bakelite finished steel cabinet. The de luxe model is housed in a satin finish striped walnut cabinet. Both are the lay-down table type. 4 tubes for a.c.-d.c. operation. 550-1750 kc. Model



NT, table and console, is a 10-tube all-wave superhet with Magic Eye. Covers all wave bands from 540-19,000 kc. continuously. The extra large airplane dial is calibrated in kilocycles and meters and the names of the countries are included.

Prices: Z, \$12.45; Z de luxe, \$13.25; NT table, \$49.95; NT console, \$69.95.—*Radio Retailing*, September, 1936.



22 EMERSON

Emerson Radio & Phonograph Corp.

Model: L-143, L-141.

Description: L-143, 5-tubes, a.c. superheterodyne, Micro-selector, 6½-in. dynamic speaker, Gemloid dial. Phonograph has efficient electric motor for a.c. operation. Plays 10-in. and 12-in. records. American, foreign and police reception.

L-141, 5-tubes a.c., Micro-selector, 6½-in. speaker, Gemloid dial. American, foreign and police reception.

Prices: L-143, \$59.95; L-141, \$39.95.—*Radio Retailing*, September, 1936.



23 PRATT

Howard A. Pratt

Models: Mirror glass radios.

Description: Blue, rose, crystal, green, amber, gold and gunmetal glass cases. Top panel may be monogrammed. 6 tubes (1 metal, 5 glass), superhet, short and long wave, a.c.-d.c., illuminated dial.—*Radio Retailing*, September, 1936.



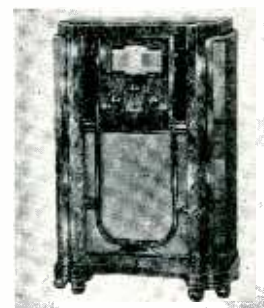
24 STROMBERG-CARLSON

Stromberg-Carlson Mfg. Co.

Models: 160L, 145P.

Description: 160L, 5-range, high fidelity, acoustical labyrinth, metal tubes, trifocal tuning; de luxe edge lighted Selectorlite dial, micrometer sub-dial.

145P, radio and automatic phonograph, four range, high fidelity, acoustical labyrinth, metal tubes, trifocal tuning. Shifts and plays records of any make, 10 or 12 in. This model combines a lowboy for the phonograph mechanism with a radio set in the "column" cabinet.—*Radio Retailing*, September, 1936.



25 UNIVERSAL

Universal Battery Co.

Models: 6, 32 and 110 volt sets.

Description: 5, 6, 7 and 8 tube table and console models. 5-tube sets cover



500-4,000 kc. The 6, 7 and 8 tube models also have the 18-6 mc. band. Meta-glass tubes. Cathode ray tuning in the larger sets. Permanent magnet dynamic speaker in the 6-volt models. All cabinets have modernistic lines.

Prices: Range from \$29.50 to \$90.—*Radio Retailing*, September, 1936.

Your entire organization should be familiar with these new products



Scoop!

Majestic

The Plus Radio

MIGHTY MONARCH OF THE AIR

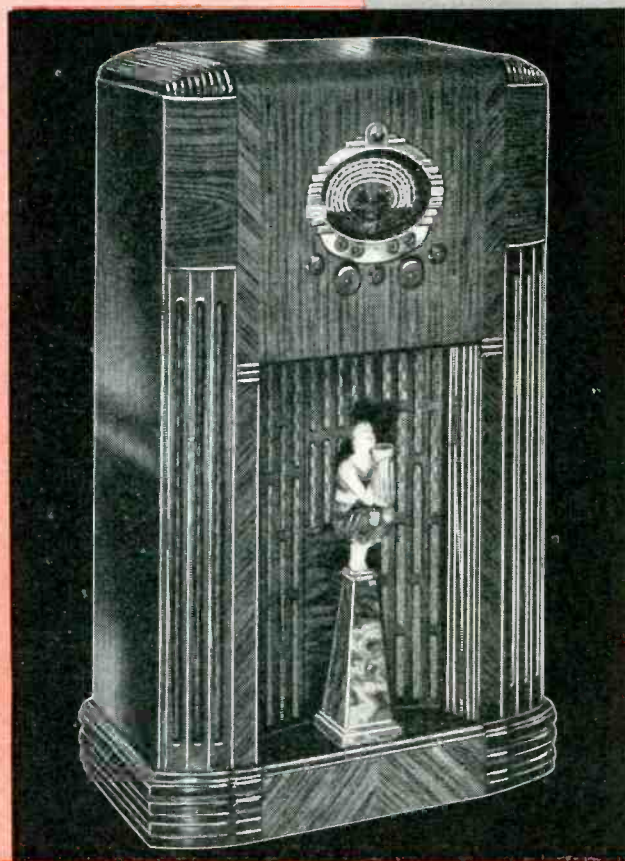
Scoops the World

WITH THE

NEW 1937 SETS

MAJESTIC... *The Plus Line*... gives the public every important scientific feature to be had in any radio set made, *Plus*... additional improvements in design, construction and performance offered exclusively by Majestic.

Irresistible eye-appeal is paralleled by matchless performance, *Plus* hitherto undreamed-of values in each of the fifteen super-powered "De Luxe" models. Every model is a custom-built job, but competitively priced to put it within the reach of the masses. The cabinets are objets d'art... breath-taking beauty that will win the buying preference of all classes of society. Years ahead of the industry, Majestic leadership is destined to reach new high levels that will amaze the radio world. *Investigate! Phone, wire or write today!*



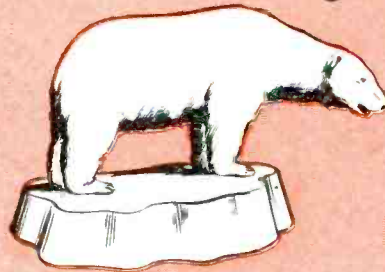
Majestic **RADIO & TELEVISION CO.**



Sensational NEWS FOR THE RADIO DEALER

Majestic . . . *The Plus Line* . . . gives you a "Plus" profit in two different ways. Sold direct from the factory to you means a higher profit margin. Distributed by only a few dealers in each territory assures you greater sales volume at regular list prices; no sales lost through destructive price-cutting. The Majestic sales policy gives you absolute profit protection; offers you the industry's greatest opportunity for building a permanent money-making business on a sound basis. The revolutionary merchandising plan back of the Majestic Line guarantees you both immediate and steadily growing future sales volume . . . at a substantial profit per sale . . . on a scale that will paralyze your competition. Get the facts at once. *Telephone or wire us NOW!*

Majestic



MIGHTY MONARCH OF THE ARCTIC •

Majestic Refrigerators are as outstanding in their field as the radio sets incorporated in them are basic refrigeration improvements invented, developed, tested and perfected during the past three years by the world's outstanding scientists and engineers.

SEE THE *Majestic* EXHIBIT
AT THE NATIONAL EXPOSITION
NEW YORK, GRAND CENTRAL PALACE

MORE THAN 5,000,000
Satisfied Majestic Users

MORE THAN \$29,000,000
Spent for Advertising

600 W. ADAMS ST. CHICAGO, ILL. **FACTORY, MARION, IND. N.Y. OFFICE - 315 BROADWAY**



26 CLIMAX

Climax Radio & Television Co.

Models: New line of radios.
Description: A complete and comprehensive line of table sets for a.c.-d.c. operation. All cabinets are designed along modernistic lines and may be had in both the lay-down and upright table styles. 4 to 7 tube jobs available. In the de luxe line of a.c. sets will be found the following features: "Monovision" which offers at one glance visible indication of tuning, tone, volume and wave band; electronic ray tuning. Battery operated sets are also included in the line.—*Radio Retailing*, September, 1936.



27 GRUNOW

General Household Utilities Corp.

Model: 733.
Description: 7-tube all-wave, clock type tuning. 12-in. speaker, 6-in. airplane type dial, 550-18,000 kc. "Teledial" tuning, patterned after a telephone dial, is featured this season in some of the Grunow sets. 36 sets make up the complete line, six of which are for farm, camp or boat use. Metal tubes are employed in many models. Two-thirds of the line are consoles, following the trend towards larger sets. Electric eye tuning makes its appearance on the 7, 8, 9-tube sets.—*Radio Retailing*, September, 1936.

28 DeWALD

Pierce-Airo, Inc.

Models: 622, 619, 618.
Description: 622, 6-tube universal superhet, 175-550 meters.
 619, 6-tube a.c.-d.c., 75-555 meters.
 618, 6-tube, a.c.-d.c., 18-52, 60-555 meters.
 All models also available for long-wave operation at \$1.75 additional.
Prices: 622, \$25.75; 619, \$27.50; 618, \$37.25.—*Radio Retailing*, September, 1936.



29 MARCONIPHONE

Marconi Bros., Inc.

Models: Portable automatic combination.
Description: A.c.-d.c. radio phonograph combination with automatic record changer in a console cabinet. Radio uses nine tubes, and receives both standard and European wavebands. Automatically changes eight 10-in. Plays 12-in. records. Repeats any record. Several other automatic combinations in the table, console and portable styles are made.—*Radio Retailing*, September, 1936.



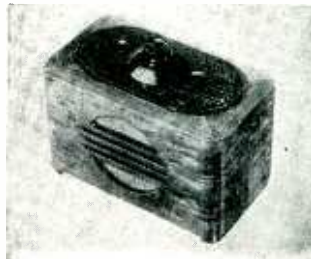
30 GAROD

Garod Radio Corp.

Models: 370C, 4110, 4110-LC.
Description: 370C, 7-tube, a.c. 3-band laydown table set. Range 16-53, 75-555 meters. Polychromatic dial scale, octal tube sockets.
 4110, 11-tube, a.c. 4-band



upright table. 16-555 and 870-2060 meters. Centro-Master automatic control unit, improved Vision Master.
 4110LC, 11-tube, 4-band phonograph combination. Supersensitive balanced electro-magnetic pick-up and powerful a.c. motor. Also available with automatic record changer to play 8 10-in. records continuously without attention. 12-in. records manually.—*Radio Retailing*, September, 1936.



31 PHILCO

Philco Radio & Television Co.

Models: 604C, 604X, 116X De Luxe.
Description: 604C, 5 tubes, two tuning ranges. Has full vision tuning with dial and all controls mounted on top of the set. Color station indicator with foreign stations named.
 604X, 7 octal base tubes, console, foreign tuning system, color dial, inclined sounding board, shadow tuning, concert grand electro dynamic speaker. Three tuning ranges.
 116X De Luxe, high fidelity audio system, 15 tubes, 5 tuning ranges, acoustic clarifiers, inclined sounding board, twin tone controls, automatic tuning by which favorite American stations are tuned in by twirling a dial.
Prices: 640C, \$39.95; 640X, \$89.95; 116X, \$195.—*Radio Retailing*, September, 1936.

32 RCA VICTOR

RCA Mfg. Company, Inc.

Model: 6T2.
Description: 6 tube, 3 band, metal tubes, 540-18,000 kc., 8-in. speaker, edge lighted dial, phonograph connection, automatic tone compensation. There are 28 models under \$100 in the new line and several sets go down to 60,000 kc. where the two-way po-

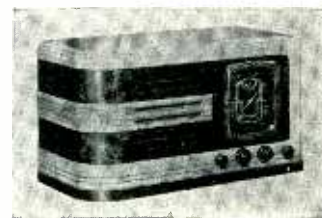


lice conversations may be heard. Several table models are available in white for bedroom or kitchen use. The complete line includes 8 consoles, 17 table sets, 3 combinations, a high fidelity phonograph, a radio record player and 4 farm sets.—*Radio Retailing*, September, 1936.

33 TIFFANY-TONE

Herbert H. Horn Mfg. Co.

Models: 83W, 62, 83C.
Description: 83W, 8-tube, 3-band a.c. allwave superhet. 6-in. electrodynamic speaker, large "E-Z-tune dial" Magic Beacon tuning, metal tubes. Walnut and antique white table cabinet.
 62, 6-tube, two-band a.c. set with 6-in. speaker. "E-Z tune" dial, "G" type tubes. "Laydown" cabinet.
 83C, 8-tube, 2-band a.c. all-wave console, 12-in. speaker, 8-in. oval "E-Z tune" dial, magic beacon tuning, metal tubes.
Prices: 83W, \$46.95; 62, \$31.95; 83C, \$69.95.—*Radio Retailing*, September, 1936.



Use the front and back cover cards to obtain more information, free

THE PUBLIC'S MAGIC KEY TO ENTERTAINMENT
IS YOUR

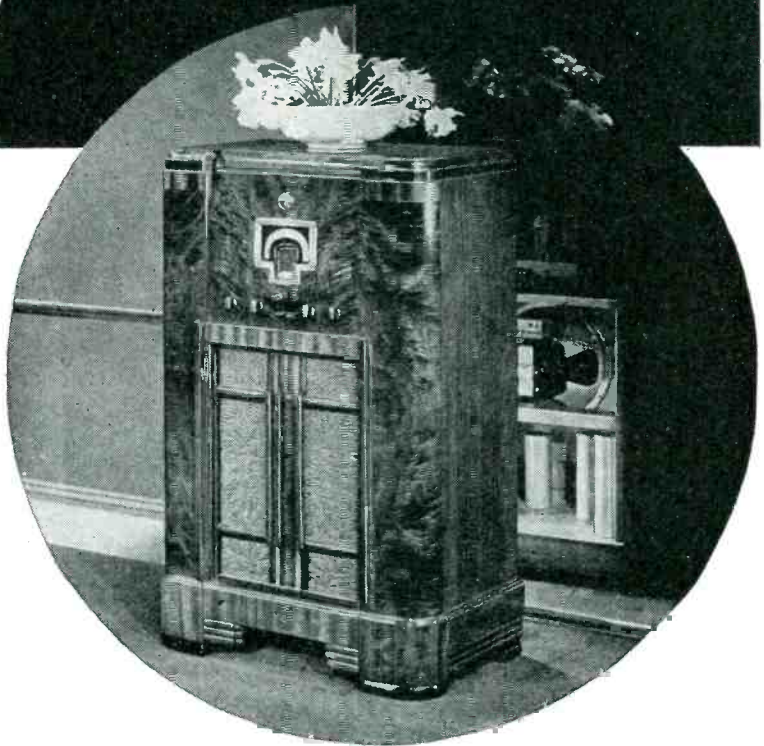
Magic Key to Profits!

... RCA Victor's outstanding Sunday radio program turns listeners into prospects ... sends them to YOU... to BUY!

EVERY Sunday afternoon RCA Victor sponsors the Magic Key radio program—a full hour of diversified entertainment heard by millions throughout the nation. And every Sunday RCA Victor sends powerful sales messages into the homes of this vast audience—messages that create new prospects—send them marching to your store—to BUY!

One dealer in Dallas told us recently that the Magic Key program had led directly to six orders—all for high-priced sets—and one for the most expensive instrument in the 1937 line! And this is but a typical example!

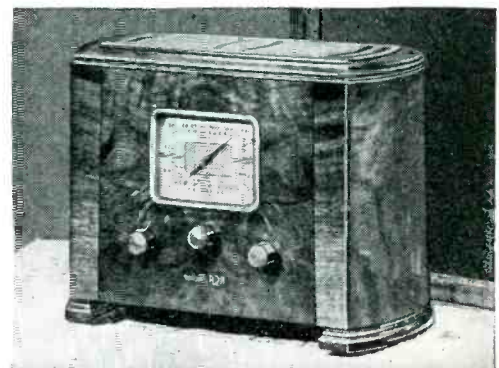
It will pay you to regard the Magic Key program as *your* Magic Key to Greater Profits. Back up this broadcast and the advertising in national magazines with the many sales helps RCA Victor makes available to you. Feature the great 1937 RCA Victor radios... EXTRA VALUE SERIES of 28 models under \$100... MAGIC VOICE SERIES from \$129.95 up. Push them for all they're worth—and they'll be worth plenty to you!



MAGIC VOICE SERIES... Model 9K-2, console with Magic Voice, Magic Brain, Magic Eye, RCA Metal Tubes. A 9-tube, 5-band superheterodyne. Foreign, domestic, police, aviation, amateur, U. S. weather reports. Phonograph connection and 13 other important features. . . \$129.95

EXTRA VALUE SERIES... Model 5-X. 2-band table set for AC or DC. Domestic programs, short wave (49m.), police, aviation, amateur calls. \$32.95

All prices f.o.b. Camden, N. J.
(Subject to change without notice.)



RCA Victor

RCA Manufacturing Co., Inc.,
Camden, N. J. A service of the
Radio Corporation of America



THROUGH THE YEARS IT HAS ALWAYS BEEN RAYTHEON'S POLICY TO PROTECT ITS DEALERS AND JOBBERS THROUGH A RIGID RETAIL PRICE SETUP. RAYTHEON'S TUBES ARE FAIRLY PRICED TO GIVE RAYTHEON DEALERS REAL PROFIT PER TUBE OVER OTHER TUBE LINES. BECAUSE OF RAYTHEON'S UNUSUALLY HEALTHY GROWTH, THE SALE OF RAYTHEON TUBES HAS NEVER BEEN "FORCED". RAYTHEON TUBES ARE NOT ADVERTISED AT CUT PRICES.

TO AID RAYTHEON DEALERS IN FULLY CAPITALIZING ON THE TREMENDOUS PUBLIC ACCEPTANCE OF RAYTHEON'S QUALITY AND NAME, OUTSTANDING SELLING HELPS ARE SUPPLIED RAYTHEON DEALERS, INCLUDING SIGNS, POSTERS, BANNERS, COUNTER CARDS, WINDOW DISPLAYS, NEWSPAPER MATS, REPLACEMENT CHARTS, TECHNICAL DATA SHEETS, ETC.

WRITE RAYTHEON TODAY FOR YOUR SUPPLY OF THESE AIDS TO GREATER TUBE PROFITS.



THE MOST COMPLETE LINE—ALL TYPES OF GLASS, OCTAL BASE, METAL AND AMATEUR TRANSMITTER TUBES

RAYTHEON PRODUCTION CORPORATION

420 Lexington Ave., New York, N. Y.

55 Chapel Street, Newton, Mass.

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555 Howard Street, San Francisco, Calif.

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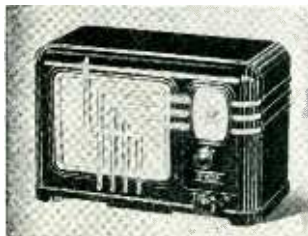


34 FADA

Fada Radio & Electric Co.

Model: 212C, 260D.
Description: 212C, 12 metal tubes, all wave, Phantom Flash-O-Graph tuning system, ultra hi-frequency band, "minute log" edge lighted airplane dial, free-wheeling tuning, 12-in. speaker.
 260D, 6 tubes, Universal black Bakelite cabinet trimmed with chromium. American and police broadcasts. Built-in antenna. 5-in. speaker.
 Fada is laying special stress this season on its Bakelite and Plaskon models which are available in walnut, black, ivory, ivory-and-gold, black-and-chromium, etc.

Prices: 212C, \$149.50; 260D, \$24.95.—*Radio Retailing*, September, 1936.



35 AUTOMATIC

Automatic Radio Mfg. Co., Inc.

Model: A5, J50, J60, J80, F10, C4, S6, E6, T.
Description: A5 auto radio, 5 tubes; J50 auto, 5 tubes; 160 auto, 6 tubes; J80 auto, 8 tubes; F10 auto, 5 tubes. C4, table, 540-4,400 kc., a.c., d.c., 4 tubes; S6, table, 545-4,200 a.c., d.c., 6 tubes; E6, table, a.c., 550-1,500 and 55,000-15,600 kc., 6 tubes; T, table, 540-4,400 kc., a.c., d.c., 5 tubes.—*Radio Retailing*, September, 1936.

36 CASE HALLICRAFTERS

Case Hallicrafters Corp.

Models: 601, 701, 801, 802, 1001, 1101, 1102, 58.
Description: 601 console, 550-18,000 kc., a.c., 6 tubes; 701 console, 540-18,000 kc. a.c., 7 tubes; 801 console, 540-18,000 kc., a.c., 8 tubes; 802 console, 540-18,000 kc., a.c., 8 tubes; 1001 console, 540-18,000 kc., a.c., 10 tubes; 1101 console, 540-24,000 kc., a.c., 11 tubes; 1102 console, 540-21,000 kc., a.c., 11 tubes; 68, table, 550-18,000 kc., a.c., d.c., 5 tubes.
Prices: 601, \$49.50; 701, \$59.50; 801, \$69.50; 802, \$89.50; 1001, \$109.50; 1101, \$124.50; 1102, \$139.50; 68, \$29.95.—*Radio Retailing*, September, 1936.



37 SENGBUSCH

Sengbusch Self Closing Ink Stand Co.

Model: Radio Desk Set.
Description: Combination radio, clock, writing set and desk lamp. International Kadette chassis, Waltham, Seth Thomas or Lux electric or spring wound clocks. Plaskon or Bakelite cabinet in striking colors.
Price: \$39.50 to \$49.50.—*Radio Retailing*, September, 1936.

38 TRAV-LER

Trav-Ler Radio & Tel. Corp.

Model: 41.
Description: Deluxe cabinet, finished both front and back, illuminated wrist watch dial, a.c.-d.c., 4 tubes, 550-1750 kc.
Price: \$17.95.—*Radio Retailing*, September, 1936.



39 SENTINEL

Sentinel Radio Corp.

Model: 1937 line of radios.
Description: 70AC, 5 tubes, a.c., consolette, 540-1720 and 2300-2500 kc.
 52AT, 5 tubes, 540 kc.-18.1 mc, table.
 52ACT, same in consolette cabinet.
 52AC, same in console cabinet.
 52ATE, 6 tubes, 540 kc.-18.1 mc., automatic tuning device.
 46AT, 7 tubes, 540 kc.-18.1 mc, table.
 46AC, same in console.
 46ACE, 8 tubes, 540 kc.-18.1 mc, four all-metal tubes, tuning indicator, con-o'e.
 57ATE, 9 tubes, 530 kc.-20.5 mc, tuning indicator, 5 metal tubes, table.
 57ACE, same in console.
 47ATE, 11 tubes, 132-390, 535-6300 kc., 6.3-23.5 mc., tuning indicator, table.
 47ACE, same chassis in console.
Prices: 70AC, \$29.95; 52AT, \$29.95; 52ACT, \$39.95; 52AC, \$49.95; 52ATE, \$39.95; 46AT, \$49.95; 46AC, \$64.95; 46ACE, \$69.95; 57ATE, \$69.95; 57ACE, \$89.95; 47ATE, \$90; 47ACE, \$110.—*Radio Retailing*, September, 1936.

40 TROY

Troy Radio Co.

Model: 75PC.
Description: Portable phono-radio combination with RCA pick up. Removable top, five tube superhet chassis.
 Many of the sets in balance of line may be had in white. Cabinets are unusually modernistic in line.
Price: 75PC, \$44.95.—*Radio Retailing*, September, 1936.

41 ADMIRAL

Continental Radio & Tel. Corp.

Models: E325, "Leader".
Description: E325, 4-tube, 6-volt lay-down table set, 43-550 meters, 6-in. permanent magnet dynamic speaker, illuminated 5½-in. airplane dial, battery drain less than 1.2 amp.
 "Leader" console, tilt tuning, 11 metal tubes, 12-in. speaker, 16.4-550 meters.
Prices: E325, \$29.95; Leader, \$69.75.—*Radio Retailing*, September, 1936.



42 HALSON

Halson Radio Mfg. Corp.

Models: Line of radios.
Description: Model 05, midget, 5 tubes, a.c.-d.c., 540-4500 kc.; 100M, midget, 6 tubes, a.c.-d.c., 550-2500 kc.; 50RL, midget, 150-350 and 550-1500 kc. a.c.-d.c., 6 tubes; 60M, midget, 540-4500 and 5800-18,000 kc., a.c.-d.c., 7 tubes; 60L, midget, 150-350, 550-1550, 5800-18,000 kc., a.c.-d.c., 7 tubes; 606, midget, 550-4500, 5800-18,000 kc., a.c., 7 tubes; 6L6, midget, 150-350, 550-1550, 5800-18,000 kc., a.c., 7 tubes; 536, midget, 550-1750, 5800-18,000 kc., a.c., 5 tubes; 50X, midget, 550-2500, 5200-18,000 kc., a.c.-d.c., 6 tubes; 5LE, midget, 150-350, 550-1500 kc., a.c.-d.c., CW7 console, 550-4500, 5800-18,000 kc., a.c.-d.c., 7 tubes; 1900 console, 150-400, 550-42,500 kc., a.c.-d.c., 19 tubes; 1500, console, 150-400, 550-42,500 kc., a.c.-d.c., 15 tubes; 1100, console, 550-4500, 5800-18,000 kc., a.c.-d.c., 11 tubes; AM6C, console, 550-4500, 5800-18,000 kc., a.c., 6 tubes; 56U, auto, 550-1500.
Price range: \$22.50 to \$169.50. Auto-radio, \$36.25.—*Radio Retailing*, September, 1936.

Know as much about what's on the market as your competition

NEW ACCESSORIES



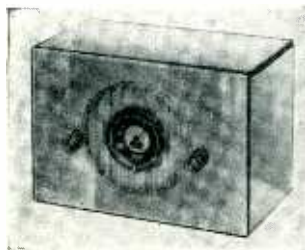
43 PHONETTE

Electro-Acoustic Products Co.

Model: Phonette.

Description: High quality radio attachment for reproducing musical recordings in combination with a radio. Consists of a constant speed self-starting motor, turntable and crystal pickup. A.c.-d.c. operation.

Also available, the Magnavox "Playfellow" a unique portable, designed for summer homes, college rooms, etc.; the Concerto, table model electric phonograph.—*Radio Retailing*, September, 1936.



44 SCHWARTZ

Schwartz Ornamental Glass Corp.

Model: Mirror radio cabinet.

Description: Mirror-covered radio boxes in various colors. Adapted to most any of the smaller sets. A large variety of grille designs.—*Radio Retailing*, September, 1936.

45 CRAM

George F. Cram Co.

Model: 310.

Description: 12-in. globe, glass ball, mounted on one-half meridian showing degrees, allowing ball to revolve like an ordinary globe. Can be illuminated at night for easier reading or decorative appearance.

Price: \$15.—*Radio Retailing*, September, 1936.



46 GENERAL ELECTRIC

General Electric Company

Models: Radio Time Clock.

Description: An ingenious time-switch clock with a dial which indicates time in important parts of the globe. The radio receiver, which plugs into the back of the clock, is switched on one-half minute before the desired program starts giving the set time to warm up. Molded case in mottled walnut finish. Self-starting.—*Radio Retailing*, September, 1936.

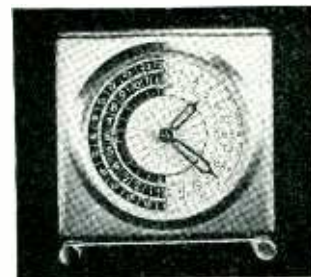


47 CLOK-TROLA

Clock Control Corporation

Model: Radio time clocks.

Description: Turns radio or other electrical devices on or off automatically as many times a day as desired. A time key for every half hour. Radio turns off automatically at the end of the period. That is if the seven o'clock key is set the radio goes off at 7:30. Three models are available, two square and the illustrated type.—*Radio Retailing*, September, 1936.



48 SKY PILOT

Sky Pilot Organization

Model: World-wide clock.

Description: For overseas listening, has a.m. and p.m. designations as well as the 24-hour figures for countries employing 24-hour time. Gives corresponding time throughout the world. Spring wound in a brushed brass case of modernistic design.

Price: \$3.95.—*Radio Retailing*, September, 1936.

49 ELECTROTONES

Harris Manufacturing Co.

Models: Six, Sixty, Sixty-Six.

Description: Six, record playing adaptor to convert a radio into a combination. Easily installed and of unusual design. Equipped with self-starting motor and improved crystal pick-up.

Sixty, record playing adaptor in the form of an occasional table to be placed near a chair. The lid is turned back exposing the record player on



the top. Two shelves are provided for records. Plays eight 10-in. or seven 12-in. records consecutively.

Sixty-Six, an attractive table model of modern horizontal design. Equipped with automatic record changer, plays eight 10-in. records or seven 12-in. records consecutively; has self-starting two speed motor with improved crystal pick-up, may be attached to the radio. The legs may be detached in a moment allowing the main body of the cabinet to be used as a table model and placed on the radio console or elsewhere in the room.

Prices: Six, \$39.50; Sixty, \$79.95; Sixty-Six, \$89.95.—*Radio Retailing*, September, 1936.



Does competition have you down? The answer may be here

The DEALER'S CHOICE for 1937— fast becoming the PEOPLE'S CHOICE, too!

*Early reports show astonishing
swing to Westinghouse*

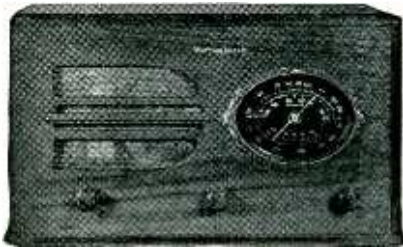


TABLE MODEL, WR-209. Standard and Police Bands, Spot-lite Tuning; Spectrum Dial.

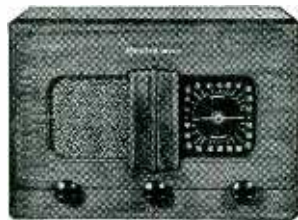
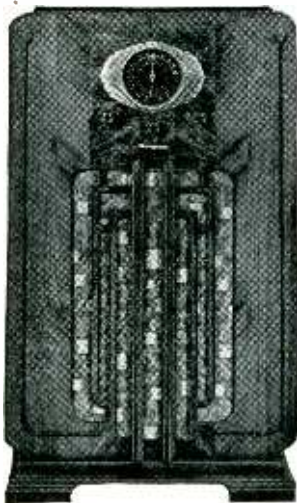


TABLE MODEL, WR-102. AC-DC. Standard and Police Bands.



CONSOLE, WR-310. Standard and Police Bands.



CONSOLE, WR-314. Weather, Police, Foreign and Standard Bands, Precision Tuner, Precision Eye, Precision Hand, Spectrum Dial.

Sales up all along the line

We promised you a Westinghouse landslide in 1937, and even this early in the campaign, our predictions are being borne out. State after state is reporting "sales up".

And why not? A pre-season poll of thousands of prospective radio buyers *told* us what the people wanted in a radio. We built the 1937 Westinghouse line accordingly. We built the *right* models, put in the *right* features, priced each set at the *right* level for profitable sales.

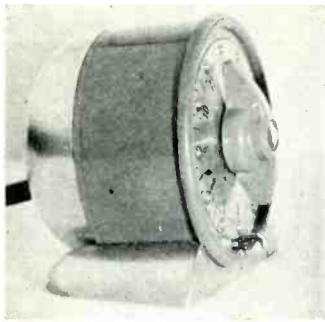
So, make the first move toward turning Westinghouse popularity into profits. For complete information, call your nearest Westinghouse Radio Distributor or write Merchandising Headquarters, Westinghouse Radio, 150 Varick St., New York, N. Y.

Feature Planks in the Winning Westinghouse Profit-Platform

| | | |
|------------------|------------------------------|------------------------------------|
| Precision Tuner | Station Stabilizer | Three-Position Bass Tone Control |
| Precision Eye | Dual Selector Drive | Three-Position Treble Tone Control |
| Precision Hand | Auditorium Speaker | High Fidelity Control |
| All-Metal Tubes | Push-Pull Output | Beam Power Amplifier |
| Spectrum Dial | Low Volume Bass Compensation | |
| Spot-lite Tuning | | |

Westinghouse

Radio



52 MAGIC LION

Magic Lion Manufacturing Co.

Device: Tuning indicator.

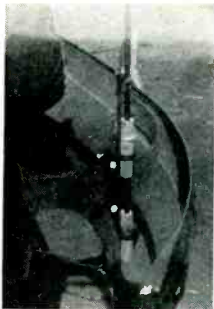
Description: 6E5, 6G5 or 2E5 tube housed in bronze-finish unbreakable accessory unit for attachment to receivers having automatic volume control.—*Radio Retailing*, September, 1936.

50 MARK-TIME

M. H. Rhodes, Inc.

Device: Series 4512 portable time switch.

Description: Automatic operation anytime within 12 hours, turns on or off at will of operator, direct reading dial, brown bakelite with chromium finish, complete with 6-ft. cord and series tap, rugged spring movement, device consumes no current, causes no radio interference, works on either a.c. or d.c. up to 10 amperes 125 volts.—*Radio Retailing*, September, 1936.

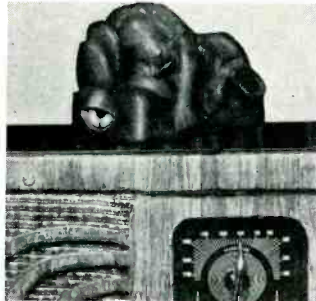


51 TOBE

Tobe Deutschmann Corp.

Device: Auto-radio antenna.

Description: Telescoping type rod designed to be fastened to rear bumper or other convenient point and extended upward, length when telescoped is 3-ft., length extended is 8-ft., equipped with rugged mounting bracket and necessary insulation, tunable for use as 5-meter transmitting antenna, no tools necessary for installation.—*Radio Retailing*, September, 1936.



53 TACO

Technical Appliance Corp.

Device: De Luxe self-selecting antenna system.

Description: Permits high efficiency reception of either standard broadcast or short-wave signals without manual switching, features armored aerial wire which has a special high-tension core around which copper conductors are grouped, low-loss cross-bar insulator at top of antenna transformer, set coupler.

Price: \$6.75.—*Radio Retailing*, September, 1936.



54 GEN-RAL

General Manufacturing Co.

Device: Number 45 allwave coil combination.

Description: Furnished completely shielded and wired, frequency range is 5 mc. to 16 mc., 1.6 mc. to 5 mc., 520 kc. to 1600 kc. and 145 kc. to 400 kc., in four bands.—*Radio Retailing*, September, 1936.



55 EMERSON

Emerson Radio and Phonograph Corp.

Model: Antenna Kit.

Description: All-wave, high fidelity antenna kit, for maximum sensitivity to short-wave broadcast, clarification on all wave bands, and automatic tuning of the antenna to the desired station.

Price: \$5.—*Radio Retailing*, September, 1936.



56 CORWICO

Cornish Wire Co.

Devices: Self-selecting impedance matching transformer, allwave antenna systems.

Description: Transformer (illustrated) comprises an arrangement of inductances and capacitances so engineered as to permit passage only of specific frequency to which associated receiver is tuned, designed to work with twisted-pair downlead. Noise-master antenna systems include models 14, 18 and 19, one non-selecting and two self-selecting types for allwave reception.

Prices: Transformers, 95c. Antenna type 14, \$6.75. Antenna type 18, \$3.40. Antenna type 19, \$4.30.—*Radio Retailing*, September, 1936.

57 WINCHARGER

Wincharger Corp.

Device: De Luxe model 37.

Description: 6-ft. Albers airfoil propeller, centrifugal airbrake governor and balancer, designed for low-speed charging, air-cooled, grease sealed ball bearings, front end commutator, easy access to brushes, collector ring of same design used on 32-volt units, 5½ ft. rigid angle iron tower, stationary tail vane, hand brake, ammeter, cut-out and panel, starts in 8½-mile wind.—*Radio Retailing*, September, 1936.



58 FILTERCON

Continental Carbon, Inc.

Device: Main line noise filter model F1005DH.

Description: Designed for connection between main line fuse plug and individual circuit fuse plugs, provided with mounting bracket for open panel installations, 4½ by 3 in. in diameter, conservatively rated to carry 10 amperes at 110 or 220 volts.

Price: \$5 list.—*Radio Retailing*, September, 1936.



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RADIO SERVICEMEN



Get this new radio book

FREE

Explains just how to spot and repair over 700 set troubles.

Saves your time! Saves your money!

Time-Saving Information

• Certain radio sets develop trouble peculiar to their particular type of circuit. Each month "Tricks of the Trade" explains how to locate and fix specific set failures. The following are examples of the curt, practical way Radio Retailing offers this vital information to you.

BREMER-TULLY. BRUNS-WICK S8

Bad volume control
Often due to fibre projecting too high, causing rotor arm to miss. Push fibre down before replacing control.

CLARION 60. 61

Set dead or very scratchy
Look for failure of special audio input transformer primary. Replace with same device or substitute resistance coupling. Tone will suffer if ordinary transformer is used for replacement due to special characteristics of original.

CROSLEY 143

Neon pilot lights when set switch is in Off position
Replace leaky 8 mike, 150 volt condenser.

MOTOROLA 77

Poor tone . . . Check to see if voice-coil or field wires have been reversed. This causes voice-coil form to become blackened and charred inside due to heat. If swollen, discolored appearance is noted replace.

RCA 120

Operates at low volume on strong signals, intermittently comes up to good volume
Check .05 condenser between center terminal of volume control and control grid lead of 2B7 second detector.

• Every issue of Radio Retailing will bring you more of these "Tricks". File them and in a short time with this FREE book you'll have a service manual of un-equalled value.

HERE at last is a trouble-shooting guide that will ring the bell with every serviceman and dealer in the radio game. It contains no useless description, no theories, no amateur data. Every single one of its 56-pages is packed with practical, hard-bitten "how" information that can be used profitably on your service jobs every day in the year. "Tricks of the Trade" is a service book that is different. Once you get your copy you won't part with it for a minute. This one book contains:

704 tested ways of finding and fixing the troubles in specific set circuits.

157 tube socket diagrams showing the connections for that many tubes.

Reference charts showing—the cost of electricity used in operating various appliances—the correct and incorrect way to install radio aerials—reception spectrum—etc.

• Every one of these "tricks" (see typical examples in column to left) were volunteered by

active radio men from their own experiences. Why spend hours testing and re-testing a balky set, when with this book, you can put your finger on the most probable cause of the trouble in a few seconds.

• These "Tricks" will show you how to spot a lot of troubles that won't show up in any test equipment. If you value your time and are interested in saving yourself a lot of headaches—get a copy of "Tricks of the Trade"—today. **IT IS FREE TO YOU** if you accept this offer now.

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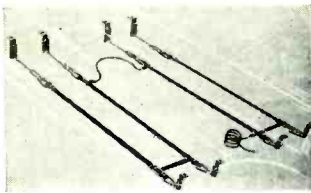
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59 INLANTENNA

Inland Mfg. Co.

Device: Auto-radio antenna.
Description: Designed for use beneath car, chain permits easy adjustment, positive lock insures tension, insulator links are rubber-moulded over bus tire cord, non-breakable and non-stretchable, continuous folded strip without joints, no leaks, rubber cover repels moisture, connections for shielded leadin and heavy duty cross lead are soldered, tested and sealed by rubber boots.—*Radio Retailing*, September, 1936.



60 CLAROSTAT

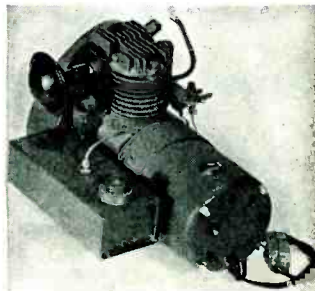
Clarostat Mfg. Company

Device: Line dropping resistor.
Description: Completely inclosed line resistor, the size and shape of which is identical with a standard metal tube casing and 8 prong socket, fully meets the Underwriters requirements as "live" parts are thoroughly insulated and covered. Available in sizes for practically any voltage drop for any combination of tubes or pilot lamps. Heat is kept above the chassis, thereby prolonging the life of condensers and resistors as well as reducing fire hazard.—*Radio Retailing*, September, 1936.

61 PIONEER

Pioneer Gen-E-Motor Corp.

Devices: Gasoline and wind-driven generators, genemotors, dynamotors, converters. (Typical Gas-driven machine and genemotor with and without filter illustrated).
Description: Cub type LB plants are available in 6 or 12 volt types with 200-watt output, push-button starting, battery ignition. Baby Junbo types are furnished to

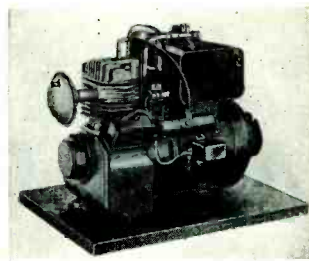


deliver 6, 12, 32 and 110 volts, wattage ratings from 150 to 250 watts. Blue Diamond types deliver 110 volts a.c. up to 300 watts. Gold Crown types deliver 32 volts up to 800 watts. Other available types deliver 110 volts a.c. up to 1500 watts. Gen-E-Motors are available with and without filters, for all ordinary d.c. inputs, outputs required for operating radios and sound equipment. Dynamotors operating from 6 volts and from 12 volt sources are available with outputs of 50 ma. to 32 amps., at 250 to 1000 volts. New Air-Flo generator now in production.—*Radio Retailing*, September, 1936.

62 SNYDER

Snyder, Inc.

Device: Auto-radio antennas.
Description: Line includes tur-top inverted channels, tur-top tubular channels, ski-pole, trombone, jr., du-pole trombone de luxe, all-metal plates, rubberset ski-poles, triangle cable kits and di-rod parallel kits.—*Radio Retailing*, September, 1936.



63 TINY-TIM

Continental Motors Corp.

Device: Portable, gasoline-driven power plant.
Description: Red Seal Continental engine, four-cycle air-cooled vertical cylinder, cooling fan built on crankshaft, aluminum die cast pistons, three rings, one-pint oil capacity, all moving parts automatically lubricated from crankcase, two quarts gasoline capacity, carburetor with needle valve adjustment, generator directly coupled to engine, pulley for V-belt on front end to drive small mechanical appliances, four-pole type generator with four brushes, 6 volts at 200 watts, 12-volts at 250 watts, electrically governed to operate at constant speed regardless of load.
Price: 6-volt unit, \$55 f.o.b. 12-volt unit, \$57.50 f.o.b.—*Radio Retailing*, September, 1936.



64 CIRCLE ESS

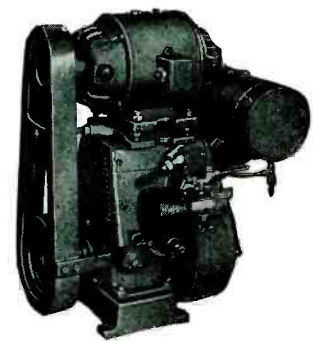
F. W. Stewart Corp.

Devices: Automobile radio control equipment.
Description: Complete line for various makes of cars and standard types for universal use.—*Radio Retailing*, September, 1936.

65 KATO

Kato Engineering Co.

Device: Air-charger.
Description: Self-governing propeller, simple adjustment permits varying speed over a considerable range, maximum of 12-amperes at 6 volts in moderate winds, begins charging at approximately 9 miles per hour, complete unit includes tower, generator, vane, propeller and meter panel, suitable for mounting on flat or peaked roof. Propeller available separately.—*Radio Retailing*, September, 1936.



66 JANETTE

Janette Manufacturing Co.

Device: Gasoline driven generating plants.
Description: Line includes models delivering either alternating or direct current from 250 to 5000 watts or volt-amperes, 250 watt plants are horizontal mounted, V-belt connected. 1000 and 1200 watt sizes are horizontal V-belt connected machines. Larger sizes are direct connected by means of a special, heavy duty flexible coupling.—*Radio Retailing*, September, 1936.

67 GEN-E-ROTOR

Gen-E-Rotor Co.

Device: Air-driven charger.
Description: 2500-watt, 32 and 110 volt d.c. devices, also suitable accessory batteries, towers and other associated equipment.—*Radio Retailing*, September, 1936.

Knowledge of new merchandise is power for the radio retailer



68 ATR

American Tel. and Radio Co.

Device: Line of automatic tapering battery chargers.

Description: ATR Standard charges at 4½ amps., ATR De Luxe charges at 6 amps., ATR Master charges at 10 amps. All completely equipped with polarized dash receptacle and plug, fuses, 9 ft. d.c. cord, 12-ft. a.c. cord, on-off toggle switch, all operate on 110 volts, 50-60 cycle a.c. and utilize dry disc, fullwave rectifiers.

Prices: Standard, \$9.67. De Luxe, \$11.45. Master, \$14.25.—*Radio Retailing*, September, 1936.



69 WILLARD

Willard Storage Battery Co.

Devices: 6 and 2-volt radio storage batteries.

Descriptions: 6-volt types from 102 to 119 ampere hours, 13 to 25 plates per cell, wood insulation, rubber containers. 2-volt types from 111 to 240 ampere hours, 13 to 27 plates per cell, wood insulation, composition and rubber containers. Both types have bail type handles, special tight-fitting noiseless radio terminals.—*Radio Retailing*, September, 1936.

70 LYNCH

Arthur H. Lynch, Inc.

Device: Line filter.

Description: Filterradio incorporates same principle as that used in design of Hi-Fi antenna systems, may be used on circuits carrying a kilowatt, for any type of line either a.c. or d.c. or a supply in which a motor generator or inverter is used, voltage limit is 250.

Price: \$5.—*Radio Retailing*, September, 1936.



71 RAY-O-VAC

Ray-O-Vac Company

Device: B-battery.

Description: New design with metal tops and plug-in feature, increased capacity, types 25, 35, 45 and 55 include these new features.—*Radio Retailing*, September, 1936.



72 EXIDE

Electric Storage Battery Co.

Device: Radio storage batteries.

Description: Complete line including models 6R-100, 6R-150, XH-21 designed especially for radio service. Model XH-21 illustrated.—*Radio Retailing*, September, 1936.



73 BURGESS

Burgess Battery Co.

Device: Waterproof "B" batteries.

Description: Protected against cell leakage and outside moisture, each cell individually wrapped in three layers of moisture-resistant paraffined paper, additional separation from other cells by paraffined inner layer, maximum insulation between cells to prevent stray current losses, individually sealed cells covered with pitch, heavy outside cartons also paraffined, double wax seal on top reinforced by gauze strip between wax layers.—*Radio Retailing*, September, 1936.

74 B-L

B-L Manufacturing Co.

Device: Auto-radio filterpac demonstrator power supply.

Description: Type 160-C4 permits operation of auto-radios equipped with new heater type tubes direct from any 110-volt, 60-cycle a.c. line, delivering 6.6 amperes d.c. at 6 volts.

Price: \$19.50.—*Radio Retailing*, September, 1936.

75 ATLAS

Atlas Resistor Co.

Device: Wire-wound tubular resistors.

Description: Complete line including adjustable, tapped, screw-base and non-inductive types, chrome-oxide heavy duty coating used.—*Radio Retailing*, September, 1936.

76 ONAN

D. W. Onan & Sons

Device: Model BC 6-volt battery charging-generating unit.

Description: Charges 6-volt batteries, supplies current for radio and lights, supplies belt power for operating small machinery. Gasoline engine operates at 1800 to 1900 r.p.m., overall width is 12 inches, length 13 inches, height 14 inches, weight 45 lbs. Equipped with carrying handle, charge indicator. Generates 150 to 200 watts, includes muffler, battery leads and clips, rubber mounting pads, complete ready to operate.

Price: \$57.50.—*Radio Retailing*, September, 1936.



77 RUBYFLUID

Ruby Chemical Co.

Device: Soldering paste, acid-core solder, rosin-core solder.

Description: Paste does not corrode or give off objectionable fumes, does not harden in container. Solder is 40/60 mixture of tin and lead, 11-gauge, self-fluxing, does not sputter when heat is applied, flows smoothly.—*Radio Retailing*, September, 1936.

78 VICTORY

Victory Manufacturing Co.

Device: Auto-radio antennas.

Description: Single and double trombone types for mounting beneath car, weatherproofed, cadmium-plated.

Prices: Improved model, \$2.75. Twin unit, \$2.75 per pair.—*Radio Retailing*, September, 1936.

Need more information about the Manufacturer's Policy? This will be supplied too

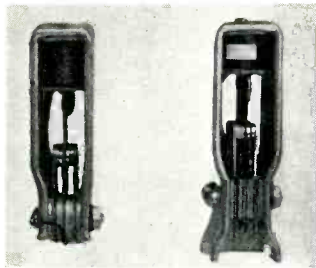
NEW PARTS

84 THORDARSON

Thordarson Electric Mfg. Co.

Device: Tru-fidelity transformers.

Description: Terminal board shield cap effectively prevents pickup of stray voltages in connections and leads, both terminal board shield cap and transformer bottom plate are ground to fit the case body and so increase shielding efficiency, case body is of special cast metal with openings only for leads, non-magnetic clamps hold core, all connections brought out to mounting lugs set on heavy bakelite strip, extra row of terminals provided for both primary and secondary sides, coils are of hum-bucking construction. Available in a complete range of types for all classes of audio work.—*Radio Retailing*, September, 1936.

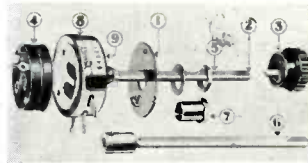


81 MALLORY

P. R. Mallory & Co., Inc.

Devices: Replacement condensers, vibrators.

Description: 69 replacement condensers in line service 100 per cent of the sets using electrolytic condens-



82 YAXLEY

P. R. Mallory & Co., Inc.

Device: Silent replacement volume control.

Description: Incorporates design features to minimize time required for replacement, new roller-that-doesn't-roll contact principle gives true and uniform area of contact at all points, adjustable grid-bias provision, flat on shaft to take standard push-on or set-screw knobs, knob speaker, attachable switch, 3-inch long aluminum shaft, extension shaft available, special hex shoulder nut, completely enclosed, highly plated finish.—*Radio Retailing*, September, 1936.

79 RADIART

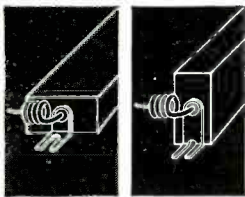
Radiart Corporation

Devices: Vibrators for replacement or original equipment use.

Description: Types available include synchronous with condenser, series, half-wave split reed synchronous, type 2867, type 3200 utility, non synchronous standard, non-synchronous heavy duty, synchronous large frame, synchronous small frame, synchronous split reed.—*Radio Retailing*, September, 1936.



ers, available in round cans and cartons, incorporate heavy metal seal around actual unit inside carton to protect against humidity, surge-proofed by a new development that makes use of constant-wattage characteristic of radio power packs. Replacement vibrators are set-tested, minimum number of units services maximum number of receivers, incorporate selected pure tungsten contacts, special high tensile reeds, pure rubber insulating tubing, flexible tinned copper lead wires, low loss in magnetic circuit, high contact pressure.—*Radio Retailing*, September, 1936.

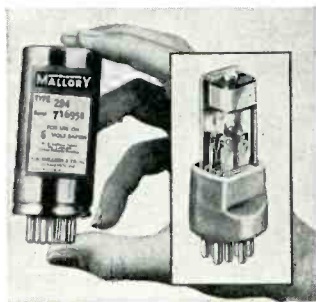


80 SOLAR

Solar Manufacturing Corp.

Device: Little Giant dry electrolytic condenser mounting.

Description: Flex-O-Mount adjustable mounting for this line of condensers is a movable universal tab which makes the condenser actually reversible, may be mounted flat or on edge, designed for tight corners where mounting on leads is not advisable.—*Radio Retailing*, September, 1936.



85 UTAH

Utah Radio Products Co.

Devices: Replacement speakers, vibrators, transformers.

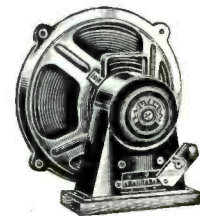
Descriptions: Speaker line includes replacement types for existing home and auto-radios, both dynamic and

83 MICAMOLD

Micamold Products, Inc.

Devices: Paper, mica, dry electrolytic condensers and carbon and wirebound resistors.

Description: New line includes bakelite-moulded paper condensers and similarly protected wirewound resistors. Condensers made in popular capacity values at ratings up to 1000 volts, wirewound resistors resemble the usual mica condensers in appearance and come in all usual values in wattage ratings up to 2 watts.—*Radio Retailing*, September, 1936.



magnetic. Vibrator line offers complete replacements for all existing receivers using power supplies of this type. 15 vibrators cover the principle replacement jobs. A complete line of power and audio transformers and chokes for amateur transmitters, sound systems, set builders and servicing is also offered.—*Radio Retailing*, September, 1936.

Circle, sign, mail. We'll give you the address of the nearest distributor

86 JEFFERSON

Jefferson Electric Co.

Device: Line of plastic-sealed transformers.

Description: Audio and output transformers, chokes, machine-wound coils, vac-



uum-dried and impregnated, cores of silicon steel laminations, housed in special moulded plastic of high melting point, insures positive protection against moisture and condensation, plastic is non-brittle, will not chip or crack.—*Radio Retailing*, September, 1936.

87 IRC

International Resistance Co.

Device: 2-watt type BT-2 insulated resistors.

Description: Complete sealing against moisture, lower operating temperatures with proportionately higher wattage dissipation, low noise level, 1½ long by 5/16 diameter, made in all practical ranges.

Price: 30c each, net to the trade.—*Radio Retailing*, September, 1936.

88 ALADDIN

Aladdin Radio Industries Co.

Devices: Polyiron core R. F., I.F. and choke coils, magic wand.

Description: High gain, High Q.I.F., R.F. coils single or double tuned providing high output from a single stage of I.F. or R.F. Adjustable polyiron core R.F. chokes, critical choke values can now be obtained by this method, available 2.1 mh. to 30 mh., list \$90

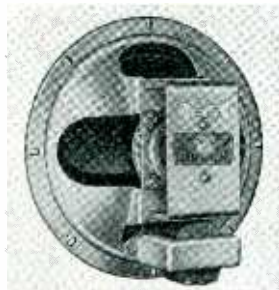
to \$1.25. Magic Wand, an aligning tool extremely useful to the serviceman for accurately checking I.F., R.F. stages in the least possible time, list \$1.00.—*Radio Retailing*, September, 1936.

89 SPRAGUE

Sprague Products Co.

Device: New line of condensers.

Description: Features use of specially treated tube and sealing compound to insure freedom from humidity, applied to manufacture of entire line of paper, foil and gauze condensers in both 600 volt and 450 volt types. Various new 450 volt types have been added to round out list of condensers available. Prices on many units of 600 line reduced. Type EC, TM, BH and BT units now made of uniform 2½ inch length for quick easly mounting with newly developed mounting strap, strap matches mounting holes in most existing receivers. — *Radio Retailing*, September, 1936.

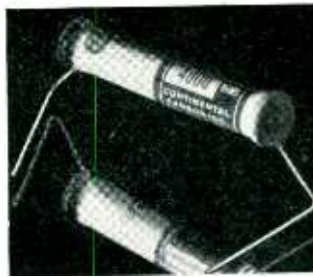


90 PERM-O-FLUX

Continental Motors Corp.

Device: Permanent-magnet dynamic speakers.

Description: Employs magnetic material having extremely high flux density, voice-coil suspended in rear by spider mounting and in front by an additional suspension disc, available in all standard sizes, for use in home type receivers and auto-radios as well as sound equipment, available with or without transformers, with or without cabinets or baffle mountings for car use.—*Radio Retailing*, September, 1936.



91 CONTINENTAL

Continental Carbon, Inc.

Devices: Solid-molded Carborite resistors.

Description: 1000-volt insulation of double ceramics, resistance values pre-aged and permanent, firmly bonded leads, stock values from 10 ohms to 10 megohms.

Prices: 5-watt, 50c., 3-watt, 30c., 1-watt, 20c., ½-watt, 17c., ¼-watt, 17c.—*Radio Retailing*, September, 1936.

92 MEISSNER

Meissner Manufacturing Co.

Device: Align-aire i.f. transformer.

Description: 3600 degrees of hair-line micrometer adjustment, moisture-proof, dust-proof, self-locking, double-tuned with top-tuning adjustment, air or Ferrocarr cores, available in all frequencies from 170 to 3100 kc., supplied with input, interstage, output, center-tapped output, beat-frequency oscillator, noise-silencer and band expanding unit windings.—*Radio Retailing*, September, 1936.

93 CURTIS

Curtis Condenser Corp.

Device: Condensers.

Description: Complete line of electrolytic condensers in cans and in cardboard containers, all common capacities and voltages, for radio, radio filter, audio by-pass, motor-starting and transmitting applications.—*Radio Retailing*, September, 1936.

94 CROWE

Crowe Name Plate & Mfg. Co.

Device: Oval dial.

Description: Friction drive, 17 to 1 ratio, two-speed planetary drive for 85-to-1 ratio available at slight extra cost, pointer travels 180 degrees with plain condenser and either 270 degrees or 342 degrees when used with geared condenser, convex glass crystal, glass, bakelite or pyralin scales, illuminated from rear.—*Radio Retailing*, September, 1936.

95 DUCO

Dumont Electric Co., Inc.

Devices: Complete line of dry electrolytics, wet electrolytics, paper and oil-paper condensers for replacement and transmitting equipment.

Description: New types take care of all existing replacement problems, both with respect to capacity, breakdown voltage and mounting methods.—*Radio Retailing*, September, 1936.

96 WARD-LEONARD

Ward-Leonard Electric Co.

Device: Non-inductive, non-capacitive plaque resistors.

Description: 100 watt, 40 watt and 20 watt types also available, inductance at frequencies up to 1000 kc. and



distributed capacity up to 5 mc. are negligible, useful for dummy antenna work and other applications in which inductance and capacitance upsets calculations.—*Radio Retailing*, September, 1936.

Sell from this complete industry catalog if you haven't the merchandise in stock

Admiral GOES WITH 3 TUBE C

Prices THAT STOP 'EM!
Features THAT SELL 'EM!

- **TILT-TUNING**—A sensation from coast to coast. Everywhere folks are saying "good-bye to back-benders . . . give me a tilt-tuner!" And no wonder . . . standing or sitting it's the easy way to tune.
- **11" OVAL DIAL**—Most beautiful ever designed. Dial figures in large, easy-to-read gold letters on translucent blue glass background.
- **"FINGER-FLICK" STATION SELECTOR**—Nothing like it! Accelerating "fly-wheel" gives split-second tuning with a "flick" of the finger. 5 seconds . . . instead of the usual 20 or 30 seconds . . . to go from 540 KC to 18,000 KC.
- **VISUAL STATION INDICATOR**—Cathode-ray or miniature x-ray tube permits you to "see" when your set is perfectly in tune. Acts like a station "stop-light."
- **MINUTE-HAND FOR CLOCK-LIKE TUNING**—Just like looking at your watch and noting the time. Instead of logging in kilocycles, etc., let the pointers "tell-the-time." Small, conventional pointer acts as "hour" hand; special larger pointer serves as "minute" hand.
- **OTHER FEATURES**—and detailed specifications in our free booklet. Mail coupon on opposite page.

A Complete Line

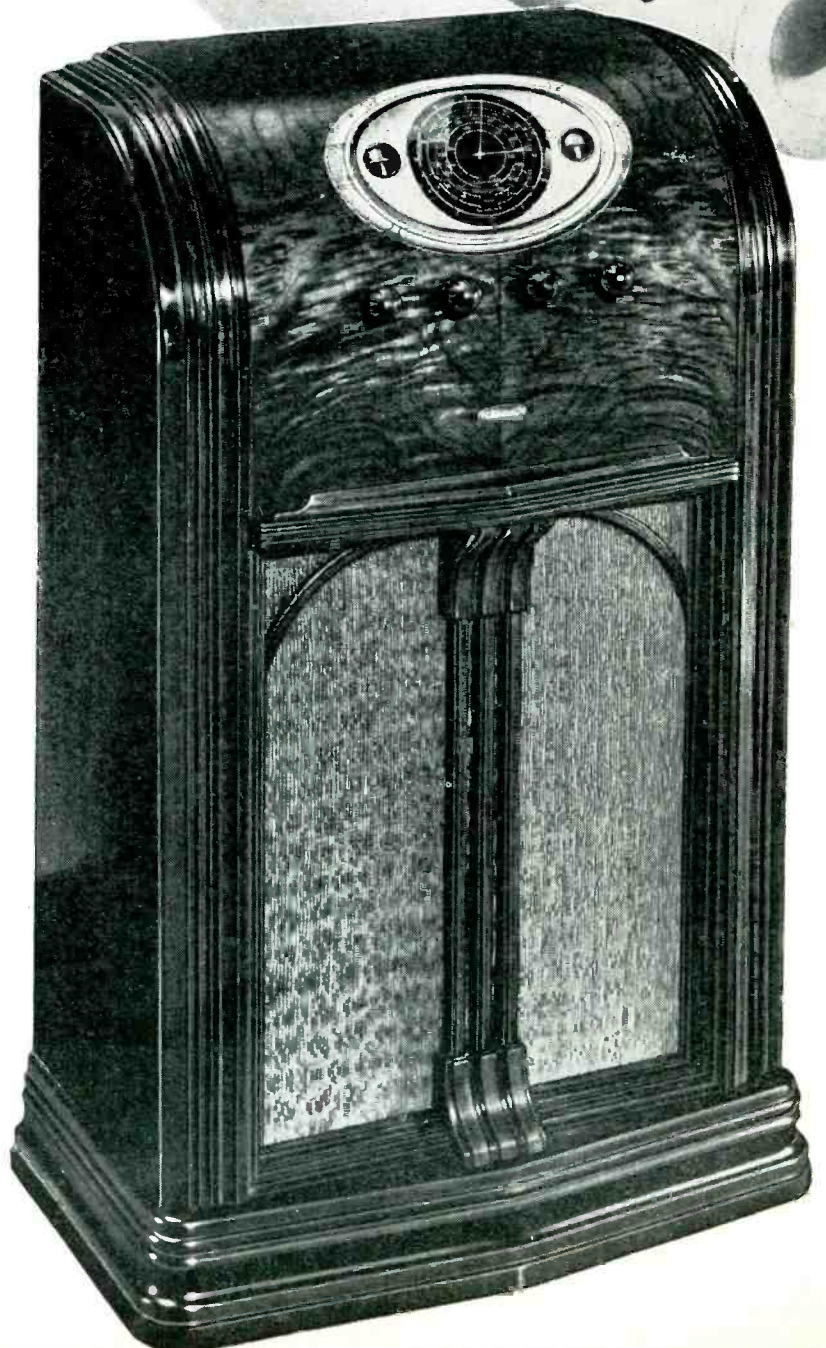
Admiral offers a complete line for home, farm and auto . . . AC, AC-DC, Battery and Auto . . . 16 models . . . 4 to 19 tubes . . . 540 to 18,000 KC . . . \$19.95 to \$175.00 . . . the biggest value in radio today!

**CONTINENTAL RADIO
& TELEVISION CORP.**

325 W. Huron St.

CHICAGO

ILL.



INTO ACTION
NEW "BIG GUNS"
CONSOLE \$ 69.75

79.50

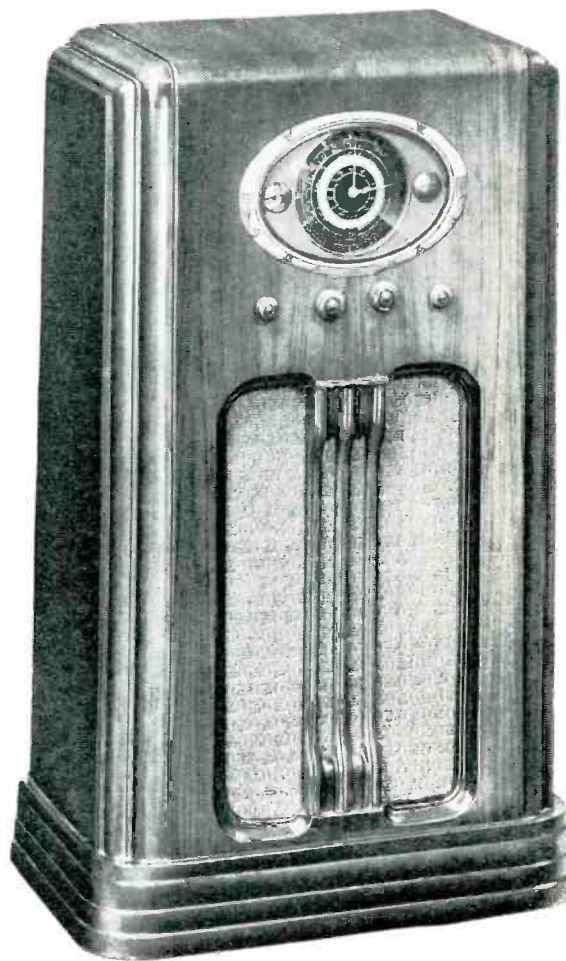


Admiral Model AM 488
12 Tube Tilt-Tuner \$99.50

■ What a radio! 13 watts of clear undistorted power—twice the output of any other set under \$100. Compare for yourself. Has beam power push-pull output stage using 2 6L6 beam power amplifiers. Also automatic tone control. Otherwise, chassis is the same as Model AM 787. Housed in beautiful, eye-catching tilt-tuning console.

Admiral Model AM 786
11 Tube Console \$69.75

■ Meets all competition, and then some! 3 continuous all-wave bands (540 to 18,000 KC) . . . simplified tuning control (see opposite page) . . . full floating 3 gang condenser . . . automatic volume control . . . hi-gain superheterodyne circuit with 3 stages of amplification . . . absolute 2 microvolt sensitivity . . . built-in filter . . . automatic antenna tuning . . . completely shielded circuits . . . push-pull high fidelity audio system . . . 7½ watts of clear undistorted power output . . . variable tone control . . . 12" heavy duty, plug-in superdynamic auditorium type speaker . . . housed in beautiful, tone-seasoned, trouble-free cabinet.



Admiral Model AM 787
11 Tube Tilt-Tuner \$79.50

■ Stop 'em . . . shock 'em . . . bring 'em in by the hundreds. 11 tubes at \$69.75 will certainly do it. Then "step 'em up" to the even more profitable 11 Tube Tilt-Tuner at \$79.50. You'll have little difficulty convincing customers that "tilt-tuning" is worth the difference. No more back-bending. No more "daily dozen" every time you bring in a different station. Large oval dial is conveniently tilted for easy reading. Standing or sitting, it's "tipped top" tuning. Chassis is the same as Model AM 786.

MAIL COUPON TODAY

Our new booklet gives detailed specifications covering all the new Admiral Models. Mail this coupon for your free copy today. There is no obligation. Send to Continental Radio & Television Corp., 325 W. Huron St., Chicago.

Name _____

Address _____



NEW TEST EQUIPMENT



97 ROTO RANGER

Simpson Electric Co.

Device: Multifaced single meter analyzer.

Description: Twelve different scales controlled by the range selector switch gives a separate meterface for each type of measurement. Voltage reading to 1000V, M.A. 130, Ohms 2 meg., complete with test prods. conductor cords and instructions, net \$49.00.—*Radio Retailing*, September, 1936.

98 USE

United Sound Engineering Company

Devices: Oscillograph, Audio Oscillator.

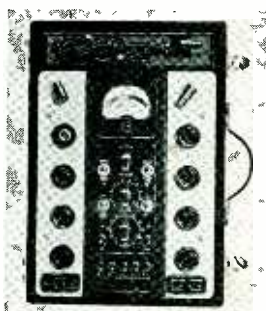
Description: Model CR-3 Oscillograph, 3" tube, Amplifier gain 40, linear from 15 to 100,000 cycles, sweep frequency to 20,000 cycles and is divided in 8 ranges, sensitivity .75 volts per inch, operates on 110 A.C. 60 cycles, 7½" x 13" x 18", 31 lbs. net \$84.50. Model CR-4 Audio Oscillator, range 10 to 20,000 cycles, frequency Calibration by means of vibrating reed at 120 cycles, output 500 and 10,000 ohms, harmonic distortion less than 5%, 4 tubes, 110 v. A.C. operation, 7½" x 13" x 18", 31 lbs., net \$77.00.—*Radio Retailing*, September, 1936.

99 WESTON

Weston Electrical Instrument Corp.

Devices: Model 771 portable tube checker, Model 772 high sensitivity analyzer.

Description: Model 771 makes a neon short check while tubes are hot, has filament electrode return selection, no adapter is needed for



new tubes, spare socket is included for future use, attractively finished in black, cream and red, checks all present types of receiving tubes, makes cathode leakage test, tests by BCD system, makes individual tests on elements of diodes, has understandable quick-reading scale, line voltage reading directly on meter, voltage ranges 10-100-1000, resistance ranges 0-2,000,000 ohms, makes high resistance condenser leakage test.

Model 772 has an instrument with sensitivity of 20,000 ohms per volt, makes true voltage readings in low-current circuits, is designed for rapid use.—*Radio Retailing*, September, 1936.



100 WEBBER

Earl Webber Co.

Devices: Analyzers, tube testers, Oscillators, test bench.

Description: Model 70 Master Services, voltage readings 1000V, 1000 ohms. per volt, Current 1000 m.a., 10 amp., resistance to 30 meg. capacity to 40 mfd., six rotary selector switches also pin jacks, test both metal and glass tubes, neon tube leakage tester, short test. Official Radio Service Laboratory, a test bench con-



tains all necessary test instruments for servicing, all voltage, current and resistances ranges, tubes tested, test oscillator, output meter, speaker tester, mounted on castors for easy moving.—*Radio Retailing*, September, 1936.

101 SHALLCROSS

Shallcross Mfg. Company

Devices: Test and measur-

ing Equipment, Precision resistors.

Description: Model 611, voltages and current to 1000, resistance to 5 meg, Capacity 10 mfd, inductance 10,000 henries, size 10" x 10" x 6½", 11 pounds, net price \$50.00. Model 681 volt ohmmeter, voltage to 1000, Resistance 3 meg. 1 M.A. movement, quartered oak case 5" x 5" x 7½", 4 pounds, net \$24.00.—*Radio Retailing*, September, 1936.



102 CONSOLIDATED

Consolidated Wire and Assoc. Corp.

Devices: Filters, test equipment.

Description: Magic Eye Tester, used as output meter, Bridge indicator, Hum measurement, R.F. Alignment, Condenser leakage checker, Continuity, High Resistance ohmmeter, list \$7.50. Interference Rectifier provides simple and effective means of locating electrical interference from oil burners, refrigerators, etc., also type of filter necessary, extremely useful to the serviceman, list \$9.50.—*Radio Retailing*, September, 1936.



Need more details?

Circle, sign and mail the cards



**“SON, if they’re KEN-RAD *all-metal tubes*
—I KNOW THEY’RE GOOD!”**



Ken-Rad is one of the oldest and best established radio tube manufacturers. People know and have confidence in the name, Ken-Rad.

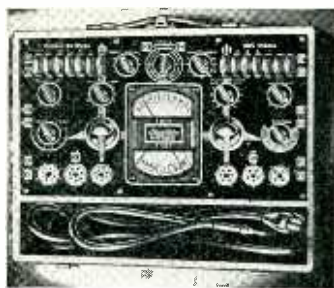
Ken-Rad was one of the first in the all-metal tube field. Longer experience, finest engineering talent, precise manufacturing methods give *Ken-Rad all-metal tubes* unsurpassed quality.

Thus, the prestige of the Ken-Rad name and the dependability of *Ken-Rad all-metal tubes* offer dealers a money-making combination. Write us for information about making money the Ken-Rad way.

Ken-Rad
★ *Radio Tubes* ★

KEN-RAD TUBE & LAMP CORP., INC., Owensboro, Ky.

Also manufacturers of Ken-Rad Incandescent Electric Lamps.



103 SUPREME

Supreme Inst. Corp.

Devices: Analyzers, Oscillographs.

Description: Model 500 Analyzer, voltage ranges to 1400v, current to 1400, Resistance to 20 meg., decibels from -10 to +26 D.B., output ranges 7-140-700-1400 A.C. volts, electrolytic tester, all tubes tested on "Good-Bad" scale, net \$66.95. Model 545 Cathoray Oscillograph, input resistance 500,000 ohms, max. input potential 800v, sweep frequency up to 20,000 cycles, 3" tube, amplifier response from 20 to 90,000 cycles, net \$92.95.—*Radio Retailing*, September, 1936.



104 HICKOK

Hickok Inst. Corp.

Devices: Analyzers, tube checkers, Oscillators.

Description: Model S.G. 4800 Analyzer, tests all tubes, volts 1000, M.A. 250, ohms 10 meg., Capacity .0001 to 20 mfd., 1000 ohms per volt, net \$57.00. Tube tester model E-3800, all metal and glass tubes, size 11½" x 11" net \$36.00. Oscillator model O.S.-10, 7 bands, 85 KC to 25 MC., fully shielded, velvet vernier

dial, modulation 400 cycles at 50%, output calibrated in decibels, electron coupled oscillator, 11" x 9" x 5½", 16 lbs. net price \$48.00.—*Radio Retailing*, September, 1936.



105 CLOUGH-BRENGLE

Clough-Brengle Company

Devices: Oscillographs, Multimeters, Oscillators, Vacuum tube voltmeters.

Description: Oscillograph model CRA, sensitivity .38



volts per inch, sweep frequency to 20,000 cycles, amplifiers flat to 100,000 cycles, Calibrated screen, Automatic synchronizing, net \$84.50. Model 85 Unimeter, volts to 750v. M.A. to 150 ohms 2 meg; output measurements rotary selector switch black crystalac case with leather handle 4½ x 5½ x 8½, 5 pounds with batteries, net \$24.95. Model 95 Unimeter, volts to 1000, M. A. 500, Resistance to 20 meg., capacity .00025 to 16 mrd., rotary selector switch, two 4½" fan type meters, net \$47.75.—*Radio Retailing*, September, 1936.



106 JACKSON

Jackson Elec. Inst. Corp.

Devices: Analyzers. Multimeters, tube testers, test bench.

Description: Model 580 Dynamic analyzer tests over 200 types of tubes. Measures voltage up to 1500v., Current to 150 m.a., ohms to 10 meg, Capacity 15 mfd, Decibels -10 +18, direct reading scale, rotary selector switch, 19¼ x 13¼ x 6", net \$59.50. Test Oscillator model 540, 100 KC to 70 M.C., 72" scale, electronic frequency modulator, one piece cast aluminum case, 11½ x 8½ x 4½, net with tubes \$56.25.—*Radio Retailing*, September, 1936.



107 SOLAR

Solar Mfg. Corp.

Devices: New Condenser Analyzer.

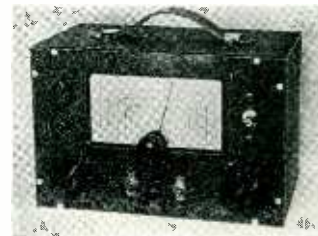
Description: Measures Capacity from .00001 to 70 mfd., Power factor to 50%, Resistance to 2 meg. and 100 meg., continuity, Color Coded direct reading scales, no external meters or appliance necessary, in two types list at \$32.00 and \$40.00.—*Radio Retailing*, September, 1936.

108 SUPERIOR

Superior Instruments Corp.

Device: Model 40 condenser analyzer.

Description: Checks shorted, open or leaky, or measures the capacity of all condensers used in service work; combines also in the same case a neon tube output meter. A foolproof circuit selection method makes it impossible to injure the instrument when using



wrong switch combinations. This compact "3 in 1" instrument operates on 110 a.c.-d.c., thereby making it universal in servicing. Price: \$7.40 net.—*Radio Retailing*, September, 1936.

109 TRIPLETT

Triplet Instr. Corp.

Device: Vacuum tube voltmeter.

Description: Model 1250 measures low A.C. and D.C. voltages without current drain, uses the Triplett twin instrument. One meter is a sensitive galvanometer, the other, a three-range voltmeter with linear scales reading peak A.C. and D.C. voltages, ranges 2.5, 10, 50 volts, silver and black panel, cased in black crackle 7½" x 6½" x 4½", accuracy independent of tube characteristics net \$33.34.—*Radio Retailing*, September, 1936.



Its good business to route this section to your entire staff.

THE 4 WAY ARCTURUS LINE IS N.E.W.S

Millions of Arcturus Glass Tubes, used initially in radio receivers, create a natural replacement market for Arcturus Dealers and Servicemen. Numerous radio owners, having experienced Arcturus' quality performance, demand Arcturus Tubes. Millions of Arcturus glass Tubes will be sold for replacement in 1936.

More "G" Tubes of Arcturus manufacture are in use today than any other make. Pioneered by Arcturus more than a year ago, and now used by the entire industry, Arcturus "G" Tubes have the advantage of tested and proved performance. Here's another natural replacement market for dealers and servicemen.

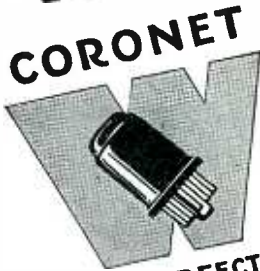
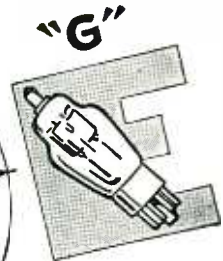
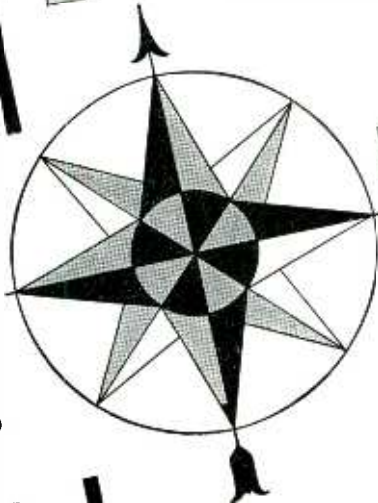
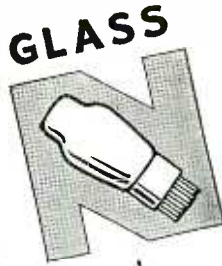
Arcturus Coronets — the perfected Metal Tubes — are being used as initial equipment by a number of set manufacturers. The active demand for Arcturus Coronets indicates the preference of the trade and consumers for a tube they know will give the same efficient service as other Arcturus Tubes.

Arcturus Coronets for replacing glass tubes is the biggest sales idea that has hit dealers and servicemen in years. New, exclusive, made to order for you to increase your sales and profits. Owners of old sets like this modernization idea; want to incorporate radio's latest development in their receivers.

ARCTURUS alone provides a 4-way sales and profit set-up; has designed its prices to give the trade a better opportunity for profits; pioneered 7 of the 8 fundamental developments in a.c. tubes. (Arcturus Dealers and Servicemen are kept always ahead).

ARCTURUS RADIO TUBE CO., NEWARK, N. J.

At the Show!
Be sure to see the
ARCTURUS EXHIBIT
Booth No. 12, New York
Retail Trade Show, Sep-
tember 18th, 19th and
20th.



THE PERFECTED
METAL TUBE



CORONET
TO REPLACE
OLD GLASS TUBES

Get on the band-wagon. More sales and greater profits with Arcturus. See your Arcturus Jobber, or write us today for details of this 4-way profit line.

ARCTURUS

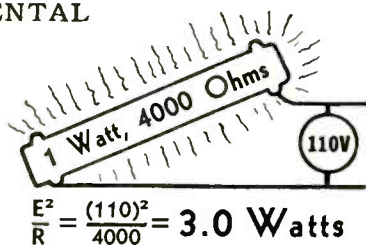
GLASS — "G"

CORONET THE PERFECTED METAL RADIO TUBES

Resistors

CONTINENTAL

Insulated
Carbon
Resistors
Withstand
500%
Overload



Resistors are not supposed to be operated at a 300% overload, but it is a satisfaction to know that 300% overloads can be carried by dependable CONTINENTAL Carbon resistors. Standard types, list price: 1/4, 1/2-watt, 17 cents; 1-watt, 20 cents. Semi-precision insulated resistors are supplied only in 1-watt size within 5% of rated value for meter multipliers. List, 30 cents. Complete listing, including 3 and 5-watt sizes, in Bulletin 104-A.

Free Cabinet . . .

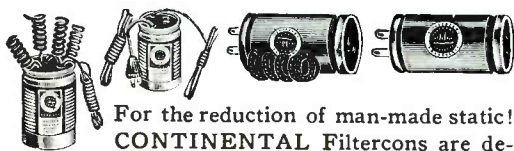


Dial Color Code, Wattage Chart

Offered with the purchase of 35 standard insulated CONTINENTAL Carbon resistors—this convenient cabinet saves time in locating resistors and in calculating the correct size to use. The resistor bins are supplied with 35 selected values most frequently required.

Code 135D, 1-watt, list price \$7.00
Code 135G, 1/2-watt, list price 5.95

Filtercons

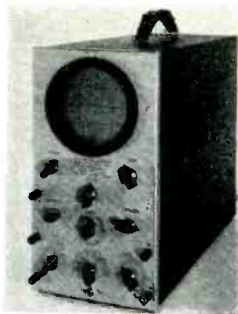


For the reduction of man-made static! CONTINENTAL Filtercons are designed in three major types — interference rejection, interference diverting, and noise suppression Filtercons. The application of Filtercon F1005DH in blocking line noise out of the house wiring eliminates much of the interference picked up by antenna lead-ins. Bulletin 104-A describes applications for Filtercons.

CONTINENTAL CARBON Inc.

13902 Lorain Ave., Cleveland, Ohio Toronto, Ontario

CONTINENTAL CARBON INC.



110 DU MONT

Allen B Du Mont Laboratories, Inc.

Device: Oscillograph.

Description: Model 148, 3" or 5" tube, .2 volts per inch, sweep frequency 10-100,000 cycles, calibrated scale, amplifier response 10-10,000 cycles, amplifier gain 25, 14" x 7 1/2" x 18", 40 lbs., list with 3" tube \$94.50, with 5" \$106.50. Model 154, .75 volt per inch, sweep frequency 10-100,000 cycles, calibrated scale, amplifier gain 100, response 10-100,000 cycles, 11" x 6 1/2" x 13", 18 lbs., both 110v. A.C., list \$74.50. — *Radio Retailing*, September, 1936.



111 READRITE

Readrite Meter Works

Device: Ranger-Examiner Model 735 pocket-size volt-ohm-milliammeter.

Description: Ranges are 15-150-750 volts, 1.5-15-150 mils., 1/2-1000 ohms. 0-100,000 ohms, higher ohmage ranges possible with external batteries, selector switch, Triplet D'Arsonval instrument, moulded case 3 1/8 by 5 1/2 by 2 1/2 inches overall, modernistic black and silver panel, complete with test leads and alligator clips.

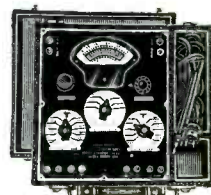
Price: \$10.80 dealer's net.—*Radio Retailing*, September, 1936.

112 DEPENDABLE

Radio City Products Company

Devices: Analyzers, tube checkers, multimeters.

Description: Model 4153 analyzer checks all tubes, voltages to 1000V, Currents to 250 ma. and 2.5 amp., ohms to 40 meg., capacity up to 300 mfd., decibels +40, inductance 10,000 henries, net price \$38.95. Mod-



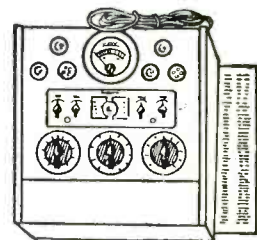
el 305 tube tester tests all type tubes, available either Portable or in Counter style 24.50 net. Model 406 Multi-meter provides ohms up to 2 meg., volts to 750, milliamperes to 250, rotary selector switch, copper oxide rectifier for A.C. Portable model \$18.95 net.—*Radio Retailing*, September, 1936.

113 HOYT

Burton Rogers Company

Devices: Meters, Analyzers, tube testers, oscillators.

Description: Model 25 Analyzer, readings up to 1000V,



250 M. A., 2 meg.; 1000 ohms per volt, 12" x 12" x 5" quartered oak case, weight 11 lbs., net \$39.50 Model 20 tube tester, tests all tubes, tests shorts and leakage, "Good-Bad" meter dial, net \$29.95. Test Oscillators models 11, a battery model; model 111 operates from 110 A.C., net at \$29.95 and \$32.95, 100 K.C. to 70 M.C., 6 bands, accuracy 1% output 1/2 to 100,000 microvolts, modulated at 400 cycles 35%, portable case with leather handle.—*Radio Retailing*, September, 1936.

ALLIED PRODUCTS



114 BULLET

Transducer Corp.

Device: Electro-dynamic microphone.

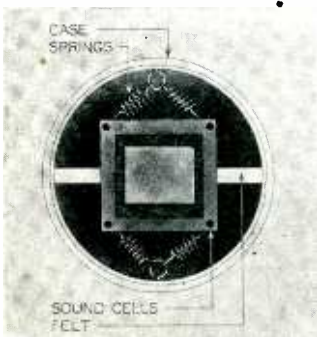
Description: Designed primarily for reproduction of speech, no pre-amplifier or polarizing voltage required, broadly directional properties, overall length 6 3/4 inches, maximum diameter 3 3/4 inches, no exaggeration of low frequencies when talking close, housed in damp and shockproof double shell moulded bakelite case, average output level minus 35 to 40 db., 0 db. equals 12 1/2 milliwatts for sound pressure of ten bars, impedance 10 ohms, 15-ft. cable included.—*Radio Retailing*, September, 1936.

115 BRUSH

Brush Development Co.

Device: Crystal microphone, model BR2S.

Description: New spring mounting within this unit (illustrated) makes unnecessary any external mounting ring or rubber stand shock absorber.—*Radio Retailing*, September, 1936.



116 WEBSTER-CHICAGO

Webster Co.

Devices: Model 4P-60 60-watt amplifier, model MV-410 10-watt voice amplifying system, MP-420 6-volt portable amplifier.

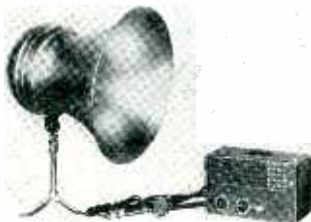
Descriptions: Model 4P-60 uses 4-6C6's, 2-6A6's, 76, 6E6, 2-6L6's, 83, 5Z3, one to four position input, high gain 143 db., handles one to ten permanent magnet speakers, tapped output impedance.

Model MV-410 uses a 6C6,



3-6A6's, includes permanent magnet speaker with exponential horn of spun aluminum with mounting bracket, 25 ft. of microphone cable and 15 ft. of speaker cable, one position with volume and tone control, runs on 6 volts d.c.

Model MP-420 is a universal 110 volt a.c.—6-volt d.c. job equipped with separate pow-



erpacks for both classes of service, pickup and turntable integral with unit, hand-type crystal microphone, two 12-in. permanent magnet speakers, microphone and phonograph mixer, sound control, phonograph unit has high-fidelity pickup and universal motor. MV-410 and MP-420 are illustrated.

Prices: MV-410 is \$102.50.—*Radio Retailing*, September, 1936.

A NEW DEAL IN P. A.

(plus a new deck of cards!)

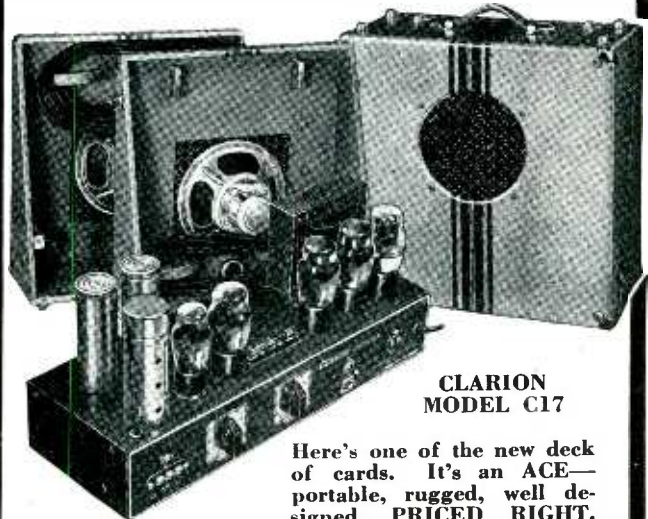


OUT of the chaos which has enveloped the Public Address market, CLARION emerges with a new deal in distribution, and a new deck in the form of a complete line of sound equipment which is a full year ahead of the rest.

Now—for the first time—sound engineers will be able to centralize their source of P.A. equipment. Distribution will be effected through franchised jobbers in each territory—Johnny Q. Public cannot buy CLARION direct—list prices will be maintained for the protection of the serviceman or engineer who makes the installation—a comprehensive advertising campaign will intensify the demand for CLARION P.A. equipment. That's CLARION'S NEW DEAL. And it's a FAIR and SQUARE deal!

* * *

SHOW VISITORS: We cordially invite you to inspect the new CLARION line at our Showrooms. Demonstrations at your convenience.



CLARION MODEL C17

Here's one of the new deck of cards. It's an ACE—portable, rugged, well designed, PRICED RIGHT.

Send for catalog describing the entire CLARION line.

TRANSFORMER CORPORATION OF AMERICA

69 Wooster St.

Dept. J10

New York, N. Y.



Clarion
AMPLIFIERS

Order One!

MAKE THIS SPECTACULAR DEMONSTRATION

Watch them Sell!



300 WATTS 12 VOLTS

\$65.00 LIST PRICE • •
F.O.B. FACTORY

ORDER one of the new Johnson Iron Horse Generators today. Put it in your window. Hook it up with twelve 25-watt lights—and turn on the juice!

Talk about a demonstration that sells! It's dazzling! And it's just what hundreds of people in your community want. Low cost electricity for light, power, radio—in hundreds of places where there are no electric lines. A perfect tie-up with farm radio sales!

The new Iron Horse Generator is the leader in the field. **DOUBLE** the usual capacity. Charges 12 volt or 6 volt battery. Permits low cost installation (lighter wiring). Positive push button starting and 21 advanced features make it the most **complete, thoroughly serviceable**, low priced power plant on the market.

Backed by the great Johnson organization and its world-wide reputation for building **DEPENDABLE** products. Powered by the famous 4-cycle Iron Horse gasoline engine—used on leading makes of farm washers, power-mowers, pumps, etc. Advertised to over 7,000,000 farmers!

Write or Wire at once for Full Details and Discounts!

JOHNSON MOTOR CO., 1930 Pershing Rd., Waukegan, Illinois
Canadian Johnson Motor Co., Ltd., Peterboro, Canada

Builders of the famous Sea-Horse Outboard Motors

IRON HORSE

G E N E R A T O R



119 POWERIZER

Radio Receptor Co.

Device: New rack construction.

Description: Centralized radio, public address and speech input equipment made by this company is now available in new type rack construction, front removable rack and panel

117 OPERADIO

Operadio Mfg. Co.

Device: St. Charles model sound system.

Description: Handles up to 60 speakers, reproduces microphone or phonograph or radio output, has return speech feature permitting talkback, reproduces up to two programs simultaneously with selector, distributes sound through from 10 to 60 speakers and any intermediate number may be used in steps of 5, contains dual-speed phonograph playing up to 16-inch records, contains three-band high-fidelity receiver with frequency range of 528 to 18,300 kc., includes dual diaphragm crystal microphone housed in all-steel walnut grained cabinet.—*Radio Retailing*, September, 1936.



assemblies are constructed on usual heavy channel and angle-iron frameworks but all panels are hinged at one side and may be swung open in front.—*Radio Retailing*, September, 1936.

120 UNIVERSAL

Universal Microphone Co., Ltd.

Device: Microphone stand.

Description: Adjustable orchestra type combining advantages of both folding and telescoping, rubber-covered clamping collars released by finger-touch, stop permits feet to be brought to lock point instantly, adapter bushings furnished for any type of microphone, pol-



118 HOPE

Hope Manufacturing Co.

Device: Parabolic deflector baffles for sound equipment speakers.

Description: Acoustex (prestwood) material, models with and without stands and bases for speakers of various sizes.

Prices: \$12 and \$15. Stand, \$20.—*Radio Retailing*, September, 1936.



ished cadmium with cadmium legs, height completely extended 5 ft. 6 in., maximum dimensions when collapsed 2 in. by 2 in. by 20 in.—*Radio Retailing*, September, 1936.



121 UPCO

Upco Engineering Labs., Inc.

Devices: Models M-1 and M-1 high-fidelity feather-weight pickups.

Description: Designed for use with small combination radio-phonographs and portable public address systems, have 2½-oz. needlepoint pressure, play all records up to 12-in. at 78 or 33½ r.p.m., standard impedance of 10,000 ohms, other impedances on request, black crystalline finish, also available in statuary bronze and polished aluminum, length of arm 8½ in., overall length 9¼ in., M-2 has built-in volume control.

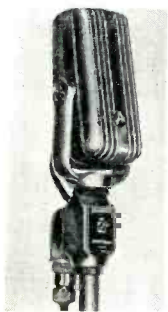
Prices: M-1, \$7.25. M-2, \$8. —Radio Retailing, September, 1936.

122 AMPERITE

Amperite Corp.

Device: Velocity microphone model RBHn.

Description: Studio type reproduction at high output, acoustic design to eliminate cavity resonance, triple shielding against stray fields, shock absorption at two points to avoid effects of mechanical vibration, switch inbuilt, new cable plug with positive locking device permits disconnection of cable at microphone, nickel-alum-



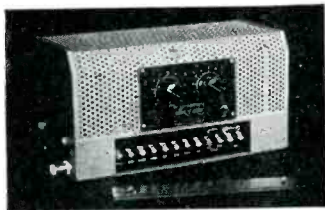
inum magnets, obtainable with either low or high impedance output, gunmetal or chrome finishes.—Radio Retailing, September, 1936.

123 RCA

RCA Manufacturing Co.

Devices: Amplifier MI-4283 and portable sound system PG98.

Description: MI-4283 comprises a four-stage ampli-



fier with an input impedance of 16,000 ohms for use with MI-4010A velocity microphone or equivalent, field excitation for two 1000-ohm dynamic speakers provided, delivers 12 watts (25 watts maximum), Class A undistorted output, frequently range from 50 to 10,000 cycles, power supply 110 a.c., equipped with tone control music-speech switch radio and phonograph inputs. PG98 is a 12 watt ampli-



fier, in carrying cases, includes two dynamic speakers with baffles and velocity microphone, amplifier has frequency range of 50 to 10,000 cycles, operates on 110 a.c.

Prices: MI-4283 amplifier, \$76.95 less tubes. PG98 complete portable sound system, with tubes, microphone and speakers, \$179.50. —Radio Retailing, September, 1936.

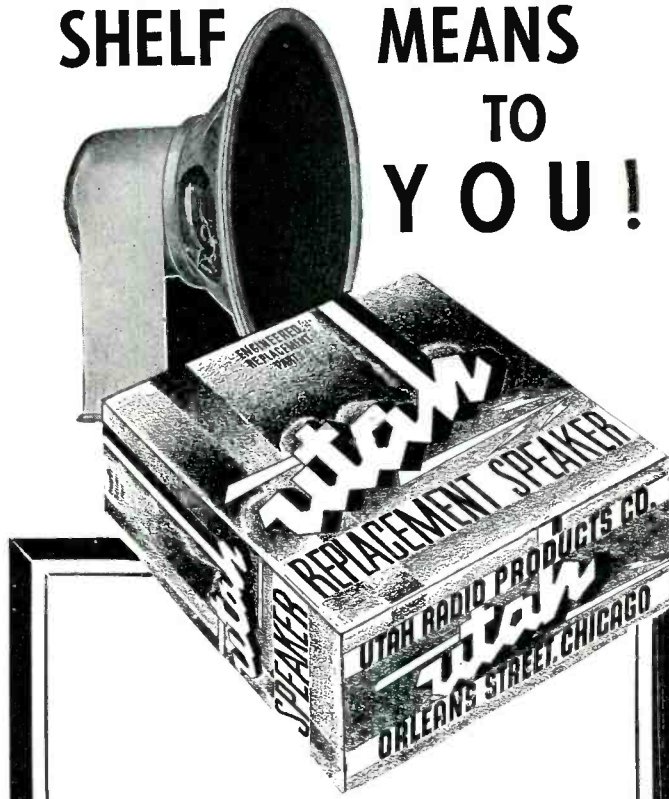
124 UNITED

United Sound Engineering Co.

Device: Sound equipment.

Description: Complete line of fixed and portable amplifiers with and without microphones, speakers, baffles, exponential horns and other associated equipment.—Radio Retailing, September, 1936.

WHAT THIS CARTON ON YOUR JOBBER'S SHELF MEANS TO YOU!



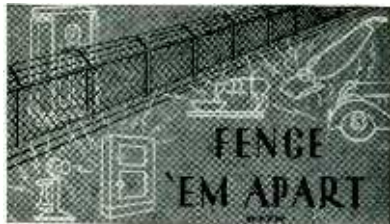
IT means instant service on replacement speakers because your jobber stocks only twenty scientifically designed models which give you perfect replacement for any set you will ever be called upon to service.

The UTAH carton also means that behind the product it contains there is fifteen years experience in building quality replacement parts.

UTAH also makes the best in replacement Vibrators, Transformers, Chokes, Volume Controls, Tone Controls, Resistors, Jacks, Jack Switches, Push Button Switches and Plugs.

UTAH RADIO PRODUCTS COMPANY
ORLEANS STREET, CHICAGO
"15 YEARS OF LEADERSHIP"

RADIO . . . and "MAN-MADE" STATIC



"NOISE-MASTER" No. 14
Brings in overseas signals stronger, and eliminates "man-made" static on broadcast as well as shortwave band.

List price . . . \$6.75

"NOISE-MASTER" No. 18
First time at this popular price; licensed Amy, Aceves & King antenna of simple doublet type SELF-SELECTING, recommended for clarifying shortwave reception.

List price . . . \$3.40

"NOISE-MASTER" No. 19
SELF-SELECTING doublet type, with function-box in the antenna line. Assures excellent all-wave reception.

List price . . . \$4.30

•The "man-made" nuisance noises caused by household appliances can be completely divorced from radio by installing "NOISE-MASTER," the modern Amy, Aceves & King licensed antenna. Broadcast as well as shortwave reception improved tremendously. Service men, try this great product on your next installation . . . there's a model for every location!

CORNISH WIRE CO., Inc.
30 Church Street, New York, N. Y.

INSURE LARGE RADIO PROFITS
WITH THE NEW 1937

Freed-Eisemann

FAMOUS SINCE BROADCASTING BEGAN



ONE OF
OUR MANY
OUTSTANDING
VALUES—

LIST PRICE
\$17.95

STUDY THESE REMARKABLE FEATURES

- Model 50—Powerful 5 Tube Set
- 5½", 4 color, illuminated Airplane Dial
- Handsome Rubbed Walnut finish 2 tone Cabinet
- Width 12", height 8", depth 7"
- Natural Tone Dynamic Speaker
- Works on either AC or DC current
- Self-contained aerial; no ground needed

AN EXCEPTIONAL VALUE FOR QUICK, PROFITABLE SALES

This model also available with extra band for shortwave police and amateur calls—List Price \$18.95

Other FREED-EISEMANN models are priced from \$12.50 to \$49.95
Prices on Export Models, for higher voltages and with long wave band on application

DISTRIBUTORS AND DEALERS — Write for catalog and wholesale prices on complete line.

FREED MANUFACTURING CO., INC.
44 West 18th Street, New York, N. Y.



125 BELFONE

Bell Sound Systems, Inc.

Device: Intra-department communicating system.

Description: Amplifier, microphone and loudspeaker system, box approximately size of midget radio, flip-key control, microphone and speakers are single units, volume control, two different types of speakers available, used in combinations of two or more, multiple hookup permissible.—*Radio Retailing*, September, 1936.

127 SEGELSOUND

Segelsound, Inc.

Devices: Sound equipment.

Description: Line includes models using beam power output tubes, power ranges from 14 to 120 watts output. All in compact carrying cases housing everything but dynamic speakers which are in separate cases. Adjustable chrome microphone stand with non-tipping base, electronic mixers for two or more inputs, tone control and fuses a.c. lines. Mobile 6-volt models with from 14 to 30-watts output. Rack and panel centralized sound systems. High power output aircraft model operating off specially designed wind-driven generator furnishing 110 a.c.—*Radio Retailing*, September, 1936.

128 ASTATIC

Astatic Microphone Lab., Inc.

Device: Microphone.

Description: Single-diaphragm type crystal, wide angle uni-directional pickup, 2½ in diameter by ¼ thick, net weight 3½ oz., back is flat and screen is domed, cable attaches through a collet type ferrule, output level approximately minus 56 D.B. using 5 megohm load, high capacity graphfoil



126 GIBBS

Thomas B. Gibbs & Co.

Device: 209XX portable amplifying system.

Description: 28 watts output, five stages using 3 75's, 6C6, 2A5, 2-2A3's, 80, resistance-transformer Class A Prime circuit, 130 db. gain with straight line reproduction within ½ db. plus or minus from 40 to 10,000 cycles and less than 5 per cent distortion at full volume, 2-cell crystal and high impedance phonograph input provision, 12-position mixing panel, 13-inch dynamic, 21½x23x11½ in. overall, 73 lbs., sockets for either one or two speakers, 2000 ohm field and 4 ohm voice coil. Field supply from amplifier, 500 ohm terminal strip.—*Radio Retailing*, September, 1936.



crystal element permits use of long cables without serious output loss, also permits use of transformers, telephone black finish, 8-ft. cable, designed for concealed placement without stand, frequency response practically flat from 40 to 700 c.p.s. with rising characteristics to maximum peak of 12 D.B. at 2500, from this point fall-back is gradual.

Price: \$22.50.—*Radio Retailing*, September, 1936.

129 SHURE

Shure Brothers

Devices: "Ultra" wide-range crystal microphones.

Descriptions: Reproduction from 40 to 10,000 cycles, "cruciform" crystal mounting insures high output, dual-drive high-capacity



grafoil bimorph crystals, curvilinear diaphragms, internal screen-protected cartridge units, complete barometric compensation, moisture-sealed construction. Model 700A is small unit with swivel arrangement permitting tilting, cable entrance so that cord may be run inside or outside stand tubing, unit 2 3/8 in. diameter, net weight 12 oz., semi-directional pickup, diaphragm type. Model 701A similar to 700A but has grille type case and mounting and is 2 1/2 wide and 1 3/8 deep. Model 702A is a spherical type with semi non-directional pickup, 2 1/4 in. overall diameter.

Prices: \$25 each, with 7 ft. of cable.—*Radio Retailing*, September, 1936.

130 MAGNA

Unit Reproducers Mfg. Co.

Devices: Speakers, pickups.

Description: Permanent magnet types in 5, 6 and 8-inch sizes, moulded material spider assures permanent centering and good fidelity, magnetic material of new ultra-efficient metal combinations. Pickups utilize same efficient magnetic material and are available in 8 styles to suit all common applications.—*Radio Retailing*, September, 1935.

131 VIBRO-MASTER

Dencose, Inc.

Device: Sound equipment.

Description: Line includes 30A 12-in. portable recording-playback unit recording on acetate and aluminum, 31 12-in. portable recording-playback unit to operate on d.c., four other recording-playback units. Also makes model 20 portable reproducing unit with capacity up to 16-in. records, model 20C a.c.-d.c. combination reproducing unit.

Prices: Range from \$99.50 to \$425.—*Radio Retailing*, September, 1936.

132 PHILMORE

Philmore Manufacturing Co.

Devices: Home broadcaster type junior microphones, line noise filters.

Descriptions: Two new products by this maker of shortwave kits, 1, 2 and 3-tube receivers, crystal sets and other radio equipment.—*Radio Retailing*, September, 1936.



133 OPERADIO

Operadio Manufacturing Co.

Model: 28 speaker.

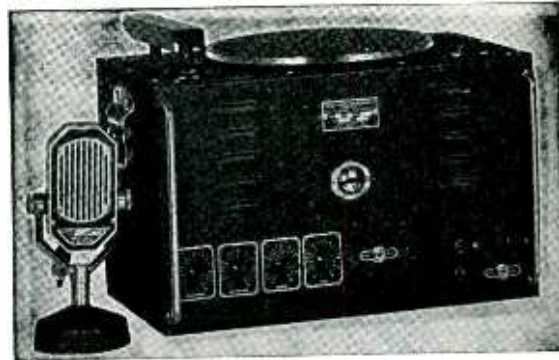
Description: Side wall, two-way speaker cabinet with opening front and rear to take advantage of sound distribution from both sides of the speaker cone. Made of steel and finished in baked crystal. Takes 8-in. chassis only.

Price: \$10.—*Radio Retailing*, September, 1936.

An OUTSTANDING Unit in Our New PUBLIC ADDRESS Line

6 Volts DC and 110 Volts AC

EXCLUSIVE MODERN FEATURES



The U-69 Universal P A SYSTEM

- One or two ribbon or crystal mikes.
- Two to Six Speakers—horn or case type.
- Metal tube with New Beam Tubes.
- Electric Eye overload indicator.

Write for No. 106 P. A. Catalog
Illustrating U.S.E.'s New PA Products

UNITED SOUND ENGINEERING COMPANY
Manufacturers of Electronic Equipment
2241 UNIVERSITY AVE. ST. PAUL, MINN.

IF You Sell, Service or Distribute Auto Radios You NEED MAGIC ROD!

Why? Because an item that improves the performance of every Auto Radio using it is a DOUBLE PROFIT ITEM—bringing its own profit and increasing radio profit. AND MAGIC ROD, a new type aerial will positively bring in MORE stations—MORE volume by reducing the NOISE LEVEL to an all time LOW!

Developed in the Motor State—MAGIC ROD is rapidly reaching new markets. Public acceptance has been quick wherever introduced because MAGIC ROD solves the car aerial problem so easily that it seems like magic to seasoned radio men. Prove this on your own car. Money back if you're not satisfied!

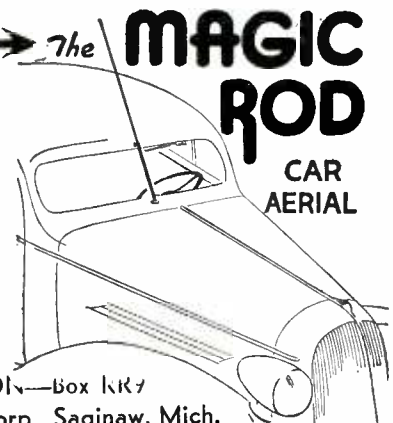
Write or Wire

For full details, territories and discounts. On your salesman's cars MAGIC ROD will definitely increase radio sales.

LIST PRICES

| | |
|-----------------|--------|
| Black Base | \$3.50 |
| Enamel | |
| Chromium Plated | \$4.50 |

MAGIC ROD DIVISION—Box 1117
General Distributing Corp., Saginaw, Mich.



Sensational demand for The **PORTOMATIC**



**PORTABLE
AUTOMATIC
PHONOGRAPH
and RADIO**

Dealers report swift turn-over

The phonograph has a rich beautiful tone. Patented construction will play and change 8 records of any standard make automatically.

Felt-lined receiving tray stores records and protects them.

Radio has remarkable clarity, volume and faithfulness. Also short wave reception.

Built-in aerial. AC or DC or foreign current.

Ingenious mechanism. Superb tonal qualities.

Luxurious cowhide leather case.

Only a fraction of the size, weight and price of larger machines.

Good territories available. Write or wire for details now—for quick action.

List Prices \$99.50 to \$149.50

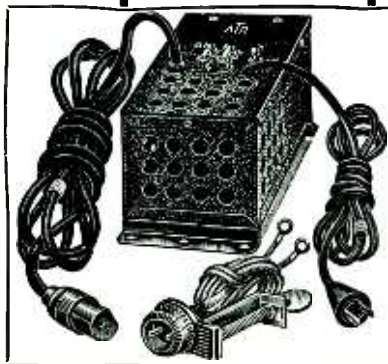
LEHMAN RADIO SALON, Inc.
1013 MADISON AVENUE NEW YORK

ATR

Automatic
Tapering

BATTERY CHARGER

Keeps Auto Batteries fully charged. An automotive necessity—needed more now than ever before — makes cold weather starting easy.



Big Fall and Winter Seller

High in efficiency but low in price. Operates noiselessly and economically. Ruggedly made to last many years. Simple to operate and fool-proof. Operates from any 110 volt 50-60 cycle A.C. line. Tapers off in charging current rate to approximately one-half as battery becomes charged. Completely equipped as illustrated.

OTHER ATR PRODUCTS

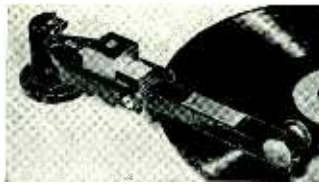
ATR Auto Radio "A" Battery Eliminator. Specially designed for demonstrating and testing auto radio sets on regular A.C. lines 105-125 volts 50 to 60 cycles.

ATR D.C.-A.C. Inverters. Produces A.C. Current Anywhere—in Cars—on Farms—in D.C. Districts. 16 different types for D.C. inputs from 6 to 220 volts having A.C. output of 110 or 220 volts.

Send for description and prices of money-making Battery Chargers, Eliminators, Inverters, etc., and name of nearest jobber.

Manufactured By

AMERICAN TELEVISION & RADIO CO.
St. Paul, Minnesota, U. S. A. Cable Address: "LIKEX," New York



134 FAIRCHILD

Fairchild Aerial Camera Corp.

Devices: Fairchild-Proctor sound recording system for broadcast stations, portable recorder, pickup.

Description: Complete line of recorders. Pickup has voltage output of approximately 1.5 volts, center of needle to center of base is 12 in., overall length is 14 in., height is 3 1/4 in., diameter of base is 3 in., needle pressure is adjustable from 1 to 3 oz.—*Radio Retailing*, September, 1936.

135 OXFORD-TARTAK

Oxford-Tartak Radio Corp.

Device: Model XA22 aluminum exponential horn.

Description: Designed for use with 6-inch dynamic cone unit, constructed of heavy gauge spun aluminum acoustically treated to avoid metallic sound, suitable for indoor, portable or outdoor applications, flare sprayed with satin aluminum finish, furnished with support, bell diameter is 20-in., horn length is 20-in., overall length is 28-in. and net weight is 7 1/2 lb. Collapsible floor stand with folding base available for use with above horn. Minimum height is 3 1/2 ft. and maximum height 7 ft.

Prices: Exponential horn, \$25. Horn with model 6T cone, \$38.25. Stand, \$21.—*Radio Retailing*, September, 1936.

136 ILLUSTRAVOX

Electro-Acoustic Products Co.

Device: Illustravox junior sound-slide film machine.

Description: Designed espe-

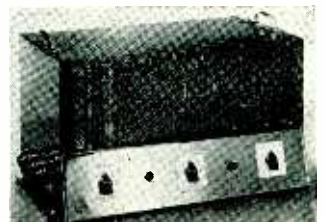
cially for individual selling presentations or for small groups, projector drops into correct operating position when front door is opened, portable desk screen self contained, available with three types of projectors, 100-watt, 50-watt and 50-watt junior.—*Radio Retailing*, September, 1936.

137 WRIGHT-DECOSTER

Wright-DeCoster, Inc.

Device: Speakers.

Description: Re-styled and re-designed line includes universal field models which eliminate the need for carrying excessive stock, 5-inch d.c., 6-inch d.c., 8-inch d.c., 10-inch d.c. and 12-inch d.c. models available with fields of 2500, 1800, 1800 tapped at 300, 1500, 1000 and 700 ohms. Nokoil permanent magnet dynamics are available in 6-inch, 8-inch, 10-inch and 12-inch sizes. Hyflux magnetic reproducers. Para-curve diaphragm reproducers featuring solid center spiders and Stadium weatherproof units are available for high-fidelity radio and sound system applications.—*Radio Retailing*, September, 1936.



138 RADOLEK

Radolek Company

Device: 15-watt amplifier.

Description: Built-in complete mixer and fader, hi-lo tone control, plug-in input and output, two high-gain channels one low-gain channel, four stages, 20-watt speaker field supply, tapped output, two separate volume controls for microphones, volume control for phonoradio.

Price: \$27.50 less tubes.—*Radio Retailing*, September, 1936.



139 PACENT

Pacent Engineering Corp.

Device: 16 m.m. sound on film portable projector.

Description: Synchronous motor, mechanical drive, sound system integrally built-in, one lamp for both projection and sound, accommodates 2000-ft. reels, may be operated with blimp on or off, folds up including speaker into one case, weighs 53 lb.—*Radio Retailing*, September, 1936.



140 TRIAD

Triad Mfg. Co., Inc.

Device: Triadyne 25B5 and 25N6G tubes.

Description: When used as single ended class A amplifier with 110 volts d.c. supply will develop 2 watts of audio at 9 per cent total harmonic distortion, operates on dynamic coupling principle involving two triodes in cascade.—*Radio Retailing*, September, 1936.

141 ACME

Acme Sound Co.

Device: Portable, folding parabolic flare baffle.

Description: Weatherproof, constructed of extra heavy gauge aluminum, portable and can be folded together with stand to fit accompanying carrying case, accommodates 10, 11 and 12-

inch speakers, reducer rings available for smaller size speakers.

Price: Parabolic baffle, \$7.50. Baffle stand, \$6.90. Mounting bracket, \$1.50. Carrying case, \$7.50. Weatherproof cover, \$1.80. Metallic grill to protect cone or speaker, \$1.50. Reducer ring, 50c.—*Radio Retailing*, September, 1936.

142 VELOTRON

Bruno Laboratories, Inc.

Device: Velocity microphone with static field.

Description: Employs a static rather than the usual magnetic field, output of the order of minus 50 db., high impedance but may be employed with cable lengths up to 500-ft., maintains high-fidelity characteristics even under close-talking conditions, approximately same directional characteristics as magnetic velocity type but angle of pickup is wider, supplied with shock absorber, swivel, 10-ft. of single conductor shielded cable and cable connector, 6 1/4 x 2 1/4 x 1 1/4 in. overall, comes in protective felt bag.

Price: \$20.—*Radio Retailing*, September, 1936.



143 OPERADIO

Operadio Manufacturing Co.

Device: Acousti - Reflex speaker cabinet.

Description: Minimizes feedback difficulties, increases speaker efficiency, improves bass response, accommodates 12-in. speakers such as the E4 series made by this company, in-built exponential chamber which takes sound from back and expands it, built of seasoned plywood.—*Radio Retailing*, September, 1936.

2,000,000 FARM RADIOS

will be sold during the next twelve months

2,000,000 RADIO BATTERIES

WILL BE SOLD!

Sell MONARK, the SPECIAL RADIO BATTERY for FARM RADIOS and FARM LIGHTING PLANTS

Special RADIO BATTERY FEATURES

- Ample number extra-thick plates eliminates need for frequent recharging; sustained voltage permits constant maximum performance from the radio.
- Interlocking grids; specially cooked cedar separators; "pickled" plates; rigid inspections and tests, assure long, trouble-free life.
- Precycled—ready for immediate service.
- Built-in hydrometer
- One piece rubber case
- Wing-nut terminals
- Uncompromising Guarantee

Give a good radio a chance to do its best! No radio—and no light plant—can give satisfactory performance with a makeshift battery. Auto batteries are built for quick, heavy discharge (through the starter) and constant slow charge (from the generator). They aren't right for radios and light plants. Monark Special Radio Batteries are.



Monark

Special Radio BATTERIES

GENERAL OFFICES
4556 WEST GRAND AVE., CHICAGO

"Specially Designed for Radio and Gas Engine Driven Generators"

*Advertised through Leading Farm Papers to 2,000,000 Well-to-Do Farmers!

MAIL THIS COUPON TODAY

Monark Battery Company, 4556 West Grand Ave., Chicago
RUSH FULL DETAILS AND PRICES

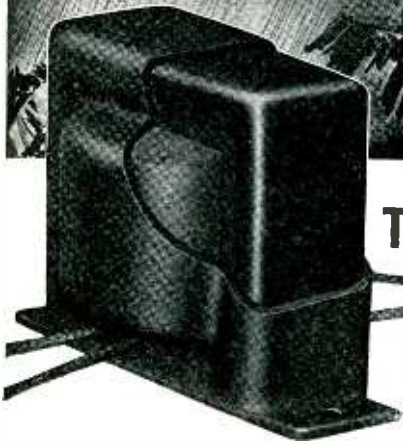
Name

Address

Individual



Hermetically Sealed



The **NEW**
JEFFERSON
Plastic-Sealed
Line

Audio and Output Transformers and Chokes

● **THE PLASTIC COATING** of high melting point, black, moisture-proof compound, expertly applied, permanently adheres to and seals all exposed surfaces and assures positive protection from adverse climatic conditions.

● **MOISTURE CANNOT PENETRATE** this tough elastic jacket. The delicate windings are completely protected at all times and electrolysis or deterioration prevented. The coating is not brittle and therefore will not chip or crack to allow absorption and condensation of moisture to endanger the useful life of the windings.

The construction and design are up to the well-known Jefferson standard,—with precision machine-wound coils, vacuum-dried and impregnated,—cores of Jefferson specification silicon steel laminations annealed after stamping . . . **JEFFERSON ELECTRIC COMPANY**, Bellwood (Suburb of Chicago), Illinois. Canadian Factory: 535 College Street, Toronto, Can.

ASK YOUR RADIO PARTS JOBBER

SELECT
FROM LIST
BELOW

JEFFERSON *Radio* Transformers

AUDIO TRANSFORMERS

| CAT. NO. | SIZE | PRICE |
|----------|---|--------|
| 467-501 | 1 to 2 Audio 2-7/8 x 1-5/8 x 1-7/8" | \$1.25 |
| 467-502 | 1 to 2 P. P. Input 2-7/8 x 1-5/8 x 1-7/8" | 1.30 |
| 467-503 | 1 to 3 Audio 3-1/4 x 1-7/8 x 2-1/8" | 1.50 |
| 467-504 | 1 to 3 P. P. Input 3-1/4 x 1-7/8 x 2-1/8" | 1.60 |

OUTPUT TRANSFORMERS

| for Single or P. P. Output Tubes—71A, 45, 33, 42, 47, etc. | | |
|--|---|--------|
| 467-509 | 2 Watt-7000-4/6 Ohms 2-7/8 x 1-5/8 x 1-7/8" | \$1.20 |
| 467-510 | 3-1/2 Watt-7000-6/8 Ohms 3-1/4 x 1-7/8 x 2-1/8" | 1.35 |

CHOKES

Small filter and plate chokes

| | | |
|-----------|--|--------|
| 466-(590) | 120 Hen.-50MA.-425 Ohms 3-1/4 x 1-7/8 x 2-1/8" | \$1.50 |
| 466-(540) | 250 Hen.-10MA.-5000 Ohms 2-7/8 x 2 x 2-1/2" | 1.30 |



144 ABC

Altorfer Bros. Co.

Models: Washers and Ironers.

Description: Model 156 washer, newly designed washing compartment, French type agitator, fingertip control and clothes feeder. Three other models available.

Four ironers also in line: Roll-About, de luxe, cabinet and cabinet de luxe. Size for every need. Fully automatic. Finished in gleaming white.—*Radio Retailing*, September, 1936.

145 LEONARD

Leonard Refrigerator Co.

Models: Refrigerators.

Description: Unit in top of cabinet, built-in temperature indicator; machine welded cabinet construction; five-year protection plan.

Features on all new Leonard's except the smallest models include: vegetable drawer below food compartment for storing dry vegetables; rubber equipment in every tray except special models; rearranging shelf on inside of door; two re-



frigerator shelves for fast freezing; new tray release; trigger action door handle; Len-A-Dor; automatic electric light; all-porcelain cooling unit.—*Radio Retailing*, September, 1936.

146 FREEZ'R SHELF

Gibson Electric Refrigerator Corp.

Models: CB-796 refrigerator.

Description: Food storage capacity, 7 cu. ft.; food storage area, 18.5 sq. ft., 105 ice cubes, 1 1/2 lb. of ice. Two deep and three shallow ice trays, three full and two small shelves. Exterior finish—lacquer, interior finish—one piece life-time porcelain. "Util-A-Rac", storage space, automatic interior light.—*Radio Retailing*, September, 1936.



147 1900 WHIRLPOOL

Nineteen Hundred Corp.

Model: 595 washer.

Description: 9 lb. capacity, single vane circulator, no center post, no belts, heavy duty wringer, trigger release, automatic tilting water board, vitreous enamel tub, panel control, 8 wringer position.

Price: \$84.90.—*Radio Retailing*, September, 1936.

148 WESTINGHOUSE

Westinghouse Clocks, Merch. Hdqrs.

Models: Electric clocks.

Description: The line includes ten time pieces, 4 alarms, 3 tambours, and a numeral clock. The two commercial clocks are equipped with sweep-second hands.

Prices: \$3.50 to \$22.50.—*Radio Retailing*, September, 1936.



And Every **RIDER MANUAL** is guaranteed to be the world's best

| | | |
|----------|---------------------------------------|---------|
| Vol. VII | 1600 pages Sets up to Oct., 1936. | \$10.00 |
| Vol. VI | 1240 pages Sets up to Oct., 1935. | 7.50 |
| Vol. V | 1200 pages Sets up to Oct., 1934. | 7.50 |
| Vol. IV | 1060 pages Sets up to March, 1934. | 7.50 |
| Vol. III | 1070 pages Sets up to June, 1933. | 7.50 |
| Vol. II | 800 pages Sets up to June, 1932. | 6.50 |
| Vol. I | 1000 pages Sets up to 1931. | 7.50 |

At Your Jobbers

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you can't go
wrong with a
RIDER MANUAL



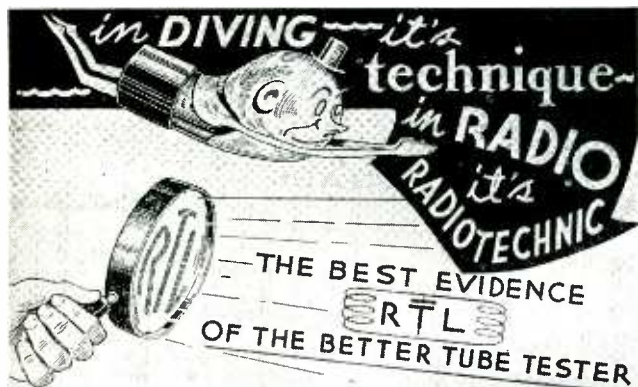
Available in standard cartons of 10. Wide range of capacities, up to .25 mfd. 200 volts, .1 mfd. 400 volts, .05 mfd. 600 volts.

AN OLD favorite in a radically new form . . . attracting universal interest! Solar Dominoes are non-inductive paper condensers molded in Bakelite. They resist heat and moisture . . . offer permanent capacity and full voltage protection. Small, flat, easy to use. Dominoes combine all the quality features of Solar tubular paper condensers . . . plus the obvious advantages of protective and attractive molding in Bakelite. Compare their appearance and performance with ordinary paper tubulars. You will find Dominoes the better value.

SOLAR MFG. CORP.

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"Through Leading Jobbers Everywhere"



TECHNIQUE—perfection of a high order—is a technical requisite of all RADIOTECHNIC Test Equipment. Technically perfect. Attractive merchandisers! Full-vision chart. Separate tests for each section of dual tubes and diodes. Simplest and most complete short circuit test. Non-obsolete. Engineered and built in a laboratory confined to tube testing.

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The Radiotechnic
Laboratory
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Evanston, Ill.



A Complete Line of
Tube Test **RTL** Equipment

RADIOTECHNIC

Mr. Service Man,
can you fix
my--er--er
RADIO

Yes, indeed you can and because you do good work and use dependable Ward Leonard replacement resistors, you give satisfaction, and she will call on you again for your services. That is how a permanent profitable radio business is built. The Radio Service Bulletin 507A shows the Ward Leonard Line and gives prices. Be ready when she calls. Send for it today.

WARD LEONARD ELECTRIC COMPANY

South Street, Mount Vernon, N. Y.
Please send me FREE Bulletin 507A.

Name
Street
City State
Jobber RR

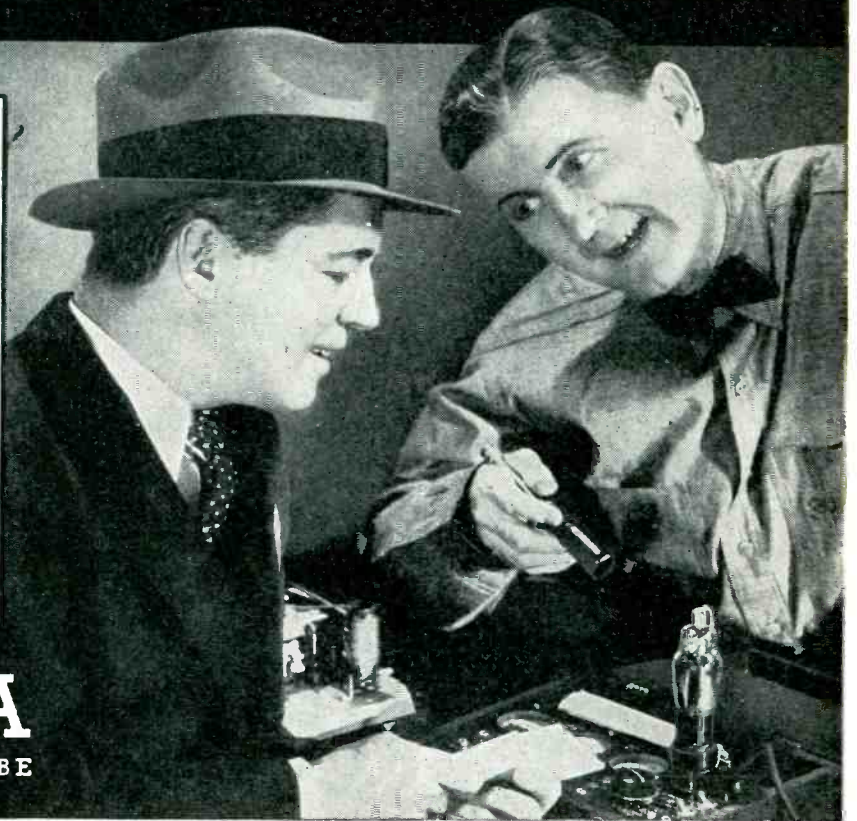
SERVICE MEN SAY SYLVANIA!

Service men are telling their customers to put in Sylvania tubes. Here's why!

"Competition in this business is tough!" pointed out one dealer. "The customer *must* be pleased! That's why I always tell my customers to 'stick to Sylvania!'"

"I know it's a quality tube . . . one of the best. I know it's gone through 80 separate tests before it ever left the factory. Sylvania gives a definite written guarantee with each tube. That means I can guarantee it 100%. Sylvania protects me and I protect my customers. And I've never had a 'kick-back' yet!"

Stock Sylvania tubes now! Make sure of your customer good-will and profits. You can get full sales and technical information by writing to the Hygrade Sylvania Corp., Emporium, Pa.



SYLVANIA

THE SET-TESTED RADIO TUBE

The **OPERADIO** Line
is the Profit Line -

*your one dependable
source of supply*



Ask About
Our New
Time Payment
Plan

for **UNIT-MATCHED**

PUBLIC ADDRESS EQUIPMENT and
RADIO SET REPLACEMENT SPEAKERS
SEND FOR CATALOGS 10 and 10D
Address Dept. R.R.

OPERADIO MANUFACTURING COMPANY
ST. CHARLES ILLINOIS

UNIVERSAL Velocity and Carbon Microphones



Universal's latest achievement—Ideal for stage use—Not affected by temperature or humidity—Flat frequency response curve from 40 to 10,000 c.p.s.; Output—63 db; Low impedance or direct to grid types. Compact, 2¾ x 4¾ in. by 1½ in. thick—Weight, less than 18 oz.—Head swings to any desired angle—Beautifully finished in black enamel and artistic chrome plate—Ask for new catalog sheet describing Models RL, RP, RH and CB—List \$22.50—Latest model music type sectional stand for above microphones—List \$10.00.

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Conquers the Ether*

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GREATER
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bulletin 536
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INDUSTRIES, Inc.**
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CHICAGO, ILL.
Licensee of
Johnson Laboratories Inc.

NEW LITERATURE

A

Meter Catalog now being printed by *Weston* includes complete data on this company's line of direct-reading capacity meters, output meters, power-level and DB meters in addition to the standard line of panel meters and major service units such as analyzers, portable tube testers, vacuum-tube voltmeters and test oscillators. Ranges and other important characteristics are fully described.

B

Speaker Characteristics are fully recorded in a new circular by *Magnavox* which includes mounting dimensions, power handling capacity, voice-coil data, field excitation requirements, transformer characteristics.

C

Tube Tester Details on *Precision Apparatus* instruments are found in elaborate bulletins now ready for the trade. These include, also, complete descriptions of this manufacturer's selective set analyzers.

D

Bridge Circuits used in new *Muter* resistance-measuring instruments are shown in a circular just released. Included, also, is a complete description of new decade resistance boxes made by this company.

E

Photograph Poster prepared by *Westinghouse* shows the appearance of this company's complete radio line, aids dealer selling.

F

Allwave Doublet Details are included in a new catalog by *Alpha Wire*, in which a special spool assortment of wires necessary in the repair shop is also described.

G

Transformer Replacement Guide by *Standard Transformer* includes data on practically every receiver ever built. Made up in card index form for handy reference.

H

Merchants Check-Up Chart prepared by Ira J. Owen of *Utah Products* is particularly useful when analyzing the various business factors which make or break a retail

business. Provided with space for rating various factors such as appearance, signs, merchandise, this chart will aid the retailer to improve his operation.

I

Nipermag Characteristics are completely described in a new folder by *Cinaudagraph*. This material is used in PM speakers and other products attracting much attention among the trade at this time.

J

Parts Catalog of the many products made by *Insuline* is just out, ready for distribution.

K

Transformer Fidelity Curves on the *Thordarson* True-Fidelity line are shown in a catalog sheet now available to the trade. Included, also, are details of construction.

L

Transmitter Guide, supplement to the original "Progressive" booklet published with such success some months ago by *General Transformer*, is now ready, continues in the style originally adapted.

M

Service Business Methods are covered in detail in a 218-page book by John F. Rider and J. Van Newenhizen, available on special arrangement with *RCA-Victor*.

N

Resistance Tube Characteristics are shown in detail in a new illustrated sheet prepared by *Champion*.

O

Blueprint Curves showing response characteristics and direction pattern of the new *Bullet* microphone, designed

primarily for speech, are available.

P

Interchangeable Tube Chart and other dealer helps designed to promote the sale and use of *National Union* tubes may be obtained on request by interested dealers and servicemen.

Q

Public Address Catalog just off the press is offered by *Radolek*.

R

Cathode Ray Data of interest to all servicemen is included in a new group of booklets prepared by the *Allen B. Du Mont* Laboratories. The series gives design and operating details of complete instruments, a frequency modulator and the tubes themselves.

S

Synchronized Sound Systems made by *Webster-Chicago* are completely described in a new catalog which gives details regarding methods of installation, describes the company's interesting time-payment plan, lists available merchandising displays.

T

Gas Generator Charging Costs are given in a bulletin prepared by *D. W. Onan & Sons*, maker of a full line of equipment for fixed and mobile use.

U

Wincharger Sales Methods used by successful dealers are reviewed in a new and complete booklet which includes, also, a chart showing wind velocities at various points throughout the country.

V

Volume Control Facts regarding new metallized types embodying modern mechanical

and electrical features are included in a 1936 catalog offered by *International Resistance*.

W

Shop and Portable Testers, the complete line made by *Supreme*, described in detail, with photographs, prices and all pertinent data appears in a brand new 42-page descriptive piece.

X

Exact Meter Scales used on *Hickok* instruments are reproduced on one page of a catalog giving complete technical specifications of this manufacturer's current line. Data concerning instruments used at high radio frequencies is included.

Y

Shortwave Tuning Condensers and other parts made by *Hammarlund* are completely described, with all mounting details and sizes, in current mailing pieces. An instruction manual on the new *Super-Pro* receiver may also be obtained.

Z

Recording Units and pickups made by the *Fairchild Aerial Camera Corporation* are pictured and described in three manuals containing actual photographs.

AA

Amplifier Circuits appear on the backs of sheets supplied by *Jefferson* to catalog transformers for all purposes. These should be extremely interesting to sound and servicemen for reference.

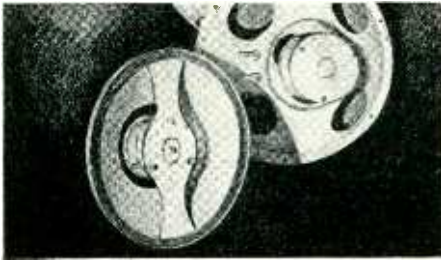
AB

25B5 and 25N6-G Tubes, something new by *Triad*, are pictured with complete operating characteristics in a 4-page bulletin prepared by this company.

AC

AC and DC Electric Plants made by *Janette* are described in two 4-page bulletins, including all installation details and prices.

No need to laboriously collect individual catalogs. We do it for you



"SPEAKER BY CINAUDAGRAPH"

That phrase is synonymous with "PERFECTION". Receivers equipped with MAGIC MAGNET SPEAKERS cannot fail to deliver less than perfect reproduction. The exclusive features embodied in CINAUDAGRAPH speakers have been acclaimed by leading engineers as bringing to radio a new concept of reception. Leading manufacturers have adopted them—public address technicians demand them.

Your customers are entitled to the finest reproduction their money can buy. They will get it in those receivers and P. A. systems, which specify "SPEAKER BY CINAUDAGRAPH".

Write for the complete technical details and a real money making proposition today.

CINAUDAGRAPH CORPORATION

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It's a Fast Seller!

TACO 500 Antenna System

- ★ All-wave reception. Self-selecting. Noise reducing. Permits lofty aerial serving set via transmission line.

In complete kit form. No extras to buy. Factory assembled, wired, soldered (corrosion-proof). Just string up.

- ★ Makes those 1936 sets perform still better. Provides new thrills from old sets.
- ★ Attractively packaged. Complete instructions. Sells over counter or on service calls. Only \$4.50 list—and it moves!

Write for technical and merchandising facts. Better still, order one from local jobber, demonstrate it, and you'll sell plenty!

TACO
TECHNICAL APPLIANCE CORP.
Pioneers in Noiseless Antenna Systems
17 E. 16th St., New York City

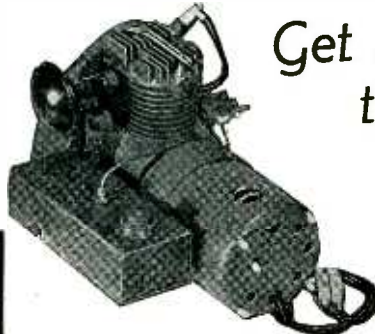
For Your Convenience!



—there is a handy subscription card enclosed in this issue. Use it today in ordering *Radio Retailing* at the bargain rates of:—

3 years for \$2 1 year for \$1

→ CASH WITH ORDER ONLY ←



Get into this Profitable New Business!

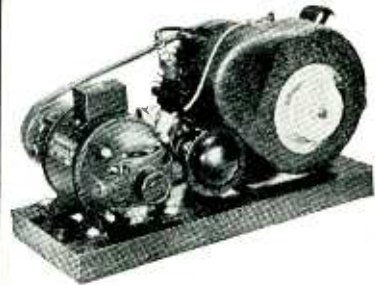
SELL LOW COST electricity for farms, cottages, camps, trailers, carnivals, fairs, boats, garages, stores, or wherever there are no high-lines.

Pioneer Gas-Electric power plants have opened a lucrative new market to the electrical dealer. These cleverly designed plants offer the user away from high-lines, a dependable source of electricity for actually less cost than many people pay in the city.

We Supply Everything You Need.

Not only do Pioneer Gen-E-Motor Corporation offer you the only complete line of low cost gas-electric power plants—they also supply you with tested merchandising helps that enable you to do a big, profitable business, at once. Window and interior displays! Literature! Newspaper ads! Colorful newspaper circulars you can mail to all rural boxholders! Inquiries from our farm paper ads!

Mail coupon now. Get full details about this marvelous new profit opportunity.



"BLUE DIAMOND"

300 watts 110 volts AC. The lowest priced "city" light plant on the market, \$79.95 list! Operates standard AC appliances. Ideal for PA work. In addition to supplying 110 volts AC, also has DC winding for charging 6 volt batteries. Kick-pedal starting! Filter available.



"GRAND CHAMPION"

32 volts DC 800 watts, self-excited, push-button starting, \$149.50 list. Powered by Smoothflo Lauson Engine. Same, but 110 volts, \$157.50. 110 volts DC 1500 watts, \$267.50 list. "Gold Crown" AC plants: 110 volts, 60 cycles, 600 watts, \$165.00 list, 1000 watts, \$240.00 list, 1500 watts, \$290.00 list. The most economical plants for large wattage requirements.

PIONEER POWER PLANTS

OTHER PIONEER PRODUCTS

"Silver Band" Dynamos, "Red Seal" Gen-E-Motors, Rotary Converters in various sizes and voltages.

MAIL THIS COUPON QUICK!

Pioneer Gen-E-Motor Corporation
 468-D West Superior Street, Chicago, Ill.
 (Cable Address "Simontrice" New York)

Gas-Electric Power Plants Dynamotors
 Converters Gen-E-Motors

Name
 Address
 City State

AD

Bullet Microphones, dynamic types made by the *Transducer Corporation*, are something new in high-gain types. Complete details regarding use are available and will be of definite value to sound men.

AE

Test Clips of various difficult-to-find types are listed by *Mueller Electric* in a data sheet just released.

AF

Battery Life is charted for use by dealers selling storage cells for use with wind-driven and gas-driven generators in a new bulletin prepared by *Exide*, which also catalogs the complete line of radio batteries made by this company.

AG

Exact Duplicate Vibrators and other units made by *Radiart* are described in listing form in a bulletin just released. This should be extremely useful to servicemen.

AH

Sound Systems made by *Gibbs* are pictured in a booklet designed to help the dealer sell. Full half-tone photographs reproduce the equipment.

AI

Lighting Plants and charging plants made by *Kato* are completely catalogued in new booklets ready for mailing. Photographs and list prices are shown.

AJ

Tube Sales Helps available from *Arcturus* include price cards, combination price lists and station logs, characteristic cards, service policy cards, tube stickers, book matches, postcards, stationery kits, cuts and mats, dummy tubes in cartons, window display units, cabinet signs, decalcomanias, calendars, tube carrying cases, testers. Details on request.

AK

Resistors, Rheostats and Relays made by *Ward-Leonard*, including many difficult-to-find special items, are completely catalogued in a stiff-covered booklet just off the presses.

AL

Tester Rebuilding prices and details are described in a bulletin now available from *J. R. Williams*, maker of Confidence equipment.

AM

Commercial Sound Equipment made by *RCA* is pictured in new bulletin sheets which include photographs, prices and installation information.

AN

Replacement Speaker Charts form an interesting section of *Utah's* new catalog, listing types designed for replacement. Auto-radio sets commonly encountered in the service shop are also listed, together with suggested replacement vibrator units. Transformer data sheets show power output obtainable from various existing tube combinations.

AO

Testing Equipment Details concerning the entire line made by *Clough-Brengle* which should be of interest and value to anyone contemplating equipment purchases at this time may be found in new bulletins just released covering the entire 1936 new product list of this company.

AP

Car Antenna Sales will be aided by use of the four-page booklet designed by *Inlantenna* to be passed along to the consumer.

AQ

Antenna Installation Instructions useful when *Victory* car types are sold are offered by the manufacturer of this product.

AR

Storage Battery Facts describing the use of these units in connection with 6-volt, 2-volt and gasoline and air-charged sets are given in a catalog just out for distribution by *Willard*.

AS

Microphone Performance Chart enabling the sound man to select exactly the right type for the installation is offered by *Shure*.

AT

Replacement Condenser Listings are included in *Dumont Electric's* complete condenser catalog, which also contains sizes, mounting details and other pertinent data for the repairman.

AU

PM Speaker Blueprints showing mounting dimensions and overall size are found in a folder prepared by *Continental Motors*. The folder gives much additional information concerning new Perm-O-Flux speakers which will be of value to dealer and serviceman alike.

AV

Remote Control Catalog prepared by *F. W. Stewart Mfg.* shows types designed especially for all the various makes of cars.

AW

Oscillograph Curves showing the output of a new audio oscillator made by *Communication Instruments* are seen in this manufacturer's catalog, which also includes a circuit of the oscillator.

AX

Dials In Color are reproduced in a new bulletin released by *Magnavox*. This booklet shows the wide variety of types available.

AY

Time Switch Details are shown on the entire *M. H. Rhodes* line in a new illustrated folder.

AZ

Replacement Speaker Cones, volume and tone controls, are shown in new catalogs including a complete list of existing receivers using these replacements prepared by *Tilton Electric* in behalf of the *Ex-Stat* line.

BA

Service and Replacement Manual. The new 1936 edition of *Mallory's* well-known book which has proven so helpful to the trade for several years because of its complete listing of the condenser requirements of existing receivers, together with much other data concerning the use of condensers, is now available. New features are included to make this book more valuable than ever before.

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Will Be Paid
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RADIO RETAILING

330 WEST 42nd STREET

30th floor

NEW YORK, N. Y.

BB

Radio Star Photographs adorn many of the direct-mail and newspaper advertising pieces prepared for new season use by *Emerson*. Fannie Brice, Lowell Thomas and other famous personalities will lend their efforts to help dealers sell through display.

BC

Illustrated Catalogs showing the complete Pierce-Airo line of *DeWald* receivers are now off the presses and ready for mailing to dealers.

BD

Sales Aids in the form of two-color booklets describing the *Globe Trotter* set are now available on request.

BE

Window Decalcomania measuring 9 by 5 inches overall, finished in gold, red, black and white and aiding in the sale of *Amperite* equipment may be obtained at this time.

BF

Sets Pictured in new catalog sheets illustrate the entire 1937 line of radio receivers made by *Simplex*.

BG

Dealer Help Catalog just put out by *Stromberg-Carlson* describes and pictures every piece of promotion material obtainable through the factory, aids merchants who wish to make a selection.

BH

Refrigeration Facts of value to the man selling *Leonard* are printed in useful form in a new folder prepared by this company.

BI

Halftone Prints of the entire *Climax* line of receivers appear in a three page folder just announced.

BJ

Bulletin Board useful in front of any radio store and a realistic fold-up promoting service departments are two dealer helps devised for immediate distribution by *Raytheon*.

BK

Log Books of every description are described in a new folder put out by *Haynes*.

BL

Colored Circulars picturing and describing the unique *Harris* line of Electrophones and Portaphones are just off the presses.

BM

Newspaper Mats designed in the interest of Admiral radios are listed and pictured in a pamphlet designed to aid dealers desiring to make a selection of products made by *Continental Radio*.

BN

Window Display Advice by a master decorator is included in a leaflet put out by *Radiobar*.

BO

Pocket Sales Piece produced by *Marconiphone* is intended to aid in the sale of this concern's portable automatic phonograph combinations even when complete stocks are not maintained.

BP

Full Page Pictures of the entire *Fada* line of receivers are seen in a new brochure offered by this company.

BQ

Unit Matched Equipment produced by *Operadio* is pictured and described in a new folder just brought out in behalf of this manufacturer's sound equipment line.

BR

Advance Catalog Sheets on the complete *Garod* receiver line are now ready for use by dealers.

BS

Freezer Shelf is featured in *Gibson's* latest refrigerator circular, printed in blue and black.

BT

Listener's Guide, a 24-page illustrated booklet printed in several colors is the high-spot of *GE's* fall promotion. The booklet explains skip effects on shortwaves, contains a complete list of broadcast, police and foreign shortwave stations, a world map in full color and other pertinent data useful to the listener.

BU

Combination Circulars are offered by *Ansley* in behalf of its line of Dynaphone instruments.

BV

Leatherette Sales File in which cards picture and describe the entire Kadette line of receivers made by *International Radio* is now ready. Particularly useful to floormen as each card describes just one set.

BW

Success in the Radio Business is the interesting title of a new book prepared by *United American Bosch*. Automatic Maestro and the Centromatic Unit are featured in this dealer help, which pictures the entire set line of this company in full, natural color. Other promotion pieces are backgrounds for sales displays, movie star signs.

BX

Washer Catalog describing the entire 1900 line is now ready for distribution.

BY

Action Backgrounds showing the precision of workmanship in the *Stewart-Warner* plant add sales appeal to photographs of this company's new radio line, pictured in a catalog just released.

BZ

Wagon Trailers designed specifically for use as portable service laboratories are described in a circular just received from the *Covered Wagon Trailer Company*.

CA

Sets, Chargers, Batteries made by *Universal Battery* are completely described in several new catalogs available from this company.

CB

Microphone Response, sensitivity and impedance of new dynamic units made by *Radio Receptor* is shown in charts contained in a circular now made available by this company.

CIRCLE LETTERS - SIGN - AND MAIL

RADIO RETAILING
330 West 42nd Street
New York, N. Y.

Gentlemen: . . . We are interested in obtaining the literature circled below:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ
BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ
CA CB

SIGNED _____

TITLE _____

COMPANY _____

STREET ADDRESS _____

CITY _____

STATE _____

Full and Complete Finance Service for

RADIO DEALERS

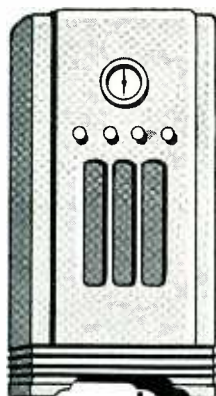
through **C. I. T.**

RADIO manufacturers, from A to Z, are now providing their dealers with the C. I. T. Budget Plan.

This makes available for radios the same quick, personalized service that has helped dealers build record sales for refrigerators and other major household appliances.

Furthermore, you can now offer your customers a combination C. I. T. Budget Plan sale of any two or more acceptable articles in one contract.

With the advantage of this new and better selling weapon the 1936-37 season should be one of the most profitable that radio dealers have ever known.



THROUGH LOCAL OFFICES FROM COAST TO COAST, C. I. T.'s NATIONWIDE CREDIT SERVICE IS AS NEAR TO YOU AS YOUR TELEPHONE.

FOR THE PURCHASE OF PAPER CALL THE NEAREST OFFICE LISTED BELOW.

Abilene ~ Akron ~ Albany ~ Altoona
Amarillo ~ Asheville ~ Atlanta ~ Augusta
Bakersfield ~ Baltimore ~ Bangor ~ Bay Shore
Beaumont ~ Beckley ~ Billings ~ Binghamton
Birmingham ~ Boise ~ Boston ~ Bridgeport
Bronx ~ Brooklyn ~ Buffalo ~ Butte ~ Camden
Canton ~ Cape Girardeau ~ Carbondale
Cedar Rapids ~ Charleston ~ Charlotte
Chattanooga ~ Chicago ~ Cincinnati ~ Clarksburg
Cleveland ~ Columbia ~ Columbus ~ Cumberland
Dallas ~ Dayton ~ Denver ~ Des Moines
Detroit ~ El Paso ~ Erie ~ Evansville ~ Florence
Fort Wayne ~ Fort Worth ~ Fresno ~ Glens Falls
Greensboro ~ Greenville ~ Hagerstown

Harrisburg ~ Hartford ~ Hempstead ~ Hickory
Houston ~ Huntington, W. Va. ~ Indianapolis
Jacksonville ~ Jamaica ~ Jamestown
Jersey City ~ Johnson City ~ Kansas City
Knoxville ~ Lexington ~ Lincoln ~ Little Rock
Los Angeles ~ Louisville ~ McAllen ~ Manchester
Memphis ~ Miami ~ Milwaukee ~ Minneapolis
Mobile ~ Montgomery ~ Montpelier ~ Mt. Vernon
Nashville ~ Newark ~ Newburgh ~ New Haven
New Orleans ~ New York ~ Norfolk
Oklahoma City ~ Omaha ~ Orlando
Paducah ~ Paterson ~ Peoria ~ Perth Amboy
Phoenix ~ Philadelphia ~ Pittsburgh

Portland, Me. ~ Portland, Ore. ~ Portsmouth
Poughkeepsie ~ Providence ~ Raleigh
Reading ~ Reno ~ Richmond, Ind.
Richmond, Va. ~ Roanoke ~ Rochester
Rome, Ga. ~ Sacramento ~ St. Louis ~ Salisbury
Salt Lake City ~ San Antonio ~ San Diego
San Francisco ~ San Jose ~ Savannah ~ Scranton
Seattle ~ Spartanburg ~ Spokane ~ Springfield,
Mass. ~ Springfield, Ohio ~ Stockton ~ Syracuse
Tampa ~ Texarkana ~ Toledo ~ Tucson ~ Tulsa
Utica ~ Washington ~ Watertown ~ West
Palm Beach ~ Wheeling ~ White Plains
Wichita ~ Wilkes-Barre ~ Wilson ~ Worcester
Yakima ~ Youngstown ~ Zanesville

C. I. T.

C. I. T. CORPORATION • NEW YORK • CHICAGO • SAN FRANCISCO
A UNIT OF COMMERCIAL INVESTMENT TRUST CORPORATION
CAPITAL AND SURPLUS MORE THAN \$100,000,000



HELPING DEALERS TO WIDEN THE SCOPE OF THEIR BUSINESS

TUNG-SOL DEALERS

make money

**WITHOUT INVESTING
A CENT**

The Tung-Sol plan was the first and is today the only nation-wide consignment plan for selling radio tubes. It has been successful because Tung-Sol dealers carry adequate stocks of tubes which build customer satisfaction, and make full profits on their sales.

There are still desirable locations where independent service organizations who can meet requirements may be appointed as agents. Ask your nearest Tung-Sol wholesaler.



TUNG-SOL LAMP WORKS INC. Radio Tube Division

SALES OFFICES: Atlanta, Boston, Charlotte, Chicago, Dallas, Detroit, Kansas City, Los Angeles, New York. . . . General Office: Newark, N. J.

TUNG-SOL
Tone-flow radio Tubes

227 Dealers Eat Sorenson's Chicken



Here's the turnout of dealers at H. E. Sorenson's chicken-fry, held at the Kirkwood Hotel, Des Moines, to introduce the new line of Grunow radios. Drought has hit this section hard but the trade is still optimistic about fall set business

WORLD SATURATION

From the Department of Commerce the following figures concerning number of radios in use as of January, 1936, all continents, are obtained: North America (850 broadcast stations, 32 shortwave stations), 26,579,696 receivers. South America (218 broadcast stations, 54 shortwave stations), 1,161,142 sets. Europe, including Asiatic Russia and Asiatic Turkey, (49 longwave stations, 314 broadcast stations, 77 shortwave stations), 28,761,378. Asia,

excluding Asiatic Russia and Asiatic Turkey, (154 broadcast stations, 25 shortwave stations), 2,436,608. Oceania (133 broadcast stations, 2 shortwave stations), 929,949. Africa (14 broadcast stations, 5 shortwave stations), 262,836.

Kerr Back in City

NEW YORK—Joseph A. Kerr, for the past two years covering the Westchester area for General Electric, has been transferred to the downtown metropolitan area.

RCA Managers Formulate Fall Plans



This group of RCA-Victor district managers and divisional heads attended a two-day session at Camden late in August to formulate Fall merchandising plans. Left to right: S. D. Camper, John W. Griffin, J. B. Elliott, R. A. Forbes, J. W. Cocke, N. A. Woodford, E. W. Butler, D. A. Lewis, L. W. Teegarden, John West, M. F. Blakeslee, F. D. Wilson, H. C. Edgar, Norman Bass, H. T. Stockholm, Vance Woodcox, H. A. Edwards, F. H. Larrabee and F. M. Bewsher

Magna in N. Y.

ROCHESTER—The Unit Reproducers Manufacturing Company of this city, maker of "Magna" permanent magnet dynamic speakers, pickups and other radio equipment, has established an office in New York City at 1472 Broadway.

Alamo Distributor

SAN ANTONIO—Harry L. Roper, for seven years district manager for Crosley in Texas, has formed the Alamo Distributing Company, of which he is vice president and general manager. H. F. Clayton, for four years sales representative for the Prima Manufacturing Company, succeeds Roper as Crosley representative.

Sustaining Programs Up

NEW YORK—Of the 100 leading national advertisers in 1935, 73 used radio, according to the NBC. Of the 27 not using the air 9 were liquor advertisers—and the networks do not handle this classification.

A total of \$36,760,496 was expended by the 73 leaders last year. Nearly two-thirds, or \$23,219,582, went to NBC. Only 70 of the first 100 national advertisers used radio in 1934.

IMPORTS

A total of \$20,485 worth of radio apparatus and parts entered the United States from foreign countries during 1935. Listed in order of dollar volume: Germany \$11,186; United Kingdom \$6,755; Netherlands \$1,078; Canada \$999; Belgium \$178; Mexico \$118; Brazil \$88; Australia \$35; Cuba \$20; Japan \$15; Dutch West Indies \$13.

ARMY PURCHASES HEAVY

Of interest to radio dealers supplying accessories replacement parts and service to Government services is the news that the War Department plans to spend \$1,000,000 for radio equipment during this fiscal year. \$500,000 will shortly be available to the Signal Corps for replacement equipment at Army air fields. New radio beacon-weather equipment is planned for eighteen stations, to cost an additional \$400,000 and obsolete low frequency equipment is to be replaced with modern high-frequency equipment at each of the Army's 31 fields.

BAIT ADVERTISING BOOMERANGS

(Continued from page 13)

days, "economy" days and the like are profitable in the long run. Chicago is a city which has educated its public to look for bargains. Large stores which started with one "money saving" day a year now have five or six, nearly all selling at cost on those occasions. More and more the stores are jam-packed on these dates, with greater and greater lulls between. What good does this do a merchant on his year's business?

Seven Better Weapons

"Now then," you interrupt to ask, "If bait propositions are like the Australian boomerang which comes back to sock you on the coco, what is the smart way to run promotions in 1936?"

1. *Consistent advertising.* A splash once in a while has not nearly the effectiveness of constant publicity. You get people to feel acquainted with you and look for your propositions. They *believe* in you more.

2. *Make your first price step-up in print.* Quote a price that is well off the bottom level. Once Chicago houses advertised refrigerators at \$119 in 1935. This year the advertised price is \$157. The average unit of sale is more than \$40 more, simply because the step-up has been done *by print*.

3. *Keep payments as low as ever.* With the cost of living rising faster than pay envelopes, it squeezes most families just as much to find extra money for their radios. Low payments are a great help in closing.

4. *Talk propositions instead of*

price. One of the best washing machine retail advertisements ever run featured a free laundry basket, clothes pins and line. The copywriter realized that women want to make a clean sweep of their old basement when they buy a new washer.

5. *Use testimonials.* The Mace-Ryer Company, Kansas City, wanted to impress prospects with their all wave sets. They got a Kansas City man to log all the stations he could in one night. Of course they primed him for telephone calls. His picture and the results enjoyed right there in Kansas City made the copy one of the most convincing advertisements that firm ever ran.

6. *Write your own advertisements.* The garden variety most national advertisers send out are 95 per cent promotions of their products and 5 per cent for the dealer. That's natural, but the homemade copy has a better flavor and is believed more by local people.

7. *Meeting mail order competition.* Forget it. No one house is ever going to get all the business. Standing in the way of mail order houses are two forces. One is the testimonial value of the thousands of appliances already in use, which lead owners to boost that brand to their neighbors. The second is the fact that 100% of the population can never be sold on any one thing.

The country is on an upward trend. The market is there waiting. Fewer and fewer radio dealers can say they are pinched by hard times into bait advertising and wholesale selling. These days good propositions are working—and it's time to use them.

KEYS TO SOUND SALES

(Continued from page 25)

tems as we are. We must go further and show him what he will "lose" by the lack of quality in some other reproducer. This doesn't mean that we should "knock" any other system.

Comparison is the third Key. While we slip this key on our chain, let's watch a salesman put it to work.

Salesman: "I am sure, Mr. Manager, that when you hear the Royal Reproducer, you will notice *at once* what an improvement it is over the usual 'canned music.' You don't enjoy

scratchy, raspy music, so ordinary equipment is just a waste of money."

Note carefully that the salesman does not "knock" any competitor. He plainly shows the prospect the values to be expected from his system which will not be found in the other units. Remember that as long as there is more than one maker of sound systems and more than one sound engineer to install them, it will be quite necessary to show the prospect why he will derive more value from our proposition than from that of any other.

The prospect is interested in the reputation of the Company, and also that of the user of the product. This twofold interest makes *Reputation* the fourth sales key. Without appearing to boast in any way, the salesman can gain favorable attention in this way.

Salesman: "The Royal Manufacturing Co. is not only the world's largest maker of sound equipment, but they supply amplifiers and the like to many of the large broadcasting companies."

Now for a little practice in the use of our key chain. So far, we have four keys—*Buyer-Benefit*, *Quality Comparison*, and *Reputation*. They will be combined by a salesman in a call he makes at the Downtown Hotel.

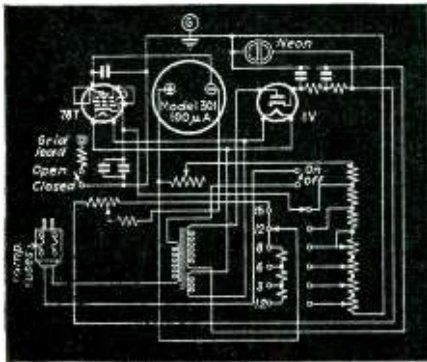
Salesman: You will increase your business and start people talking about the Downtown Hotel when you install a natural Royal Reproducer, Mr. Manager. Do you remember the favorable reaction produced by the picture "One Night of Love" with Grace Moore? It was the first picture in which our new reproducing system was used. Immediately, people realized the natural singing was just what they had been waiting for. This quality would not have been possible with ordinary equipment that scratches and squawks. Your Hotel is known for the best in everything. You can't afford less in Sound Equipment."

Read these statements again, underlining each key you find. Notice how the prospect is taught to look for the *Buyer values*. See also how *Quality* backs them up and how *Comparison* shows what he will "lose" by another system. As a final stroke, the salesman gave him a compliment. This appeals to the Manager's pride, making him feel his responsibility to the community. Such a compliment must never be plain flattery. Salesmen seek out the prospect's strong points and appeal to them sincerely. Careful *Compliment* becomes the fifth sales key.

SERVICE

DESIGN • REPAIRS • INSTALLATION

NEW CIRCUITS



V. T. Voltmeter

In response to a number of requests we print herewith the circuit of Weston's new model 669 vacuum tube voltmeter. Component parts values are not obtainable.

The design is novel in that no voltage divider or resistance bleeder is used across the input and therefore only the admittance of the tube appears across the circuit to be measured. Ranges are selected by means of a rotary switch and because the 78's variable-mu characteristics are utilized in a special circuit an extended range permits measurements from .2 to 16 volts in 6 individual ranges.

A 100 microampere instrument is used, along with a self-contained power supply operating directly from 50 or 60-cycle a.c. lines. To facilitate readings between .2 and 1 volt a neon regulator tube is used to hold the d.c. plate, grid and screen voltages constant. A screwdriver adjustment is provided for keeping the instrument on calibration in the event of tube wear. A reset control is included and must be adjusted for zero instrument reading when switching to various scales.

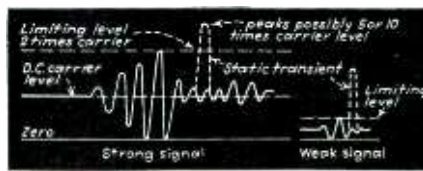
The tube is brought up through the panel to minimize input capacity. This is 4 micro-microfarads without the test leads. A.f., r.f. or any a.c. value within the range of the instrument may be read directly from the calibrated meter scale. Curves are also available for d.c. readings.

Static Reducer

The GE E-155 is the first commercial broadcast receiver we have seen using a circuit which reduces certain forms of static. Short-time transients, such as "clicks" and "pops," are limited to the audio level corresponding to 100% modulation of the received station. In tuning between stations the reduction in static is greatest, since there is no carrier wave detected to open up the device.

The rectified signal voltage at the diode load resistance for any modulated carrier wave consists of a DC voltage, due to the received carrier wave, plus super-imposed AC voltages or modulation of this carrier wave.

No voltages can appear below the



zero line since the diode rectifier passes current in but one direction. Static appears as transient peaks on top of the rectified signal, as shown by the dotted lines above. These static transients have random peak amplitudes and, of course, the weaker the received carrier wave, the greater is the ratio of static peak amplitudes to the carrier amplitude. Furthermore, weak signals in general utilize a smaller portion of the available amplitude characteristic of the IF amplifier, thereby permitting relatively high peak static transients to be detected without being limited in the IF amplifier.

The diode limiter for static reduction consists of a device which cuts static transients after detection in the signal diode rectifier at a level of twice the carrier voltage, which corresponds to the 100% positive modulation level. Thus, the carrier modulation is fully passed without distortion. Since the limiting level is automatically established for any received signal, the lim-

LOOK FORWARD . . .

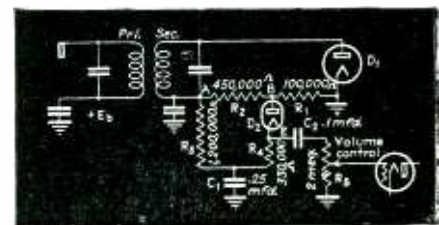
| | |
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iting device also follows a fading signal.

The diode D_1 is a normal signal diode with its load resistances R_2 and R_1 . The diode limiter D_2 is series connected with two resistors R_3 and R_4 . The common point of R_3 and R_4 is by-passed to ground for audio frequencies by the capacitor C_1 . The volume control is connected to the cathode of D_2 .

The point "A" has a negative potential with respect to ground for any received carrier wave. Current flows from ground to point "A" first through R_1 , then through the two parallel paths R_2 and D_2 , R_4 , R_3 in series to point "A." C_1 becomes charged to a negative potential approximately twice as great as point "B," depending upon the circuit constants. C_1 is sufficiently large to hold its potential nearly constant for approximately one-half second during a transient static impulse.

The point "A" has AC potentials, due to modulation of the received signal super-imposed on the DC carrier. R_3 and C_1 form a filter for all audio frequency voltages, and negligible audio voltage appears on C_1 . However, audio voltage at "B" is transferred to "E"



Announcing

IRC
REG. U.S. PAT. OFF.

Metallized

VOLUME CONTROLS

for Radio Service and Amateur Use

1. "Knee Action" Contact

Made by 5 separate silver plated phosphor bronze springs.

2. No "Jumping"

No jumping or shifting of points of contact. Each contactor invariably follows the same smooth "path" across the resistance element.

3. No Obstructions

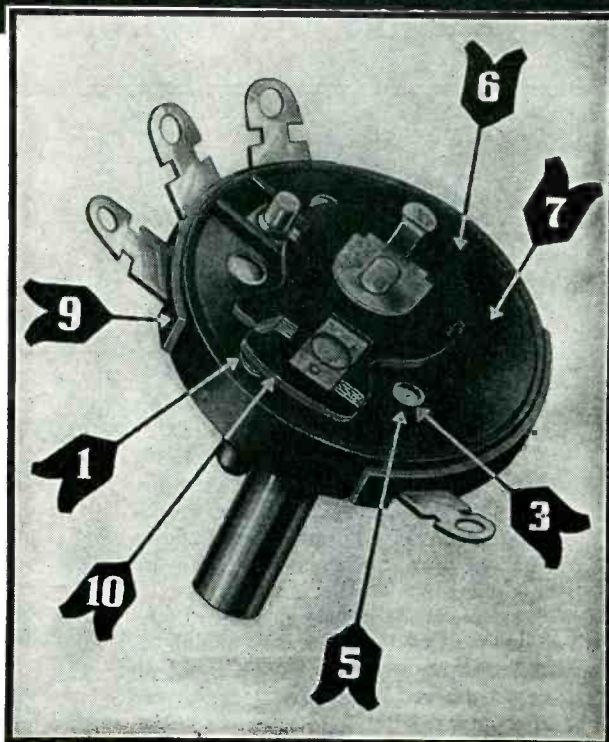
IRC contact method on tapped controls eliminates obstructions in path of contactor. Smoother adjustment—no noise.

4. Dust-Proof Case

No openings or slots in covers.

5. Corrosion-Proof

All electrical contacts are proofed against corrosion and oxidation.



6. Metallized Type Resistance Element

Permanently BONDED to moisture-proof Bakelite base.

7. Moisture-Proof

The Bakelite base of the resistance element CANNOT absorb moisture—nor will moisture damage the Metallized type resistance coating.

8. Small—But Not Too Small

Minimum size for universal application and maximum performance.

9. Protected Terminals

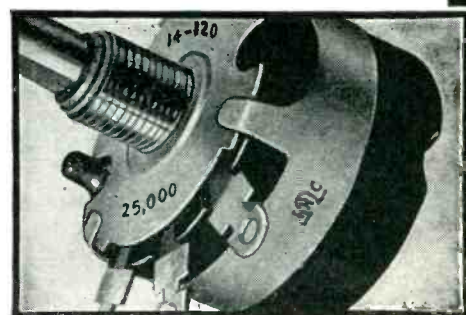
Deeply set in molded Bakelite casing.

10. Amazingly Smooth

Smoothly, yet firmly, the 5 contactors glide over the hard wear-proof surface.

with the **10** MOST IMPORTANT FEATURES EVER OFFERED IN A VOLUME CONTROL

The world's best known maker of fine resistance units scores again! For several years IRC Volume Controls have been supplied to leading radio and electrical manufacturers. Now, in a complete range of types, they are offered for service and amateur use as the outstanding replacement control development in the history of radio! Featured by leading jobbers. See them—try them—write today for catalog.



Actual size illustration of IRC Type "C" Volume Control with switch.

INTERNATIONAL RESISTANCE COMPANY
401 NORTH BROAD STREET • PHILADELPHIA

FLASH—MORE BIG NEWS!

NEW Type BT-2 (2-watt) INSULATED Metallized Resistors now ready
List Price 30c

NEW LOW PRICES on both ½-watt and 1-watt
INSULATED Metallized Resistors effective Sept. 1

½-watt (Type BT-½) List 17c 1-watt (Type BT-1) List 20c

IRC
REG. U.S. PAT. OFF.

by virtue of the conduction through D_2 . At this point it is desirable to state that the total resistance of R_3 and R_4 is large, compared to R_2 or R_1 . Furthermore, there is negligible voltage drop in D_2 compared to that in R_4 during conduction. Therefore, the audio voltage on the volume control R_5 is the same as at "B" over the modulation cycle. However, when a static peak appears at "B" greater than the potential on C_1 (that is, greater than 100% positive modulation peaks), no current can flow through D_2 since its anode then becomes negative with respect to its cathode. Thus, the diode D_2 simply does not conduct static impulses to the volume control when they exceed 100% modulation.

The advantages in limiting at the diode load resistance are as follows:

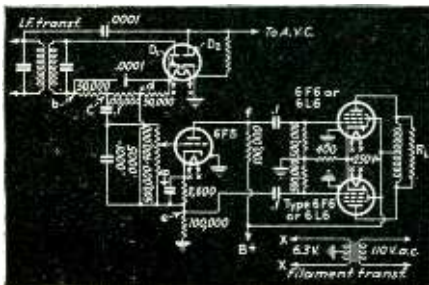
- 1) Static peaks appear only as uni-potential transients, therefore, only a single limiter is required. Ordinarily, two limiters would be required with an AC voltage, in order to limit both halves of a cycle.
- 2) The limiting function is automatically controlled by the received carrier level, regardless of the AVC characteristic, setting of volume control, etc.

Phase Inverter

The diagrammed high-gain, single-tube phase-inverter may be seen in several new receivers this fall. It is an RCA lab design, is non-degenerative and capable of driving two 6F6's or 6L6's to rated, Class A, output.

The secondary of the i-f transformer feeds the diode (D_1) of 6H6 to supply audio voltage; the primary of the transformer feeds the diode (D_2) to supply a.v.c. voltage. The audio voltage that appears across R_2 is fed to the grid of a 6F5 through a coupling condenser (C_2). The output of the 6F5 appears across resistors R_6 and R_8 . Because the potentials of points (e) and (f) are equal in magnitude and opposite in polarity with respect to ground, the output tubes operate in push-pull.

R_1 and R_3 are filter resistors. They serve to minimize the r-f voltage that can appear across the volume control and to reduce the effects of capacitance from point (a) or (b) to ground. If



point (c) or (d) should have a large capacitance to ground, the magnitude and phase of the signal voltage across R_5 will be changed. A shift in magnitude or phase of the voltage across R_5 is manifested by a decrease in power output, especially at high audio frequencies.

NEW TUBES

No issue seems complete without data on a batch of new tubes, so here's the lowdown for the month. Socket diagrams will be found farther back in this section on a new tube type layout page labelled "Tops and Bottoms:"

25B5 A Triad type comprising two directly coupled triodes, similar electrically to the well-known 6B6:

| | |
|-----------------------------------|---------------|
| Filament voltage..... | 25 |
| Filament current..... | 0.3 |
| Output plate supply voltage..... | 110 180 |
| Input plate supply voltage..... | 110 100 |
| Output plate current..... | 45 46 |
| Input plate current..... | 7 5.8 |
| Load impedance..... | 2,000 4,000 |
| Power output..... | 2 3.8 |
| Total harmonic distortion..... | 9 9 |
| Input volts for rated output..... | 21 21 |
| Mutual..... | 2,200 2,300 |
| Plate resistance..... | 11,400 15,200 |

25N6G Same as above except that it uses an octal base.

25B6G A pentode power amplifier:

| | |
|--|----------------------|
| Heater voltage..... | 25 |
| Heater current..... | 0.3 |
| Plate voltage..... | 95 |
| Screen voltage..... | 95 |
| Control grid voltage..... | -15 |
| Plate current..... | 45 |
| Screen current (no signal)..... | 4 |
| Screen current (max. signal)..... | 12 |
| Plate resistance..... | subject to variation |
| Load resistance..... | 2,000 |
| Mutual..... | 4,000 |
| Power output (10 per cent distortion)..... | 1.75 |

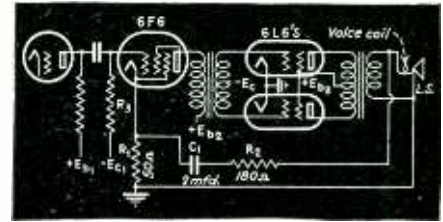
1603 High gain pentode with low noise and low microphonic characteristics, intended for use primarily in pre-amplifiers:

| | |
|--|------------------------|
| Heater voltage..... | 6.3 |
| Heater current..... | 0.3 |
| Plate voltage..... | 100 250 |
| Screen voltage..... | 100 100 |
| Grid voltage..... | -3 |
| Suppressor (tied to cathode at socket) | |
| Amplification factor..... | 1,185 .. Over 1,500 |
| Plate resistance..... | 1 meg.. Over 1.5 megs. |
| Mutual..... | 1,185 .. 1,225 |
| Plate current..... | 2 2 |
| Screen current..... | 0.5 0.5 |

Audio Degeneration

Audio degeneration is incorporated in the GE E-155 to reduce distortion arising in the driver and push-pull output stages, extend low and high frequencies and level off peaks and valleys caused by loudspeaker impedance variations. Hum arising in the audio system is also reduced and the loudspeaker is, in effect, damped for transient responses.

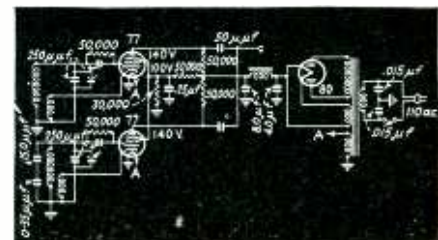
Degeneration is accomplished by feeding a portion of the speaker's



voice-coil voltage back into the grid circuit of the audio driver stage out of phase with the normal audio voltage present in this circuit. The capacitor C_1 , resistors R_1 and R_2 are series connected across the voice-coil VC. The voltage appearing on R_1 is a portion of the voice-coil voltage as determined by the values of R_1 , R_2 and C_1 . The current through R_1 from the voice-coil voltage is large when compared with the AC component of the plate current in VT_1 . This voltage must oppose the audio input voltage appearing on R_3 in the series grid circuit from the cathode of VT_1 to its grid.

The degeneration factor is the ratio by which the audio input voltage must be increased to obtain the same voice-coil voltage with and without the degeneration circuit connected. If the grid-cathode voltage is normally one volt for a given voice-coil voltage and if one volt appears on R_1 as a result of feedback from the voice-coil, the audio input must be two volts with the degeneration circuit operating, whereas it would be one volt without this circuit operating. The value of degeneration factor actually used in this particular receiver is 2.

The capacitor C_1 is used to reduce the value of the feedback voltage at low audio frequencies, thereby introducing bass compensation. The value of C_1 for given values of R_1 and R_2 controls the amount of bass compensation introduced at low frequencies in this particular circuit.



Speaker Tester

Here's the circuit of Philco's model 055 speaker tester, a beat-frequency oscillator tuning from 40 to 8,000 cycles, complete with its own power supply unit.

Electron coupling to the load is incorporated in the circuit.

HERE'S THE

Newest



A COMPLETE NEW LINE
OF RADIO TEST EQUIPMENT
from \$17.95 to
\$147.95

S U P R E M E I N S T R U M

EXPORT DEPT., ASSOCIATED EXPORTERS CO., 145 W. 45th

thing IN RADIO!

Mr. Service Man:

The new 1937 SUPREME Instruments are on parade — a price range from \$17.95 to \$147.95 — greater values than ever! For example — the Model 590 — seven A. C. voltage ranges of 0/5/25/125/500/1250/2500 volts; seven D. C. voltage ranges of 0/5/125/250/500/1250/2500 volts; seven output ranges of 0/5/25/125/500/1250/2500 volts; +6, 0 to +16, +10 to +26, +20 to +36, and +30 to +46 decibels; six D. B. ranges — 10 to 500/1250/2500 volts; five D. C. milliamperage ranges of 0/12.5/25/50/100/250 microamps; one microampere range of 0/12.5/25/50/100/250 microamps; one ampere range of 0.0125/0.025/0.05/0.125/0.25/0.5/1.25/2.5/5.0/12.5/25.0/50.0 mfd; and five resistance ranges of 0/1,000/10,000/100,000/1,000,000/10,000,000 ohms from self-contained batteries. Ranges to cover all necessary test work in any receiver, transmitter or speech equipment. The 0-200 microampere Quadrimeter — the newest thing in Radio. All for only \$46.95. Write for catalog or come in today and see the world's finest radio Testing Equipment.

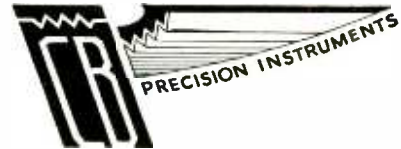
Your Parts Jobber

SUPREME INSTRUMENTS

**YOU CAN BUY ANY
SUPREME INSTRUMENT
ON S. I. C. EASY TERMS**

**INSTRUMENTS CORP. GREENWOOD
STREET, NEW YORK, N. Y., CABLE ADDRESS: LOPREH, N. Y.
MISS., U. S. A.**

OUTPUT CALIBRATION IN MICROVOLTS



achieved by
CLOUGH-BREngle
 at a revolutionary low price

\$43.90

dealer net

MODEL NINETY-NINE R-F Signal Generator

New SUPER-SERVICE Models Beat Frequency Audio Generator

MODEL 79-A with greater spread on the lower frequencies and new stability achieved through improved circuit design and air trimming capacitors. Has type 6E5 tube as zero beat indicator. Uses low cost 6C5 metal tubes. Dealer net with tubes.....\$53.75

Vacuum-Tube Voltmeter

MODEL 88 Combination Vacuum-Tube Volt-meter and Peak Voltmeter. Reads 0-1.2 volts with input direct to tube grid (no shunts) on 4 1/2-inch fan type meter. Supplies bucking voltage for peak voltage readings on scales of 0-10 and 0-100 volts. Dealer net with tubes.....\$42.50

Constant Sweep Frequency Modulator

MODEL 81-A employs the C-B "Inductor-Sweep" to give plus and minus 20 kc wobble for calibrated selectivity curves, when used with any r-f signal generator. No alteration necessary on your generator. Dealer net with tubes.....\$34.25

Cathode-Ray Oscillograph

MODEL CRA Cathode-Ray Oscillograph offers full facilities for all laboratory applications of this device. Built-in linear sweep with synchronizing circuit, amplifiers for horizontal and vertical inputs, and double the usual input sensitivity. Dealer net with all tubes.....\$84.50

See your jobber today for demonstration of these new C-B Models, or write for complete information. The name of your local C-B Distributor will also be sent on request.

Development of an improved r-f generating circuit with greater stability and linearity of output, now makes it possible for C-B to offer the lowest priced instrument ever to achieve direct microvolt calibration of r-f output. In addition, the MODEL 99 embodies numerous other advances such as:

Variable Percentage of Modulation: The depth of modulation, sine wave at all times, may be controlled from the panel, thus enabling the MODEL 99 to better meet the test requirements of modern a.v.c. and frequency "pull-in" circuits.

Direct Reading Dial: Over 100 common i-f broadcast and short-wave test frequencies are printed on the dial and their exact settings ruled in by hand, giving direct dial reading within 1/2 of 1% accuracy.

100 Kc to 60 Mc on Fundamentals: Divided between six ranges each having a complete separate inductor mounted on the rotating band change unit which eliminates the contact losses and multiplicity of wires necessary for ordinary band changing

methods. Each band is tuned across twenty-five inches of dial length, allowing extreme accuracy of setting.

Calibrated Attenuator: All r-f circuits are enclosed in both inner and outer shielding cases, with the r-f out-put being fed to cast aluminum attenuator. Each attenuation sector or range is contained in a completely isolated cast segment. Thus no r-f voltage carrying conductors are exposed, and strays are reduced to the low level necessary for testing receivers of the highest sensitivity.

The Model 99 will be ready for general delivery on or before September 1. Ask your jobber to advise you when his demonstration sample arrives.

New 1937 Catalog now ready

The CLOUGH-BREngle CO.

2819 W. 19th St., Chicago, Ill.
 Cable Address: CEBEco

Send full technical data on the new MODEL 99 and the complete new C-B SUPER-SERVICE Line.

Name

Address

Clip and mail today!

How to Build a Volt-Ohm-Milliammeter

By G. F. Benkelman

Continental Carbon, Inc.

UTILITY, simplicity, and economy are the factors which governed the design of this modern, versatile instrument which may be assembled and used by any radio dealer or serviceman.

The foundation meter is a $5\frac{1}{4}$ inch, one-milliamperes stock model with an internal resistance of 50 ohms or less. This size was selected to increase readability in places where a radio serviceman often has to work without much light. While a more sensitive instrument would offer certain advantages, all of the manufacturer's service data is compiled on the basis of readings with a meter having "1000 ohms per volt."

A special paper scale was devised which could be attached to the back of the regular meter scale with rubber cement. This scale has the important low-ohm arc at the top where its divisions are sufficiently spread out to insure accurate reading. The high-ohm arc is next and the current and potential scale is below.

As many meters have been damaged by careless use of pinjacks or switches, this circuit was designed to use a standard eleven-point double-deck rotary switch and the various ranges were planned so that it would be necessary to swing through the ohm ranges—causing the meter to flick—before reaching the current scales. Thus, there is little danger of shifting from volts to milliamperes without this warning movement of the meter. To simplify the use of both ohm scales, they are controlled, for zero adjustment, through one rheostat, one resistor and one battery of nine volts. The adjustment for the low scale is correct for the high ohm scale also.

Readings may be made from one-half ohm to 1000 ohms on the low range, and from 100 to 1,000,000 ohms on the high resistance scale.

Each range was chosen for certain practical reasons. The five-volt scale is intended for the many battery receivers which use three-volt or four and one-half-volt filament supply. Note these voltages appear on the upper half of the five-volt scale where they may be

read with the greatest accuracy. The ten-volt scale is essential for use in checking auto radio, storage batteries, and rural six-volt sets. The 25-volt range checks $22\frac{1}{2}$ volt batteries, and the drop across cathode bias resistors. The 50-volt range is intended for 45-volt batteries, screen-grid voltages, and power tube bias voltages. The 100, 250, and 500-volt ranges permit readings in the most legible portions of the scale for practically all plate and screen voltages found in standard sets. If desired, a 1,000-volt range may be secured merely by connecting a 500,000-ohm resistor in series with the test leads and switch to the regular 500-volt range.

The current ranges of ten and 100 milliamperes serve practically all radio receiver requirements, although for public address equipment it might be advisable to extend the 100-milliamperes range to 500 milliamperes by using a shunt of 0.1 ohms instead of 0.5 ohms specified on the diagram.

The advantage of a meter with 50 ohms internal resistance, or a meter with less resistance which has had added to its fundamental coil resistance sufficient manganin or German silver wire to bring its net resistance to 50 ohms, may be seen in the simplicity of providing shunts of fairly uniform values and in providing a uniform scale for the low-ohm range. If the sum of the meter movement and R_p resistance is more or less than 50 ohms, the accuracy of the low-ohmmeter range will be impaired.

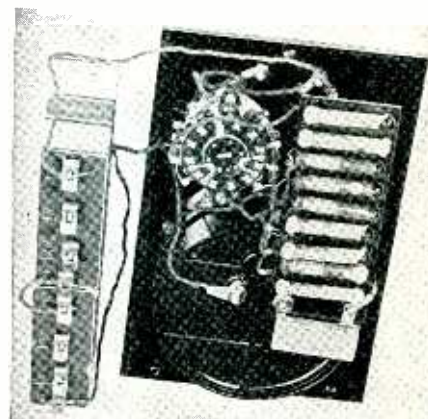
The assembly of the meter and resistors presents no difficult problem to servicemen. Insulated semi-precision carbon resistors are recommended. If purchased in a kit, the paper dial scale and resistance wire may be obtained with the resistors.

The following values of resistors are specified for the circuit:

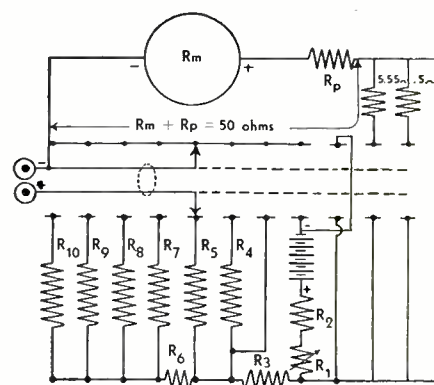
R_2 is 8,000 ohms, R_3 is 4,950, R_4 and R_6 are 5,000, R_5 is 20,000, R_7 is 40,000, R_8 is 90,000, R_9 is 240,000 and R_{10} is 490,000. The variable is 2,000 ohms. In addition to the



OUTSIDE



INSIDE



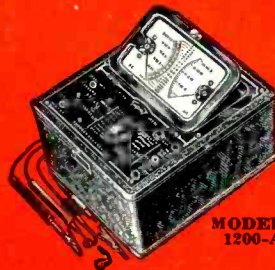
CIRCUIT

foundation meter, an 11-point double-deck non-shorting rotary switch, a 2000-ohm midgeet wire-wound potentiometer (R_1), and two four and one-half-volt C batteries are essential. In the illustration, a panel $5\frac{1}{2}$ inches x $8\frac{1}{2}$ inches proved just the right size for the assembly. It fits in a box which may be $3\frac{1}{2}$ inches to 5 inches deep.

1937 TRIPLETT MASTER SERIES...

● FEATURES

- **MAXIMUM PROTECTION AGAINST OBSOLESCENCE.** All designs carefully considered from a viewpoint of possible obsolescence. Being single purpose instruments in itself is great protection. Also damage to one unit makes repairs single and does not tie up other instruments.
- **UNITS ARE INTERCHANGEABLE IN CARRYING CASE,** inasmuch as they are contained in metal cases of one size.
- **ULTRA PORTABLE.** Unit size is small, compact, hence light in weight and practical for the best results.
- **SOLID CONSTRUCTION.** The internal construction of all **MASTER UNITS** is designed so all small parts are rigidly supported. All units will stand up under hard usage and give service.
- **PRECISION BUILT.** Every test will show **MASTER UNITS** are outstanding in quality. Every effort made to maintain accuracy throughout. Each Unit represents the most up-to-date engineering practice in every detail.



MODEL 1200-A

VOLT-OHM-MILLIAMMETER

Low ohm scale reading 1/4-500 ohms with 15 ohms center. Reads D.C. 10-50-250-500-1,000 volts at 2,000 ohms per volt. A.C. 10-50-250-500-1000 volts. 1-10-50-250 D.C. Milliamperes; 1500 Ohms; 1.5 and 3 Megohms. back up low Ohms Scale 1/4-500 Ohms. Dealer Price\$21.37

MODEL 1200-B

Similar to Model 1200-A but with copper oxide A.C. Dealer Price\$26.67



MODEL 1210-A

TUBE TESTER

Tests all types of tubes, metal, glass, G-type, under R.M.A. load conditions. Direct reading colored GOOD-BAD scale. Large meter. R.M.A. circuit used. Dealer Price\$20.00



MODEL 1220-A

FREE POINT TESTER

Used with Volt-Ohm-Milliammeter for set testing. Makes all series and parallel instrument connections through five sockets, with standard R.M.A. markings. Has plug and cord with all adapters. Dealer Price\$10.00



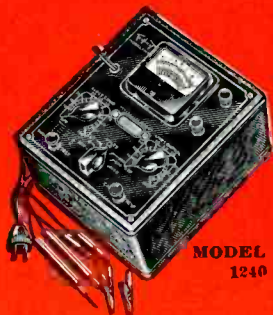
MODEL 1231

A.C. SIGNAL GENERATOR

With 12" dial, 8 bands from 100 to 30,000 Kc., fundamental. Perfect attenuation. 400-cycle note. Dealer Price, \$23.33

MODEL 1232

Similar to 1231 but does not have self-contained battery operation. Dealer Price\$25.00



MODEL 1240

CONDENSER TESTER

Model 1240 gives all radio condensers a complete test; high voltage breakdown, detects shorts and leakages, checks capacities of all types from .0001 to 10 microfarads. Illuminated line voltage indicator. All tests shown on single Triplet precision instrument. Dealer Price \$24.83



MODEL 1260

AUDIO OSCILLATOR

Generates pure sound wave without distortion or harmonics. Laboratory accuracy. Wide frequency range. Signal strong and impedance matching is variable, permitting matching with low, medium or high impedance input of amplifier or P.A. systems. A.C. operated. Dealer Price \$26.33



MODEL 1295

MODULATION MONITOR

Model 1295—for all voice transmitting stations. Indicates actual modulation percentage on direct reading scale. Factory calibrated and no further calibration needed. Complete with all necessary accessories. Dealer Price\$24.83



ELECTRICAL INSTRUMENTS

**TRIPLETT PRECISION
BUILT IN EVERY UNIT**

CO-RELATED, SINGLE PURPOSE TEST EQUIPMENT

THE ULTIMATE IN SUPER-SENSITIVITY

MODEL
1250

- ① [★] NO CURRENT DRAIN
PLUS
- ② ^{★★} SELF CALIBRATION

TRIPLET VACUUM TUBE VOLTMETER

★ Means Accuracy cannot be affected by the current drain of the instrument itself. No current drain in Triplet Vacuum Tube Voltmeter assured by self-calibrating bridge circuit used.

★★ The most important advancement in circuit design for precision electrical instruments within recent years.



DEALER PRICE
\$33.34

All laboratories and engineers will immediately appreciate the significance of this remarkable instrument. Indispensable also in the servicing field for measuring electrical impulses either A.C. or D.C. of low magnitude such as the carrier wave of signal circuits, and particularly for television work.

The self-calibrating feature is automatic with the tube bridge circuit developed by Triplet Engineers (Pat. Pending). The initial operation of adjusting the bridge at the Zero level insures exact calibration independent of tube emission values or when replacing tubes.

Model 1250 is furnished with Triplet Tilting type twin instrument. One instrument indicates when bridge is in balance. The other is a three range voltmeter with linear scales reading in peak A.C. and D.C. voltages. Ranges are 2.5, 10 and 50 volts. Other ranges to order.

Model 1250 is complete with all necessary accessories including 1-84, 1-6C6, 1-76. Case is metal with black wrinkle-finish, panels are silver and black. Dealer Price... \$33.34

THIS IS A TRIPLET MASTER UNIT
See your jobber — write for information

THE TRIPLET ELECTRICAL INSTRUMENT CO.
209 Harmon Dr., Bluffton, Ohio

Without obligation please send me complete information on TRIPLET VACUUM TUBE VOLTMETER.

I am also interested in

Name

St. Address

City..... State.....



Precision controls for controls

CLAROSTAT

CHAISIS NO. Prices

PLAIN or SWITCH How Used Resistance

"W" include switch, except on "X" controls.

"C" "X"

W. H. RAYMOND CO. (Continued)
"MAJESTIC"

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|------|-------|-----|------------|-----------|
| C-51 | X-239 | PL. | T. C. | 60,000-Z |
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| C-51 | X-795 | L. | T. C. | 100,000-Z |
| C-46 | X-237 | SW. | T. C. | 50,000-Z |
| C-46 | | SW. | T. C. | 50,000- |
| C-46 | X-395 | SW. | T. C. | 250,000 |
| | | SW. | T. C. | 250,000 |
| | | SW. | T. C. | 50,000 |
| | X-798 | PL. | Sen. C. | 5,000 |
| | X-798 | PL. | Sen. C. | 5,000 |
| | X-789 | PL. | Phono V.C. | 200, |
| | | PL. | V. C. | 200, |
| | | PL. | V. C. | 200, |
| | | PL. | V. C. | 200, |
| | | PL. | V. C. | 200, |
| | | PL. | V. C. | 200, |

W-19
W-19

310-B
340, 390, 360
800) F-50

180, 181, 321, 100B

Why They Choose CLAROSTAT

"... as good, if not superior, to others we have used."—M.N.A., St. Paul, Minn.

"Found sample OK; also others obtained from my local jobber who has recently taken on CLAROSTAT and line seems to be very satisfactory.—J.K.C., Bakersfield, Calif.

"Very smooth, not jerky rotation. Perfect resistance value accuracy. Handy mounting, especially locking stud."—E.G.E., Rockville, Conn.

"Sample control sent proved even better than you claimed. Easy to mount."—A.F., Buffalo, N. Y.

"It appears to be all that could be desired."—T.L., Tupelo, Miss.

"Smooth rotation really appreciated. Turns with minimum effort. Gave us taper we were looking for."—H.C.S., Chicago, Ill.

"Don't know of a better control. Can't suggest any improvement."—R.C., La Grange, Mo.

"All features good. Like insulated mounting especially."—C.W.M., No. Lawrence, N.Y.

"Can suggest no improvement. It has all the improvements."—J.M., Brooklyn, N.Y.

"It is the best control I have ever used. Resistance value was 'on the dot.'"—M.C.L., Satillo, Miss.

"Quite satisfactory. No better control known to me."—R.H.S., Wollaston, Mass.

Typical of the comments received from service men who tested these controls.

Speaking of VOLUME CONTROLS... Here's What Servicemen Report:

SERVICEMEN everywhere were recently invited to test CLAROSTAT controls at our expense. Thousands accepted. They chose either composition or wire-wound units, resistance values, tapers, shafts. They made their own tests. Reports have poured in ever since.

Better than 98% endorse CLAROSTAT controls. • Resistance values are reported held within 5% in all cases, and within 2% by many. • Avail-

able tapers that follow intricate resistance curves without a hitch, appeal to others. • Extremely low electrical noise is reported by 93%. • Mechanical characteristics, particularly smooth, quiet rotation and handy mounting, impress 81%.

Convincing evidence indeed of CLAROSTAT quality and dependability. Should you want first-hand proof, we'll gladly send you a sample control for test.

Ask for Your Copy...

NEW, big, 80-page CLAROSTAT Volume Control Replacement Guide sent on request. Contains most extensive listing of exact duplicates. Your local CLAROSTAT jobber can supply the required controls, as well as ballasts, flexible resistors, etc.

...and Visit with Us at I.R.S.M. Show

Look us up at Booth 25. We have an interesting exhibit. Also a real servicing story to tell you.



CLAROSTAT Manufacturing Co. Inc.

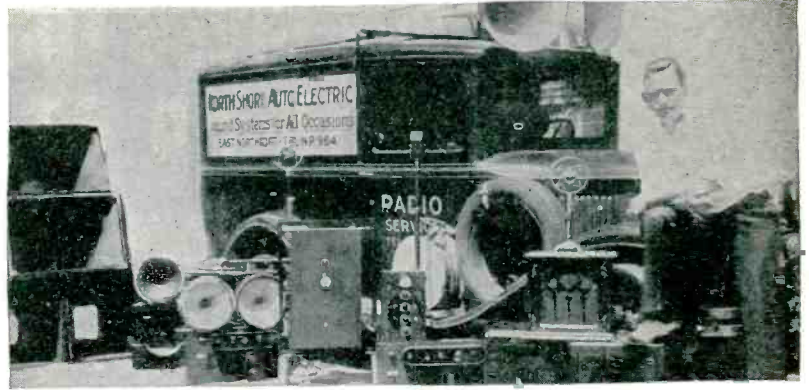


285-287 NORTH SIXTH STREET
BROOKLYN, NEW YORK, U.S.A.

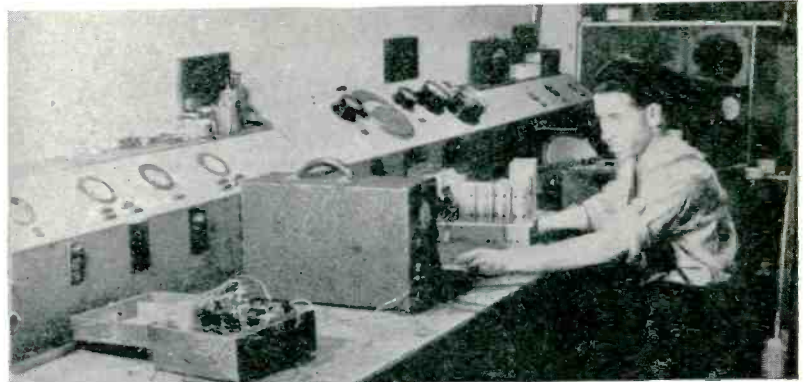
• OFFICES IN PRINCIPAL CITIES •

SERVICEMEN AT WORK

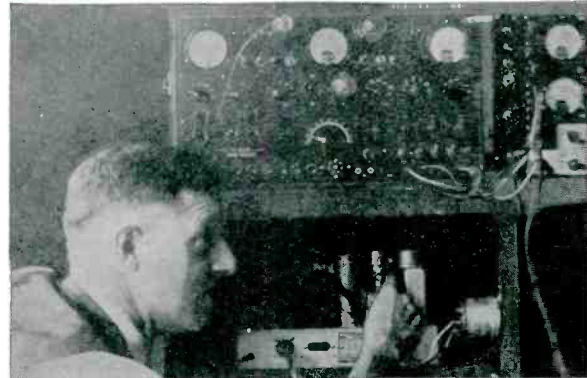
SOUND MAN—Here's Nils E. Segerdahl of East Northport, Long Island, and his extremely flexible equipment



SUNNY CALIFORNIA—Ellsworth K. Anderson of San Marino lets the ultra-violet right in to flatter his modern bench



OLD-TIMER—M. G. Goldberg of St. Paul, Minnesota, is one of our oldest contributors



SAY UNCLE—Sets do it when Al Beers of San Francisco hooks up the old analyzer and presses the buttons

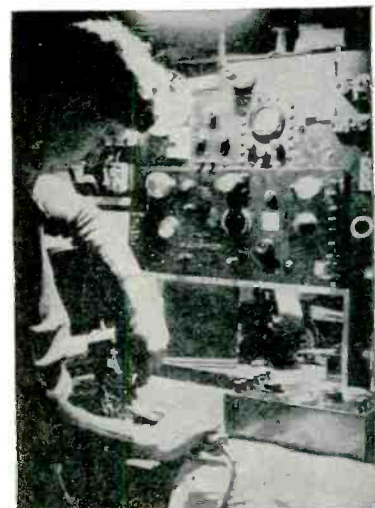


APPLIANCES TOO—Merrill Lindley of Indianapolis handles refrigerators, washers and cleaners as well as radio

LET YOURSELF GO—This is what Ed Waldo of St. Louis says he feels like doing with jelpy jobs every so often



UNDER THE HOOD—This is where you find P. W. Kidd of Chicago most of the time



IN THE MIRROR—That's where the back of the set shows when H. H. Miller of Chicago works on a chassis

OUT TO LUNCH—We missed George W. Leffer, Jr. of Buffalo but his new shop filled the lens anyway



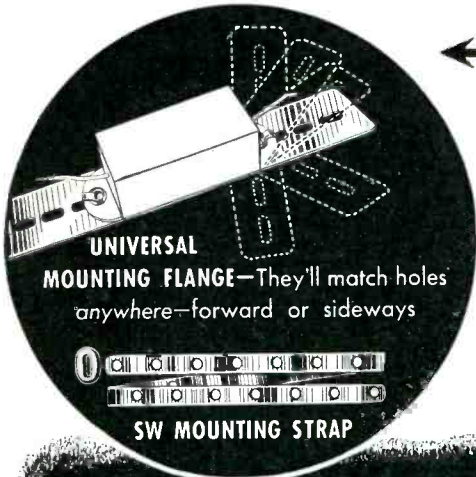
SPRAGUE GIVES YOU THESE 5 FEATURES FOUND IN NO OTHER CONDENSERS

MOISTURE CAN'T GET IN

Out goes humidity, the most common cause of condenser failure! All Sprague condensers now have a unique moisture-proof protection. The "600" Line Condensers are imprinted with a RED DOT for easy identification. Wax impregnation may be all right—the moisture proof is *perfect*.

FULL 600 V. SURGE VOLTAGE

The 600 Volt rating on Sprague 600 Line Condensers is conservative. Servicemen themselves tell us they stand surges as high as 630 to 670 Volts without failure. Follow our suggestions: *Use Spragues—and note the difference.*



A UNIVERSAL MOUNTING FLANGE—FREE

Here is the handiest, most practical mounting flange yet! Mounts condensers properly in the old chassis holes, whatever their location. For multi-unit replacements, use the flange with our ST Mounting Strap.

CONDENSERS WITHIN A "CONDENSER"

Sprague is the only manufacturer who places a finished condenser in a specially sealed outside casing for greater durability and mechanical strength. This feature is found exclusively in our famous TC paper Tubulars.

ALL TERMINALS IMBEDDED

Another instance of Sprague manufacturing perfection. Eyelets connecting leads to condenser tabs are sealed *inside* the condenser. This insures stronger construction and prevents corrosion and electrolysis.

PLUS THESE FEATURES YOU'D EXPECT TO FIND IN ANY GOOD CONDENSER

A COMPLETE LINE of 25 V.—50 V.—100 V.—200 V.—450 V. and 600 Line units for *every* radio need from the smallest of midget units to the highest capacities. Round—square—thin—flat—Lugs or Leads.

COMPETITIVE PRICES. Remember! It costs no more to use the best!

GUARANTEED MAXIMUM 10% POWER FACTOR. More and better filtering for your money.

EXTRA SAFETY FACTOR. No need to check surges.

A RADIO INTERFERENCE ELIMINATION PLAN. Write for catalog giving details.

NEW!

SPRAGUE "PINHEAD" MIKES

Just the thing to meet the rapidly growing need for extremely small, but reliable condensers! A year in the making—now ready—and it stands head and shoulders above ordinary small condensers. Conservatively rated at 525 volts, but actually will take surges as high as 560 to 580 volts. Will not breakdown. Sprague humidity proof sealing and many other features at *no additional cost.*

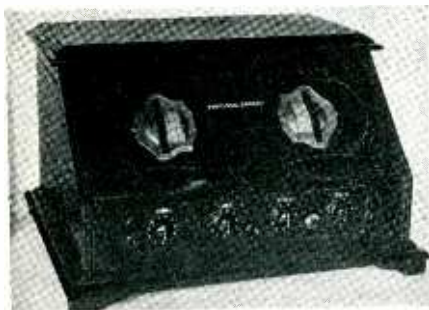


SPRAGUE PRODUCTS CO.
North Adams, Mass.

THE WORLD'S FINEST CONDENSERS — BY THE WORLD'S LARGEST CONDENSER MANUFACTURER.

How To Construct A Universal Bridge

By Jim Kirk



I HAVE just finished building a universal bridge, housing it in an old Radiola 20 cabinet obtained for \$1. This instrument is extremely flexible, performing the following functions:

1. Bridge measurement of capacity.
2. Bridge measurement of resistance.
3. Capacity bank.
4. Resistance bank.
5. Measuring ratios of audio transformers.
6. Calculating secondaries of power transformers.
7. Audio oscillator for external use with variable attenuation.

Assembly

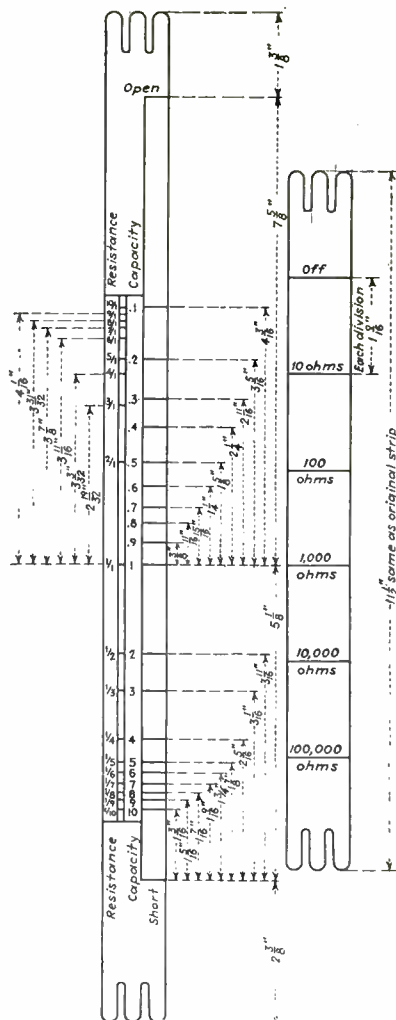
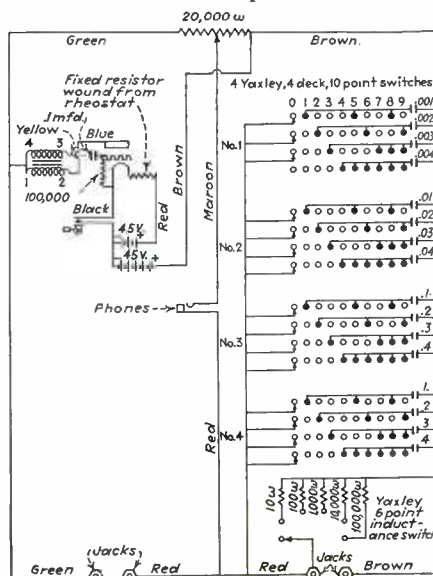
The first thing to do, after you have secured your 20 cabinet, is to remove all wiring and parts you do not need. Remove all escutcheons and parts except the following: the chassis, two '99 sockets (one at either end of the set) one audio transformer, and one phone jack. The right hand dial strip may be used, "as is" and the positions of the switch it controls marked on it. However, I made a new strip for both so that I would have a matched, balanced appearance. Drawings are shown, giving the details of the strips. If the number and type of Potentiometer specified in the parts list is used the calibration of the strip will come out all right. If another potentiometer is used, it will be necessary to calibrate the strips yourself.

Two of the large variable condensers are wrecked and the ends used for mounting the inductance switch that works from the right hand dial and the

potentiometer that works from the left hand dial. The left hand drum dial is mounted directly on the potentiometer shaft but the switch drum dial is mounted on a shaft. A bracket already on the 20 is used for a bearing and one of the flexible couplings furnished with the 20 is used to couple the drum shaft to the switch shaft.

When the nameplate is removed, some little dents may show from the edges of the nameplate, but furniture polish will eliminate these. I had an engraved piece of bakelite made to screw on the front in place of the name plate. I put my diagram and data on the inside of the cabinet cover. I used bronze cardboard (secured from stationery store) for the dial strips, so they would match the escutcheons. After the lettering was put on in india ink, I cut celluloid strips to cover them and prevent soiling, as well as improve appearance. Little escutcheons are made from one old dial strip and tacked over the lettering on the dial escutcheons. On the right hand one, I have lettered, "Resistance Bank" and on the left one, "Bridge Balance."

The 10 point-4 deck switches are furnished with name plates numbered



from 1 to 10. The 10, I inked out with india ink and I etched in an 0 before the 1 on each plate. Partly to cover screw holes and partly for convenience, at the top of each switch plate I mounted small escutcheons reading—.001, .01, .1 and 1.

The phones plug in the one jack that remains and the other jack is replaced with a jack switch that turns the audio oscillator off and on.

The 199 tube used for the oscillator is plugged in at the socket at the extreme left of the set. The batteries are mounted in the middle of the bakelite socket strip. I use the socket at the right end for plugging in the 199 when not in use so that unauthorized persons can not run down the battery by turning the switch at the front.

The two meter jacks on the 20 are replaced by colored tip jacks and the two other colored insulated tip jacks are mounted on the other end of the front, their position exactly matching. The idea of using colored jacks is to match the wire coloring and thus keep the diagram in mind and also to observe polarity when testing electrolytic condensers.

After it is all wired up, the first thing to do is to check the instrument. See that all the capacity switches are turned off, plug in several standard

FLASH

All RCA Test Equipment

Now Available on

Time Payments!

Radio engineers can now own RCA's finest, most modern apparatus on new easy plan!

BBETTER servicing means more profitable business. And there's no advertising that does a better job than the word-of-mouth praise of satisfied customers.

Give your customers a swell service job—and they tell their friends how good you are. This increases your business. The best way to do a praiseworthy job is to start off with the proper test equipment... made by Radio's Leader, RCA!

Lots of radio engineers have realized this—and have laid cash on the line for RCA Test Equipment. Lots of others wanted it—but price stood in the way. So now, in order that all may enjoy the benefits of this varied line of great apparatus, RCA makes it available on easy time payments! The plan outlined for the RCA Cathode Ray Oscillograph (in panel) is a typical example.

Do not wait a day longer! Order *your* equipment now. Profit now. Pay later!



(Above) RCA Cathode Ray Oscillograph, magic trouble-finder, with tubes \$84.50 cash, or \$10 down, \$6.92 per month, 12 months to pay; newly developed calibration screen for making comparative image measurements now available.

RCA Beat Frequency Oscillator, \$64.50, or \$10 down, \$5.25 per mo., 12 mos. to pay.

RCA Universal AC Bridge, \$49.65, or \$10 down, \$5.71 per month, 8 months to pay.

RCA Regulated Power Unit, \$39.50, or \$10 down, \$5.02 per mo., 7 mos. to pay.

RCA's easy payment plan also applies to a combination purchase of two or more test equipments. RCA test instruments not listed here include RCA Test Oscillator, RCA Frequency Modulator, RCA Vibration Pickup, RCA Piezo-Electric Calibrator.



1936-1937 CHECK-UP PLAN

—The Service Man's Sales Builder
BIGGER AND BETTER THAN EVER!

The 1936-1937 Plan will get under way soon. A bigger, better, more profit-resultful plan than ever before. A plan backed with advertising even more aggressive, compelling and comprehensive than in the past. New mailing pieces, new window displays, new interior displays. Ask your distributor about them.

RCA Parts

RCA Manufacturing Co., Inc.
Camden, N. J.

A service of the Radio
Corporation of America

resistors one after the other in the left hand jacks and see if the null point comes at the right place when the resistor dial is turned to the standard resistor matching the one plugged in. If this comes out right, the rest of the readings will take care of themselves.

To measure capacities, be sure the resistor dial is turned to off, then plug in the capacity to be measured in the left hand jacks. If electrolytic, the condenser must be formed and the polarity must be observed, red for positive, green for negative. Plug the phones in, turn the audio oscillator on and listen for the null point. There are so many capacities provided by the switches, that generally all one has to do is set the left hand dial to balance point and rotate the switches until one finds the capacity.

To measure resistors, the same procedure is followed except that the condensers switches must all be turned to zero and the resistor dial used. The resistors to be tested must be plugged in the same left hand jacks.

The resistance bank is obtained by plugging into the same right hand jacks.

To measure ratios of transformers—plug in the primary in one set of jacks and the secondary in the other set. The ratio will be read on the dial.

Suppose you have a power transformer and you want to learn the secondary voltage and you do not possess a high reading AC voltmeter. Find the ratio on the bridge and multiply.

If you need an oscillator for external use, plug in a condenser in the phone jack and use the left hand pin jacks. The potentiometer will act as an attenuator.

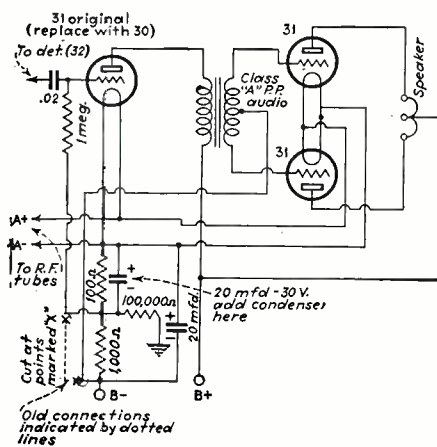
Here is a list of parts I used:

- 1 Radiola 20 with 199 tube
- 1 4½ V. C. battery
- 2 22½ V. C. batteries
- 4 small escutcheons, one for above each condenser switch
- 2 pieces of bronze cardboard 16½ inches by one inch
- 2 pieces celluloid 16½ inches by 1 inch (From auto curtain people)
- 1 engraved piece of bakelite for nameplate (Optional)
- 2 pair insulated pin jacks (one green, one brown, two red)
- 1 No. 10 SPST Yaxley Junior Jack Switch
- 4 Yaxley, 4 deck, 10 point inductance switches
- 1 Yaxley 6 point inductance switch
- 1 Yaxley RP 102, 20,000 ohm potentiometer
- 1 IRC Type WW1, 10 ohm resistor
- 1 IRC Type WW1, 100 ohm resistor
- 1 IRC Type WW1, 1,000 ohm resistor
- 1 IRC Type WW1, 10,000 ohm resistor
- 1 IRC Type WW1, 100,000 ohm resistor
- 5 resistor mounts
- 1 Aerovox Type 1450 Mica Condenser .001 MFD
- 1 Aerovox Type 1450 Mica Condenser .002 MFD
- 1 Aerovox Type 1450 Mica Condenser .003 MFD
- 1 Aerovox Type 1450 Mica Condenser .004 MFD
- 1 Pigtail type paper condenser .01 MFD
- 1 Pigtail type paper condenser .02 MFD
- 1 Pigtail type paper condenser .03 MFD (Made by paralleling .01 and .02)
- 1 Pigtail type paper condenser .04 MFD (Two .02 in parallel)
- 1 Pigtail type paper condenser .1 MFD
- 1 Metal cased paper condenser .2 (Two .1 in one can)
- 1 Metal cased paper condenser .3 (Three .1 in one can)
- 1 Metal cased paper condenser .4 (A .3 can shunted by .1)
- 1 Metal cased paper condenser 1 MFD
- 1 Metal cased paper condenser 2 MFD
- 1 Metal cased paper condenser 3 MFD (Paralleling a 2 and a 1)
- 1 Metal cased paper condenser 4 MFD

SHORTCUTS

Modernizing Crosley Models 27 and 28

By H. H. Beechill



At the time when the Crosley 27 and 28 battery receivers were on the market quite a number were sold in this territory and many of them are still in use. Most of the writer's service work on these receivers has been in eliminating blasting and distortion of powerful stations when the volume control is turned down.

This is due chiefly to the use of type 32 r.f. tubes as the 34 tubes were not available when this circuit was developed. Therefore, the later type 34 tubes are usually placed in the two r.f. sockets and the 31 in the first audio stage is replaced by a 30. As the "C" bias for all of the tubes in the set is supplied by the voltage drop across the 1,000 ohm-100 ohm resistor (part No. 22957A), it will be necessary to remove the 1 megohm grid-leak (No. 21454) from its connection to the center-tap of the audio transformer and place it on the junction of the 1,000 ohm and 100 ohm resistors instead of the "B" minus as shown on the diagram. A small tubular electrolytic condenser of about 25 mfd., 30 volt rating is now connected from the junction to "A" minus. The chief reason for using the 30 tube is to cut down the excessively high drain on both "A" and "B" batteries when the 31 is used.

Shields Break Tubes

By Gerald Evans

One of the most recent troubles encountered in certain battery sets is

breakage of type 30 and 32 tubes due to the tightness of rings supplied with glove shields. (Set and shield makers please copy!)

Stretching the ring prevents the trouble. Friction tape is also effective where too much heat is not dissipated by the tube.

Repair and Care of Genemotors

By Harry D. Hooton

The small genemotor "B" supply units used with some farm and automobile radios as a rule require very little servicing. A new set of brushes and an occasional cleaning of the commutators is usually all that is needed to make the genemotor "as good as new" again. The high voltage models, however, designed for transmitter and power amplifier work, do have certain troubles peculiar to themselves. These troubles are more often caused by lack of proper care than by any defect in the genemotor itself.

Perhaps the most common trouble encountered when the unit is used with a receiver, especially a short wave or all-wave set, is noisy operation caused by sparking at the brushes of either the motor or the generator. This condition is usually due to either a dirty or badly worn commutator or dirty or improperly seated brushes. Sparking may also be caused by weak brush springs which do not supply sufficient tension to hold the brush against the commutator segments or allow contact to be made during part of the revolution only.

The brushes and the commutators should be cleaned free of all dust and oil or grease with a clean cloth and a little gasoline before attempting to reseat or install new brushes. In some genemotors access to the commutator and brush assembly is readily obtained by simply removing the shielding cover; in others the motor ends must be removed before the commutators can be reached.

If the trouble is simply due to dirty brushes these may be cleaned by winding a strip of sandpaper, ½ inch wide and about 5 or 6 inches long, around the commutator with the sanded side pressing against the brush surfaces and revolving the armature. This method causes the brush surfaces to wear down while they are in their normal position against the commutator and insures

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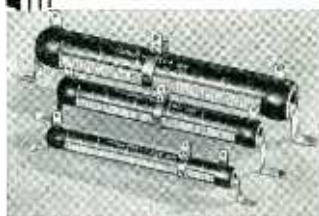


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that the curved surface of each brush will be the same as the contour of the commutator surface. The commutator is cleaned by placing a piece of sandpaper under one brush, with the sanded side against the commutator surface and revolving the armature as outlined above. The sandpaper used in each operation is size No. 00 (do not under any circumstances use emery cloth).

If the brush tension is weak or if the contact is broken during part of the revolution, clean the surfaces of the commutator and the brushes as above and increase the tension by adjusting the screw at the outside end of the brush holder, taking care that the tension is not increased to the point where excessive wear will take place. If the contact is still broken when the brush passes over certain segments, inspect these segments for a hard or glazed spot which will have to be removed with the sandpaper.

In rare cases the commutator surface may be badly worn into grooves by the brushes or by grit which may have found its way into the genemotor. If this condition is present, it will be necessary to remove the armature from the mountings and true it up in a lathe. A light cut at a fairly high speed is necessary. After the commutator has been turned down, the mica between the bars should be undercut to a depth of about 1/32 inch below the surface of the segments by means of a thin file or a hacksaw. Before the armature is replaced in the genemotor it is a good practice to go over the commutator with the 00 sandpaper and a stiff wire brush in order to remove all burrs and particles of copper which may be present.

If the genemotor fails to start when it is switched on, the dirty or glazed brushes or commutators should be suspected. Quite frequently a genemotor which will operate satisfactorily once it is started, will refuse to start if the armature has stopped in the position that allows the brush to rest upon the glazed portion of the commutator. Of course low battery voltage will cause the same effects and the battery should always be checked before making any adjustments in the genemotor itself.

If burnouts or breaks in any of the windings occur and the break is not readily found, it is advisable to return the entire unit to the factory for repair or installation of a new armature. In practically all types the motor and generator windings are interwound, which makes any repairs on this portion of the unit very difficult. If the break is near the outside or can easily be reached, the repair may be made satisfactorily. When soldering connections be careful that drops of solder do not fall into or become imbedded in the armature windings; all connections should be given a heavy coating of in-

sulating cement before replacing the armature.

Never mount the genemotor near the automobile engine or in a position where dust or dirt is likely to be drawn into the commutators and brushes. When installing genemotors in home radio receivers do not place the genemotor in a basement or other place where it will be subject to dampness or extreme temperatures. Do not oil the bearings unless it is absolutely necessary; most modern genemotors have enough oil sealed in to last the life of the unit. Last but not least, do not exceed the output specifications of the genemotor; most of the present day genemotors will operate for a short time with as much as a 50% overload but such a practice, if continued, will definitely shorten the life of the unit and there is always the danger of a burned out or broken down armature winding.

Permanent Iron Tinning

By Marion L. Rhodes

Soldering iron tips may be made to retain their tinning over very long periods by tinning with silver-solder. Any jeweler can do it quickly and at low cost.

If you prefer to do it yourself silver solder may be obtained from dental supply dealers for about 35 cents per quarter ounce and applied to the tip by using a torch and flux.

Screen-Grid Detector Overload

By Gerald Evans

Many of the old grid leak detector sets are still in use, and often develop an annoying defect. Volume increases normally with advancement of the volume control on weak signals, but on stronger stations, falls off after a certain point on the control is reached.

This is very often associated with loss of sensitivity, poor quality, especially in the lower register.

The worst part of it all is, that I never have been able to find a resistor changed in value, leaky condenser, bad tube or any part other than as specified by the maker. On one model of a Crosley receiver, I measured the detector grid bias, and found it to be six volts, which was about right for a type 24A tube. The plate and screen voltage checked correct, but it is hardly possible

that anything other than a vacuum tube voltmeter could make a correct reading on this part of a screen grid bias detector, so the resistances feeding these parts were varied over wide limits with absolutely no improvement. The biasing resistor on the detector was specified by the manufacturer as 10,000 ohms, and when measured, its accuracy was within 8%.

If the screen and plate resistors are left in receivers using this type of detector, as they are found, and the detector bias varied it will be found that in many cases the performance will exceed that received from the set at the time it left the factory.

Trouble is due to detector overload, and if the cathode bias resistor is increased to some value between 50,000 and 100,000 ohms, no other change will be necessary, and the change in tone quality will be almost beyond belief. It will be found that the detector bias will be quite high after this change is made, considerably above that specified by the maker of the tube.

Bulkhead Paint Cleaner

By V. W. Hodge

For a quicker, cleaner job of cleaning paint from auto-radio mounting bolt holes on cars, use a wire brush in the chuck of your electric drill. Garage mechanics use them for cleaning carbon from cylinder heads and valves.

Metal will be cleaned bright and shiny and will look much better than when the job is done with a file or a knife.

Omitted Audio Bypass

By James A. Nash

Many of the audio stages of older receivers are not equipped with bias resistor bypasses. Shunt 0.25 or 0.5 mikes across such resistors and both tone and volume of weak stations will be improved.

Wire Color Codes

By Harvey H. Schock

When wires connected to condensers or transformers are so dirty that their color-coding cannot readily be determined rub with a hot soldering iron and the color will generally re-appear.

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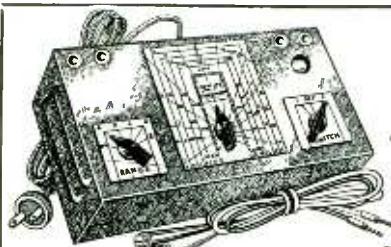
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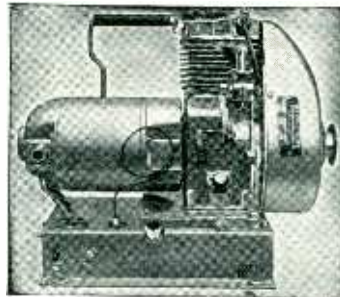
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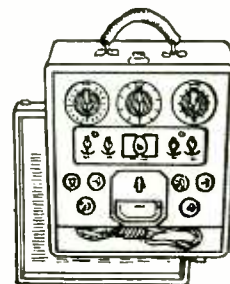
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AK 37, 40

Installing pilot light in these metal-encased sets . . . Remove the metal cover from the powerpack. Connect two wires to the 1½ volt winding, or terminal strip for the 26 tubes. Connect these two wires to a miniature porcelain base socket and use a 2.2 volt bulb. By means of a small metal clamp, the socket may be placed at any point along the front of the set. Just raise the lid and slip the clamp beneath it.

ARVIN 1936 SERIES

Vibrator hash . . . Make sure chassis is well grounded to firewall and use shakeproof washer. Make sure good ground is obtained for transmission line box. Ground the box to the frame of the car if an under-car antenna is used, or, if a top antenna is used, ground the box to some metal part known to be at the same r.f. potential as the firewall. Remove front cover from set and tighten four screws holding power transformer in place. Wiggle vibrator in socket and make certain that each grounding tooth makes contact with the sides of the vibrator case. Try a condenser in addition to the generator or dome condenser, across the car's A circuit, placing it directly on either terminal of the ammeter or fuse block. Solder a 1½-inch piece of shielding from the 6A7 grid cap tube shield to the frame of the variable condenser. Check to see that transmission line shielding is firmly contacting plugs at both ends.

GE B40, RCA M34

Hash, difficult to remove even with all condensers replaced and vibrator points functioning properly . . . Be sure screws holding vibrator in place are tight, shielding of cable to control head is ok and securely soldered to base of vibrator. Shield ends of two screws holding red and green wires coming out of vibrator base. Make this extra shield in form of box without lid, soldering to chassis at end of terminal board over screws. Depth of box should be sufficient to clear the screws nicely as they are at high potential.

GRUNOW 6D

Hum . . . Late models used 12 mike condensers across the 6000-ohm bias resistor connected to 75 cathode. In early models this was omitted and hum developed later. Install low voltage 12 to 20 electrolytic. Voltage is only 2 or three volts across the bypassed resistor.

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Difficulty in obtaining dial lights for these and similar sets using the pilots in series with tube filaments . . . Shunt 25-ohm resistor across pilot socket and replace bulb with 6-8 volt pilot. Set will thereafter continue to operate even though pilots burn out.

HOWARD 67

Low volume and poor quality . . . High resistance leak in 0.25 condenser by passing 6F5G plate resistor to ground is most common cause.

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Oscillation, howling at high setting of volume control, stations near high frequency end of dial apparently go off scale . . . Look for break in grid circuits of r.f. amplifier. Resistors in these circuits are wound of delicate wire, easily corroded and open-circuited. Replace, if defective, with wire-wound resistors.

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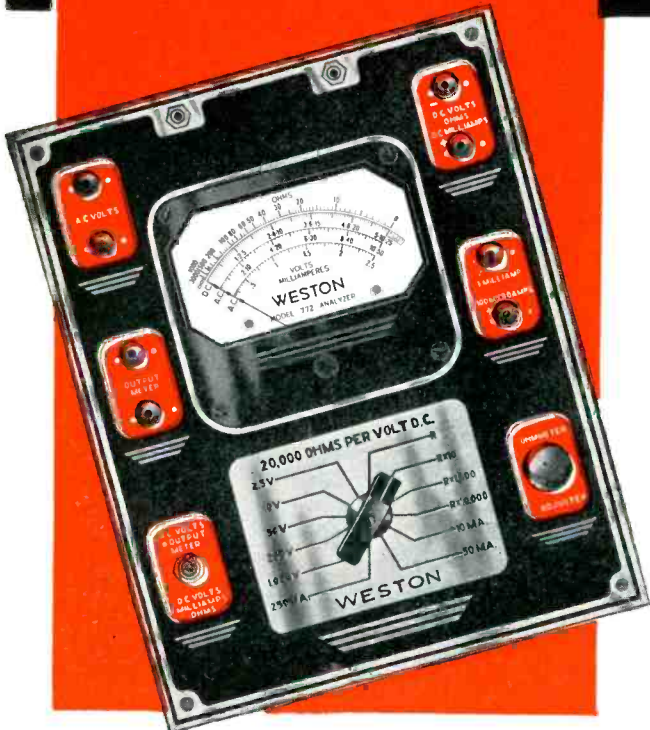
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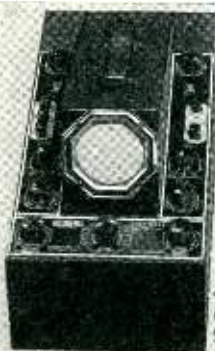
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\$57.50 net



Model 310
Volt-Ohmmeter
\$9.80 net

Model 420L
Portable Tube Tester
\$29.94 net



Model 420L
Counter
Tube
Tester
\$29.94
net

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YEARS...

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VELOCITY MICROPHONES

"V" Series



- Freedom from hum pick-up
 - Minimum cavity resonance
 - Excellent frequency curve
 - Internal shock-absorber
 - High or low output impedance
 - Black and chromium finish
 - Priced from \$25 to \$75, list
- The new "K" series, listing at \$19.50, \$24.50 and \$29.50 is now in production

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The BUGGY WHIP

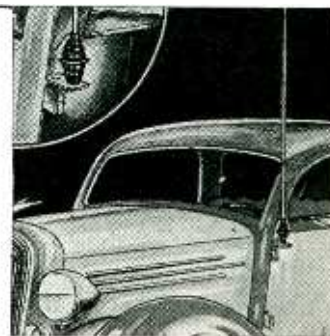
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PRODUCTS CORP.**
In Canada **ATLAS RADIO CORP.**
Toronto, Ontario



To WARD Products Corp.
WARD BLDG., CLEVELAND, O.
Please send new catalog

Name

Address

Test Equipment Specifications

(continued)

| Multimeters | CLOUGH BRENLE CO. | | HICKOK ELEC. INST. CO. | | JACKSON ELEC. INST. CO. | | RADIO CITY PRODUCTS CO. | | | | RADIO PRODUCTS CO. | | READRITE METER WORKS | | | | | SHALLCROSS MFG. CO. | | | | | TRIPLET ELEC. INST. CORP. | | WESTINGHOUSE ELEC. AND MFG. CO. | | | | WESTON ELEC. INST. CORP. | | | | |
|----------------------------|-----------------------|-------------------|------------------------|---|---|------------------------------|-------------------------------|-----------------------|-------------------------|---------------------------|----------------------|---|----------------------|--|--|--|--|---------------------|--|--|--|--|---------------------------|--|---------------------------------|--|--|--|--------------------------|--|--|--|--|
| | MODEL NO. | 85 95 | 4955 | 412 | 403A 405A 406 410 | 56 | 500 502 506 | 611 614 670 681 686 | 1125 1200 | PX-25 PX-26 PM-32 PX-37 | 564-3A 564-3B 663 | 664 665-1 665-2 689-1E 689-1F | 772 | | | | | | | | | | | | | | | | | | | | |
| PRICE | 24.95 47.75 | 24.60 | 9.85 | 13.95 8.75 17.95 31.50 | 33.50 | 3.82 4.56 | 50.67.50 81.50 24.32. | 19.60 21.24 | 30.00 32.50 60.00 55.00 | 22.50 26.63 45.00 | 41.25 55.12 | 14.63 18.75 46.50 | | | | | | | | | | | | | | | | | | | | | |
| D. C. VOLTS | 15 50 750 | 5 50 1000 | 10 50 1000 | 5 50 750 1000 | 5 2.5 5 25 100 1000 | 5 2.5 5 25 100 1250 | 4.5 4.5 1 1/2 25 100 250 1000 | 5 6 10 150 250 1000 | 15 100 750 1000 | 5 1.5 2.5 50 150 750 1000 | 3 3 2.5 300 600 1000 | 1 2.5 5 10 25 50 1000 | | | | | | | | | | | | | | | | | | | | | |
| A. C. VOLTS | 15 150 750 | 8 40 160 400 800 | 10 50 250 500 1000 | 5 750 100 250 1000 | 5 25 100 250 1000 | 5 25 100 250 1000 | 5 25 100 250 1000 | 5 150 750 1000 | 15 100 250 500 1000 | 15 150 | 4 40 200 400 800 | 100 250 500 1000 1000 | | | | | | | | | | | | | | | | | | | | | |
| D. C. OHMS | 100 20,000 2 Meg | 1/2 to 10 Meg | 10 M 500 M | 2 M 200M 100M 2 M 2 Meg 10 M 100 M 40 Meg | 1 M 200M 100M 2 M 2 Meg 1 M 100 M 300 M 3 Meg | 3 M 10M 40 500 M 10M 10M 50M | 5 560 3M 50M 300M 3Meg | 1500 1500 3 Meg 3 Meg | 1 M 100 M 100 M 1 Meg | 200 100 M 100 M 1 Meg | 1 M 10 M 100 M 1 Meg | 1 M 10 M 100 M 1 Meg 5 M 10 M 30 M 30 Meg | | | | | | | | | | | | | | | | | | | | | |
| D. C. MILS | 1.5 15 150 | 5 50 250 | 1 10 250 | 0-1 50 500 250 100 250 | 5 25 100 250 1000 | 5 25 100 250 1000 | 5 15 100 250 1000 | 1.5 15 100 250 | 15 100 250 | 15 100 | 0 to 500 in 9 steps | 0-500 in 9 steps | | | | | | | | | | | | | | | | | | | | | |
| CAPACITY, in Mid. | 00025 to 16 Mid | | | | | | 0.01 to 0.1 | 0.05 to 10 | | | .0001 to 250 Mid | | | | | | | | | | | | | | | | | | | | | | |
| ACCURACY, % | 2 2 | 1 | 2 | 2 2 2 2 | 2 | N N N | 2 2 5 2 2 | 2 2 | | | 2 2 2 2 2 2 2 2 | N | | | | | | | | | | | | | | | | | | | | | |
| SENSITIVITY, Ohms per Volt | 1000 1000 | 1000 | 1000 | 2800 N 2000 2000 | 100 | N N N | 1000 1080 N 1000 1000 | 2000 2000 | 1000 1000 1000 1000 | 1000 1000 1000 1000 | 1000 1000 1000 1000 | 100 N N20,000 | | | | | | | | | | | | | | | | | | | | | |
| CIRCUIT SELECTION | RS RS | RS PJ | PT | RS PT RS RS | RS PT PT PT | RS RS BP RS RS | RS RS | RS RS | RS RS RS | PT PT RS PT | RS PT RS PT | PJ BP BP RS | | | | | | | | | | | | | | | | | | | | | |
| DIMENSIONS...Inches | 5 1/2 x 4 1/2 x 8 1/2 | 3 1/2 x 4 1/2 x 7 | 2 1/2 x 3 1/2 x 5 | 3 1/2 x 5 1/2 x 8 1/2 | 3 1/2 x 5 1/2 x 8 1/2 | 3 1/2 x 4 x 8 | 6 1/2 x 10 x 10 | N N | 3 1/4 x 4 x 7 | 2 3/4 x 3 1/4 x 4 | 2 3/4 x 3 1/4 x 4 | 2 3/4 x 3 1/4 x 4 | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT...Lbs. | 5 | | | 2 1/2 2 1/2 2 1/2 N | 9 | 2 2 2 | 11 12 9 4 6 | 11 14 | 3 3 3 3 | 1 3/2 1 3/4 5 5 | 5 5 5 5 5 | 1 1 N | | | | | | | | | | | | | | | | | | | | | |

N—No Information. RS—Rotary Switch. BP—Binding Posts. PT—Pin Tip Jacks.

| Tube Checkers | BURTON-ROGERS CO. | | HICKOK ELEC. INST. CORP. | | | | JACKSON ELEC. INST. CORP. | | MILLION RADIO AND TELEVISION LABS. | | PRECISION APPARATUS CO. | | RADIO CITY PRODUCTS CO. | | | | RADIO PRODUCTS CO. | | | | READRITE METER WORKS | | SUPREME INST. CORP. | | | | TRIPLET ELEC. INST. CORP. | | | | TRIUMPH MFG. CO. | | EARL WEBBER CO. | | | WESTON ELEC. INST. CORP. | |
|---------------------|-------------------|--------------------------------|--------------------------|--------------|-----------------|-----------------------------------|---------------------------|-------------|------------------------------------|------------------------|-------------------------|---|-------------------------|---------|--|--|--------------------|--|--|--|----------------------|--|---------------------|--|--|--|---------------------------|--|--|--|------------------|--|-----------------|--|--|--------------------------|--|
| | MODEL NO. | 20 21 | 47 49 3500 3800 4303 | 29.50 43.50 | 9.95 18.95 | 39.50 | 305C 305 DL 305P 503 | 20 22 27 28 | 430 431 | 505 89 89 Deluxe | 1210 A 1220 A 1310 1500 | 400 420 | 30 30A ORSL | 681 770 | | | | | | | | | | | | | | | | | | | | | | | |
| PRICE, NET | 31.50 34.00 | 90.00 54.00 45.00 36.00 150.00 | 29.50 43.50 | 9.95 18.95 | 39.50 | 21.95 24.50 24.50 8.25 | 31.75 31.75 24.75 59.75 | 17.64 14.12 | 47.95 34.95 45.95 | 19.60 8.16 29.40 35.94 | 34.95 29.95 | 31.95 N N | 98.50 53.00 | | | | | | | | | | | | | | | | | | | | | | | | |
| CALIBRATION | Eng Eng | Eng Eng Eng Eng Eng | Eng Eng | Ohms Eng | Eng | Eng Eng Eng Eng | Eng Eng Eng Eng | Eng Eng | Eng Eng Eng Eng | Eng Eng Eng Eng | Eng Eng | Eng Eng Eng | Eng Eng | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST PRINCIPLE | Mu Mu | Dy Dy Mu Dy Mu | Dy Dy | Neon N | N | Em Em Em Em | Em Em Em Mu | Em Em | Eng Em Em | Em Em Em Power | Mu Mu | Power Power N | Mu Em | | | | | | | | | | | | | | | | | | | | | | | | |
| SHORT TEST | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | | | | | | | | | | | | | | | | | | | | | | | | | |
| LEAKAGE TEST | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | | | | | | | | | | | | | | | | | | | | | | | | | |
| GAS TEST | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | | | | | | | | | | | | | | | | | | | | | | | | | |
| LINE ADJUSTMENT | T T | R R R R R R | T T | ✓ | R | T T T T | T T T T | ✓ ✓ | T T T T | N N N N N | T T T T | T T T T | | | | | | | | | | | | | | | | | | | | | | | | | |
| LINE READING | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. CONTROLS | 3 3 | 3 3 3 3 3 3 | 3 3 | N 4 | 3 | 5 5 5 5 | 3 3 3 6 | 4 4 | 6 3 3 | 4 4 5 | 4 4 | 5 5 16 4 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. SOCKETS | 6 6 | 3 16 14 10 12 | 6 6 | N 6 | 6 | 5 5 5 5 | 6 6 6 12 | 4 4 | 6 5 5 | 4 5 4 8 | 6 5 6 | 6 6 14 24 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIMENSIONS...Inches | 12 12 12 5 | 3 12 12 6 12 12 14 12 14 12 25 | 5 11 N | 3 3 1/2 7 10 | 6 11 1/2 12 3/4 | 6 1/2 8 1/2 9 1/2 11 1/2 11 1/2 N | 5 1/2 5 5 5 5 | N N | N N 11 12 N | N N N N N | 10 15 10 12 13 | 5 1/2 5 1/2 21 1/2 7 1/2 7 1/2 21 1/2 11 1/2 9 1/2 11 1/2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT, lbs. | 10 10 | 17 14 12 10 43 | 9 N | 7 N | 11 | 11 19 9 N | 9 14 9 22 | 10 10 | N 13 11 | 18 14 22 72 | 15 N | 6 6 N 25 8 | | | | | | | | | | | | | | | | | | | | | | | | | |

N—No Information Eng—English Reading Em—Emission T—Tapped Transformer R—Series Resistor



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Assures complete elimination of distortion under pressure of range and volume, unbalanced tone, background noises and overheating under forcing. Ideal for public address and theatre systems where tone shades, whispers, and light musical effects are as important as heavy orchestral and organ volume. Its sensitivity is possible because of the exceptional lightness of the diaphragm and voice coil, its structural design and its high magnetic efficiency.

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Has a power capacity of 25 watts. The impedance of the voice coil is 16 ohms. Exciting energy of the field coil must be 3-8 volts at 1 1/2 amperes, which can be secured from a six-volt storage battery or Fox dry rectifier.

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Radio Receptacles; Handy Taps; Lightning Arresters; Aerial Outfits; Wire for Aerial Lead-In and Ground; Ground Clamps; Screw Eyes; Aerial Tighteners; All sizes Porcelain and Glass Insulators; Lead-In Strips; Auto Aerials and Aerial Eliminators; Short Wave and All Wave Aerial Outfits.

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Test Equipment Specifications

continued

| Oscillators (A. F. I. F. R. F.) | BURTON-ROGERS CO. | CLOUGH-BREngle CO. | | | | | | COMMUNICATION INST., INC. | HICKOK ELEC. INST. CO. | JACKSON ELEC. INST. CORP. | RADIO PRODUCTS CO. | RADIO CONSTRUCTION LABS. | R.C.A. MFG. CO. | READRITE METER WORKS | SUPREME INST. CORP. | TRIPLETT ELEC. INST. CORP. | EARL WEBBER | WESTON ELEC. INST. CORP. | | | | | | |
|--|-------------------------------------|--|-----------------------------|--------------------|--------------------------|-----------------|-------------------------------------|--|----------------------------|------------------------------|--------------------|------------------------------------|--|-------------------------|-------------------------|-------------------------------|-------------------|--|--------------------|--------------------------|------------------------|------------------------|------------------------|-----------------|
| MODEL NO. | 11 111 | OC A-B-C | OM | 79-A | 81-A | 99 | VVF | O.S. -10 | O.A. 3 | N | 441A 441B 540 | 36 38 | 339 | 9558 9572 9595 | 554 -A 553 554 | 570 580 | 1230 1231 1232 | 20 40A | 692 | | | | | |
| PRICE, NET. | 30 45 32 95 | 29 95 | 57 50 | 53 75 | 34 25 | 43 90 | 23 95 | 48 00 | 9 00 | 48 00 | 32 80 31 00 56 25 | 38 75 31 75 | 16 00 | 27 50 29 95 34 50 | 14 40 17 05 18 82 | 31 95 54 95 | 15 02 26 14 26 14 | 29 95 19 50 | N | | | | | |
| BANDS. | 6 6 | 6 5 1 | | | | | 6 10 steps | 7 | | 8 | 6 6 6 | 6 6 6 | 5 | | 8 | 5 4 | 7 7 | 6 6 6 | 7 5 6 | | | | | |
| RANGE IN K.C. | 100 to 35000 | 100 to 35000 | 100 to 60 MC | 100 to 30 MC | 50 to 10000 cycles | 100 to 60 MC | 50 to 20000 cycles | 0 to 10000 cycles | 5 to 85 to 30 KC | 85 to 40 MC | 100 to 70 MC | 100 to 70 MC | 100 to 70 MC | 60 MC 60 MC | 54 to 17 MC | 100 to 1000 | 90 to 25 MC | 20 MC 18 MC | 100 to 18 MC | 100 to 30 MC | 100 to 30 MC | 90 to 60 MC | 90 to 60 MC | 100 to 22 MC |
| MODULATION Per cent Freq. | 35 35 | 30 30 | 30 30 | | | 30 | --- | 50 | | 50 | 30 30 30 | 5 5 | 40 | | 50 | 40 | --- | 30 30 | 10 40 40 | 35 35 | 50 | | | |
| SWEEP CIR- CUIT External Internal | ✓ ✓ | ✓ | ✓ | | | ✓ | --- | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ATTENUATION VOLTS Max. Min. | | | 3 3 | N | N | N | 5 | 1 | .1 | N | N | N | N | 2 | 1 5 1 5 | N | N | 2 2 2 | 1 1 1 | 1 | | | | |
| ACCURACY % | 2 2 | 3 3 | 3 3 | N | N | N | N | 0 | .1 uv | 1 1 1 | 1 1 1 | 1 1 1 | 1 2 | 1 uv | 0 0 | 1/2 uv 1/2 uv | 0 0 0 | 1/2 uv 1/2 uv | 1/2 3 | 2 | | | | |
| TUBES | 30 6D6 30 37 | 6C5 6N7 84 | 3-6C5 6C7 5Z4 | 5-6C5 5Z4 | 6C5 6N7 84 | 30 30 | 30 30 | 41 6C6 6D6 1V | N | N | N Metal | N | N | 30 30 | 30 | N | N | 30 30 | N | N | N | N | N | N |
| POWER | Batt. 110 AC | 110 AC 110 AC- DC | 110 AC | 110 AC | 110 AC | 110 AC | Batt. 110 AC | 110 AC | 110 AC | 110 AC | Batt. 110 AC | 110 AC | Batt. 110 AC | 110 AC | 110 AC | Batt. 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | Batt. 110 AC | Batt. 110 AC | Batt. 110 AC |
| DIMENSIONS Inches | 5 5 7 1/2 7 1/2 10 1/2 10 1/2 | 7 1/2 9 7 1/2 11 1/2 11 3/4 12 3/4 | 7 1/2 8 7 1/2 9 11 11 | 8 8 1/2 8 8 1/2 | N | 6 7 1/2 9 | 5 1/4 3 1/2 6 1/2 9 6 1/2 11 1/2 | 4 1/2 4 1/2 4 1/2 8 1/4 8 1/4 8 1/4 | 4 1/2 4 1/2 4 1/2 7 7 7 | 4 1/2 4 1/2 10 10 | 5 1/2 6 6 6 | 4 1/2 2 1/2 4 1/2 8 1/2 4 8 1/2 | 4 1/2 5 1/2 7 1/2 9 1/2 5 1/2 7 1/2 | 5 1/2 5 6 1/2 6 | 5 1/2 5 12 12 | N | N | 4 1/2 4 1/2 4 1/2 6 1/2 6 1/2 6 1/2 | 6 7 1/2 7 7 1/2 | 5 1/2 5 1/2 11 10 1/2 | 5 1/2 5 1/2 8 8 1/2 | 5 1/2 5 1/2 8 8 1/2 | 5 1/2 5 1/2 8 8 1/2 | |
| WEIGHT, lbs. | 10 10 | N | 19 | 20 | N | 8 | 16 | N | N | 12 12 12 | 10 10 | 6 | 5 1/2 11 1/2 5 | 10 | N | N | 15 14 14 | 10 8 | 8 1/2 | | | | | |

LISTINGS ... New Style

Ordinarily, specifications are arranged alphabetically by manufacturers' names, these running down the left-hand side of the tabulation.

We've made it easier to compare details of the various lines by running the characteristics down the left.

Manufacturers are still listed alphabetically too, but across the top.

| Cathode Ray Oscillographs | CLOUGH-BREngle CO. | | ALLEN B. Du MONT LABORATORIES, INC. | | | HICKOK ELEC. INST. CO. | JACKSON ELEC. INST. CO. | SUPREME INST. CORP. | | TRIUMPH MFG. CO. | R. C. A. | UNITED SOUND ENGINEERING CORP. |
|---------------------------------|-----------------------|--------|--|-------------------|----------------|---------------------------|----------------------------|---------------------|--------|------------------|-------------------|-----------------------------------|
| MODEL NO. | CRA | CRB | 148 | 154 | B | RF-01 | 520 | 545 | 555 | 800 | TMV- 122 B | CR-3 |
| PRICE, NET. | 77.90 | 68.70 | 106.50 list | 74.50 list | 495.00 list | 105.00 | 79.50 | 92.95 | 147.95 | 79.50 | 84.50 | 84.50 |
| SIZE TUBE | 3" | 3" | 5" | 3" | 5" | 3" | 3" | 3" | 3" | 3 | 3" | 3" |
| SWEEP FREQ. | 16000 | N | 100,000 | 100,000 | 100,000 | 30,000 | 20,000 | 20,000 | 20,000 | 20,000 | 15,000 | 20,000 |
| CALIBRATED SCREEN | ✓ | No | ✓ | No | No | No | N | No | No | No | Nos. | No |
| SENSITIVITY, Volts Per Inch. | .4 | .4 | .2 | .75 | N | .2 | .75 | 2 | N | N | N | .75 |
| NO. TUBES | 6 | N | 6 | 6 | N | 9 | 6 | 6 | N | 6 | 6 | 6 |
| NO. CONTROLS | 8 | 4 | 9 | 6 | 12 | 14 | 10 | 11 | 10 | 8 | 10 | 10 |
| POWER | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC | 110 AC |
| DIMENSIONS INCHES | 8 14 1/2 17 1/4 | N | 7 1/2 14 18 | 6 1/2 11 13 | Rack | 11 13 15 1/4 | 9 1/4 10 1/2 18 1/4 | N | N | N | 6 10 1/2 16 | 7 1/2 13 18 |
| WEIGHT, LBS. | 32 | 32 | 40 | 18 | N | 35 | 30 | N | N | N | 25 | 31 |

N—No Information.

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PARTS PEOPLE

Who They Are and What They Make

| MANUFACTURER'S NAME AND ADDRESS | Coils | | | Condensers | | | | Resistors | | | | Switches | | Speakers | | Transformers | | Wire — Cables | Plugs | | |
|---|-------|-------|-------|------------|------|-------|--------------|-----------|------------|-------|----------|------------|---------|----------|---------|--------------|---------|---------------|-------|-------|-------|
| | R. F. | I. F. | Choke | Variable | Mica | Paper | Electrolytic | Dials | Line Cords | Fixed | Variable | Adjustable | Sockets | Power | Circuit | P. M. | Dynamic | | | Parts | Audio |
| Aerovox Corp., 70 Wash. St., Brooklyn, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Acme Electric & Mfg. Co., 1441 Hamilton Ave., Cleveland, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Acme Wire Co., 1225 Dixwell Ave., New Haven, Conn. | • | • | | | | | | | | | | | | | | | | | | | |
| Alden Products Co., 715 Center St., Brockton, Mass. | • | • | | | | | | | | | | | | | | | | | | | |
| Aladdin Radio Industries, 466 W. Superior St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Allen-Bradley Co., 1326 S. Second St., Milwaukee, Wis. | • | • | | | | | | | | | | | | | | | | | | | |
| American Phenolic Corp., 500 S. Thorp St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| American Steel Package Co., Defiance, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| American Television and Radio Corp., 128 E. 10th St., St. Paul, Minn. | • | • | | | | | | | | | | | | | | | | | | | |
| American Transformer Co., 178 Emmet St., Newark, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| Arlston Mfg. Corp., 4045 Diverser Ave., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Arlab Mfg. Co., 1250 N. Paulina St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Atlas Resistor Co., 423 Broome St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Automatic Winding Co., 96 Devon St., Newark, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| Belden Mfg. Co., 23rd St. and Western Ave., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Best Mfg. Co., 1200 Grove St., Irvington, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| Birnback Radio Co., 145 Hudson St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Bud Radio, Inc., 1937 E. 55th St., Cleveland, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Cardwell Mfg. Co., 81 Prospect St., Brooklyn, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Centralab, 900 E. Keefe Ave., Milwaukee, Wis. | • | • | | | | | | | | | | | | | | | | | | | |
| Chicago Transformer Co., 2626 W. Wash. Blvd., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Chicago Telephone Supply Co., W. Beardsley Ave., Elkhart, Ind. | • | • | | | | | | | | | | | | | | | | | | | |
| Cinaudagraph Corp., 110 Davenport St., Stamford, Conn. | • | • | | | | | | | | | | | | | | | | | | | |
| Cinch Mfg. Corp., 2635 W. Van Buren St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Clarostat Mfg. Co., 285 N. Sixth St., Brooklyn, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Concourse Condenser Co., 387 Wales Ave., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Condenser Corp. of America, 259 Cornellison Ave., Jersey City, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| Continental Carbon, Inc., 13902 Lorain Ave., Cleveland, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Continental Motors Corp., 12301 Jefferson St., Detroit, Mich. | • | • | | | | | | | | | | | | | | | | | | | |
| Cornell Dublier Corp., 499 Bronx Blvd., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Cornish Wire Co., Inc., 30 Church St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Coto Coil Co., Providence, R. I. | • | • | | | | | | | | | | | | | | | | | | | |
| Cutler-Hammer Mfg. Co., Milwaukee, Wis. | • | • | | | | | | | | | | | | | | | | | | | |
| Dejuro Amseco Corp., Shelton, Conn. | • | • | | | | | | | | | | | | | | | | | | | |
| Dongan Electric Mfg. Co., 2987 Franklin St., Detroit, Mich. | • | • | | | | | | | | | | | | | | | | | | | |
| Dumont Elec. Co., Inc., 614 B'way, N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Eby, Inc., 2066 Hunting Park Ave., Phila., Pa. | • | • | | | | | | | | | | | | | | | | | | | |
| Electrad, Inc., 175 Varlek St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Electronic Laboratories, Inc., 122 W. N. Y. Ave., Indianapolis, Ind. | • | • | | | | | | | | | | | | | | | | | | | |
| Erie Resistor Corp., 644 W. 12th St., Erie, Pa. | • | • | | | | | | | | | | | | | | | | | | | |
| Fast & Co., John E., 3123 N. Crawford Ave., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Ferranti Elec. Inc., 30 Rockefeller Plaza, N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Flechtelm and Co., Inc., 692 Broadway, N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Franklin, A. W. Mfg. Corp., 160 Varlek St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Franklin Transformer Mfg. Co., 607 22nd Ave., Minneapolis, Minn. | • | • | | | | | | | | | | | | | | | | | | | |
| General Instrument Corp., 829 Newark Ave., Elizabeth, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| General Transformer Corp., 500 S. Thorp St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| General Winding Co., 214 Fulton St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Girard Hopkins, 1437 23rd Ave., Oakland, California. | • | • | | | | | | | | | | | | | | | | | | | |
| Globar Corp., Niagara Falls, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Grey Products Co., 19 Academy St., Poughkeepsie, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Guthman and Co., Inc., Edwin I., 400 S. Peoria St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Hammarlund Mfg. Co., 424 W. 33rd St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Haldorson Co., 4500 Ravenswood Ave., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Hass Electric and Mfg. Co., 305 E. Monroe St., Springfield, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Insuline Corp. of America, 25 Park Place, N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| International Resistor Co., 401 N. Broad St., Phila., Pa. | • | • | | | | | | | | | | | | | | | | | | | |
| Jefferson Electric Co., 900 25th Ave., Bellwood, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
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| Melssner Mfg. Co., Mt. Carmel, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Micamold Products Corp., 1087 Flushing Ave., Brooklyn, N. Y. | • | • | | | | | | | | | | | | | | | | | | | |
| Morrill & Morrill, 30 Church St., New York City | • | • | | | | | | | | | | | | | | | | | | | |
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| Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
| Ohio Carbon Co., 12508 Berea Rd., Lakewood, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Operadio Mfg. Co., 13th & Indiana St., St. Charles, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
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| Racon Elec. Co., Inc., 52 E. 19th St., N. Y. C. | • | • | | | | | | | | | | | | | | | | | | | |
| Radiant Corp., Shaw Ave., 133rd St., Cleveland, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Radio Condenser Co., Davis and Copewood Sts., Camden, N. J. | • | • | | | | | | | | | | | | | | | | | | | |
| Rola Co., 2530 Superior Ave., Cleveland, Ohio. | • | • | | | | | | | | | | | | | | | | | | | |
| Sangamo Elec. Co., 1301 N. 11th St., Springfield, Ill. | • | • | | | | | | | | | | | | | | | | | | | |
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NEWARK, N. J., 219 Central Avenue

LETTERS

Wholesale Destruction

We would like you to investigate one matter that bothers us greatly. A considerable number of our wealthiest customers have been purchasing radios at wholesale for years. Many of them are connected with factories that have cooperative stores and I am inclined to believe that either through these stores or their purchasing agents they are buying sets at within 10 per cent of our lowest wholesale price and possibly less, for use in their own homes.

We sometimes get the job of installing or servicing these radios but this is a very small item compared with the profit on the sale of the set.

BOSTON WILLIAM E. CLARK

The best answer we have seen to this almost universal problem is contained in the article "Chicago Dealers Clamp Down on Wholesale at Retail", page 8, March 1936 issue of "Radio Retailing".

EDITOR

More of the Same

Our greatest complaint concerning the radio business at this time is the so-called "industrial discount," the granting of 25 to 30 per cent off to cash buyers by dealers who work from an office or from a department of an electrical goods supply house.

The bulk of the radios are supplied by just a few major manufacturers and it seems to me that these companies could easily get together and cut out this evil which robs small dealers of 40 per cent of their rightful business.

BOSTON ELI BERMAN

Oscillograph Listings

The cathode ray oscillograph is an instrument that servicemen of the future (near) are going to find indispensable. Why not devote a small portion of your magazine to specific uses of this instrument. How about it?

NORWOOD, OHIO RALPH E. SWAGLER

We have run a number of articles in the past, plan more for early publication, and in this issue you will find a complete listing of available devices, with their important specifications.

EDITOR

Drops Loss Leaders

After consideration of our loss of standard brand set sales in the last year we

have decided not to use loss leaders in the future as these are destructive to regular business.

We would appreciate a suggestion as to how we can increase our business in nationally advertised lines. We have found that in most cases purchasers of loss leaders become dissatisfied as these products will not equal the performance of standard merchandise.

OKLAHOMA CITY GEORGE SCHROUF

Several methods of increasing the sale of nationally advertised brands are suggested in the opening article in this issue, entitled: "Bait Advertising Boomerangs".

EDITOR

Mutual Admiration

(Across the bottom of a new letterhead sent to us by the following wholesaler appear the printed words: "Every serviceman should read the magazine *Radio Retailing*).

Thought you might be interested in our new letterhead.

We have a personal reason for boosting "Radio Retailing" whenever possible. In our opinion it is the most complete of the radio trade journals. From past experience we find that servicemen reading it are oftentimes sold on some new piece of test equipment or service item and it is only necessary for our salesman to take the order.

Oftentimes, you carry news items and pictures of some new item days before we can obtain manufacturers' circulars for mailing to the trade.

In our appreciation for the very real service you are rendering us we desire to do all we can to increase "Radio Retailing's" circulation in our territory.

ELMIRA HAROLD F. JENKINS
Fred C. Harrison

Value Received

Inclosed please find my check to extend my subscription to "Radio Retailing." The July issue, with its Set Specifications is easily worth the price of a year's subscription and I consider the Service Section worth dollars to me.

WEST JONESPORT, ME. ELMER L. DOBBINS

Uses Set Specifications

I notice that the July issue of "Radio Retailing" contains specifications of practically all current radio sets insofar as model, price range, etc. are concerned.

This information is most valuable to a distributor's salesman when talking to a

dealer prospect and I would appreciate it very much if you could let me have six extra copies for my men, at whatever the cost is. Let me know and I will forward you a check.

NEWARK HARRY SALZMAN
Wholesale Radio Equipment Co.

Answered By Mail

May we ask that you kindly refer to the July issue of "Radio Retailing," page 11. We note the subject entitled "Lo, The 12-Volt Washer."

Inasmuch as we are manufacturers in Canada of 6-volt lighting systems we are very much interested in the particulars of the 12-volt washing machine and would appreciate it if you would give us more information, or the source from which information can be obtained.

BELLEVILLE, ONT. E. G. ROWSOME
The Big "A" Company, Ltd.

Tear-Sheets Free

In the August "Radio Retailing" I have found a page that I like very much and would like to know if this can be obtained.

The page I refer to is titled: "Why it pays to test tubes regularly." This is an attractive page and I would like to obtain a mat of this if you have it.

HAWKINSVILLE, GA. C. T. KIMBERLY, JR.

We'll be glad to supply tear-sheets of any of our Sales Ammunition pages, in limited quantities, without charge. Mats can be obtained for \$1.25 if you require these.

EDITOR

Defense of B-Batteries

Mr. Schmutzler's letter in the August issue of "Radio Retailing" apparently gives little consideration to the location of wind-charging apparatus. We will not dispute his assertions as to the efficiency of this apparatus in Wisconsin. Having spent quite a bit of time in that state we know the wind does blow up there.

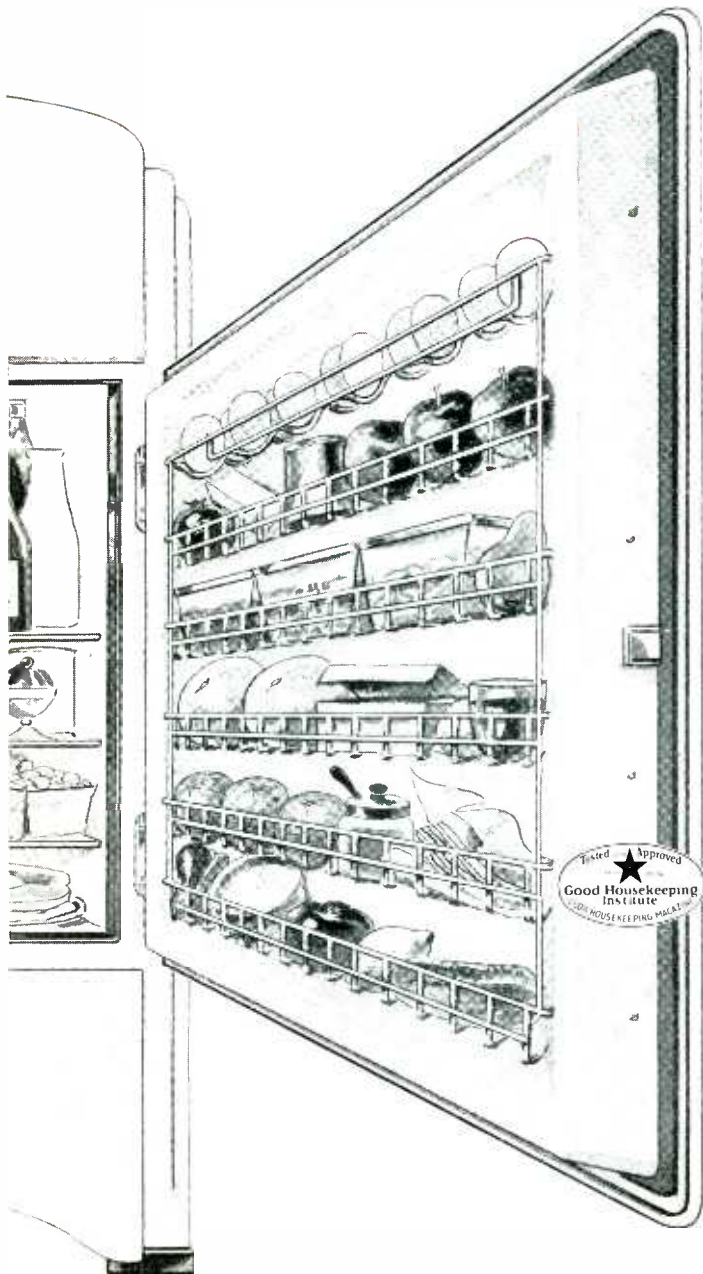
However, being located in the southeastern part of Ohio, a fairly rough and hilly country, our experience has forced us to refrain from guaranteeing that the wind will blow after we have installed such apparatus. We have a customer living upon the highest of hills and yet he does not have sufficient wind to keep his battery charged. He buys a second battery and at times has the battery charged in town.

The B-battery set is not obsolete by any manner of means. There are locations where it is advisable. Lets not tell the public that the B-battery set is a thing of the past.

NEW LEXINGTON, OHIO GUY C. HAYDEN

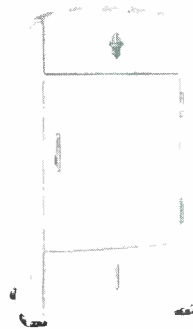
The Open door

TO GREATER SALES VOLUME is the CROSLY SHELVADOR



The nation's housewives are stampeding to the Shelvador . . . Crosley Dealers everywhere are reporting new "highs" in sales volume . . . wide-awake dealers are clamoring for the Crosley franchise—what's causing all this excitement? Is it the advanced Shelvador features or Crosley's dominant position in electrical refrigeration? It's both of these PLUS . . .

this much more in
a **SHELVADOR**



**THE WORLD'S
MOST BEAUTIFUL
REFRIGERATOR**

DEALERS: Line up with the Crosley Line and Profit! The Crosley Shelvador is priced for quick sales action—from \$99.50 to \$244.95, including delivery, installation and FIVE-YEAR PROTECTION PLAN.

*(All prices slightly higher in Florida, Texas,
Rocky Mountain States and west.)*

THE CROSLY RADIO CORPORATION • CINCINNATI
POWEL CROSLY, JR., *President*

ONLY GENERAL ELECTRIC

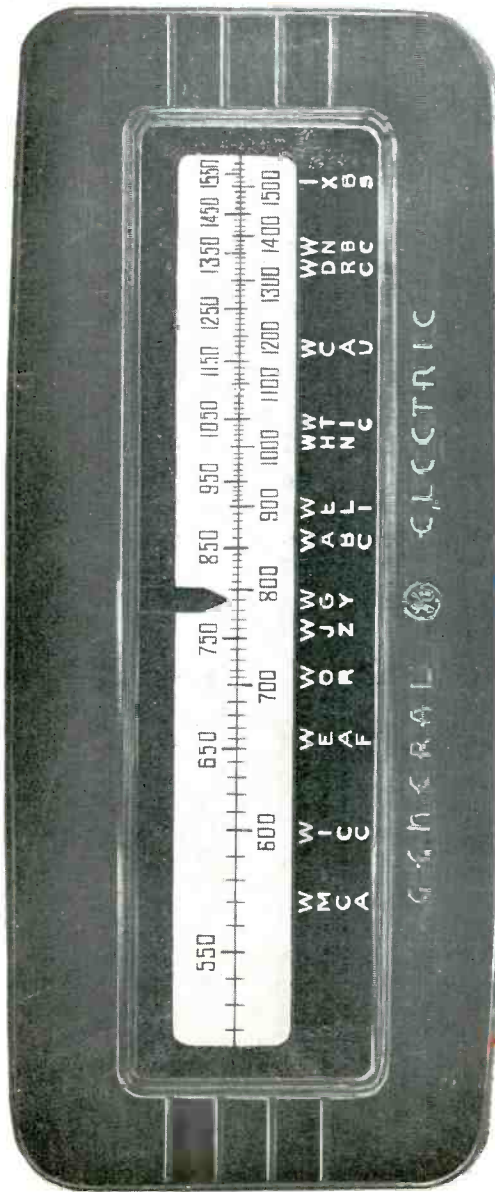
Focused Tone Radio

DIAL has these 5 Sensational

FEATURES

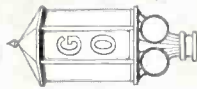
These new and amazing features are but a few of the selling opportunities incorporated in the design of the General Electric *Focused Tone* radio line. They signal *Green Lights Ahead* for dealers who want to "Go" places on increased radio sales and increased radio profits. It pays to sell a radio line that has so many advantages.

FOR METAL TUBE RENEWALS, SPECIFY G-E METAL TUBES.



G-E COLORAMA TUNING

The dial flashes automatically from red to green to guide you in the selection of stations. The red signal warns you reception is distorted or no station is tuned in. When the dial shows bright green, the signal is strong, and free from noise — every note is true and clear.



G-E LOCAL STATION PERSONALIZER

The call letters of local stations flash on when you tune in. On the higher-priced models they are illuminated in green, individually. A "custom-made" scale is provided for each locality, listing the most popular stations in that area.



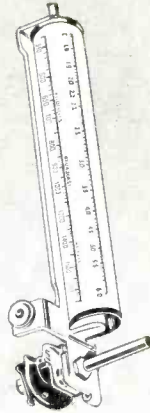
G-E AUTOMATIC FREQUENCY CONTROL

As the dial pointer is moved into the approximate region of the station's resonance point on the dial scale, the receiver's tuned circuit automatically and instantly snaps into its perfect Focused Tone position. It's a dial you simply can't tune wrong.



G-E SLIDING-RULE TUNING SCALE

It is as easy to read as a ruler. All kilocycle positions are shown on a straight line — like the markings of a "slide-rule." On the majority of models, only one scale is visible at a time; when changing to another band, a new scale is turned into position by the band-change switch. An automatic vernier reduction drive permits either rapid tuning or slow-speed tuning, without manual shifting of the tuning knob.



G-E SILENT TUNING

Absolutely silences the speaker as you tune across the dial, passing over strong stations to the one you are interested in at the moment. When the station desired is reached, simply push in the control knob and the program is heard at its maximum clarity.



GENERAL ELECTRIC

Focused Tone Radio

APPLIANCE AND MERCHANDISE DEPT. GENERAL ELECTRIC CO., BRIDGEPORT, CONN.