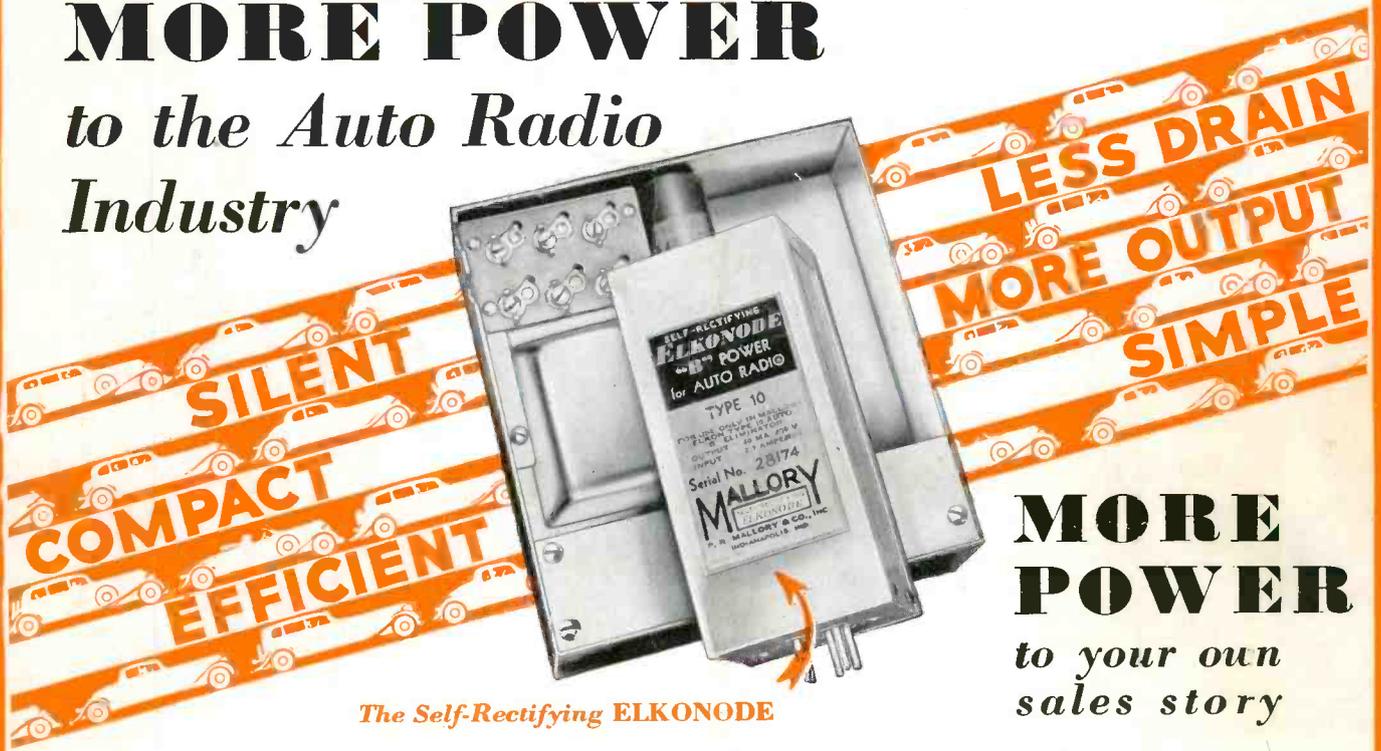


RADIO RETAILING

INCLUDING
SERVICE
AND
INSTALLATION
SECTION

MORE POWER to the Auto Radio Industry



The Self-Rectifying ELKONODE

MORE POWER

to your own sales story

\$17.50
List Price



Whether you sell a separate "B" Eliminator or an auto-radio set with "B" Eliminator built in, make sure both are operated by the Mallory-Elkon Self-Rectifying Elkonode.

This is the device that has proved itself to be the most satisfactory source of power for any auto-radio set on any car. That is why there are more Mallory Elkonodes

in use than all other power devices on the market.

Nothing greater can be said about an auto-radio set than "it is Powered by the Mallory-Elkon Self-Rectifying Elkonode." Sell this successful performance to your customers.

P. R. MALLORY & CO., INC.
INDIANAPOLIS, INDIANA

MALLORY ELKON

"B" ELIMINATOR

With the Self-Rectifying ELKONODE

BUILT TO SELL

ZENITH LEADS

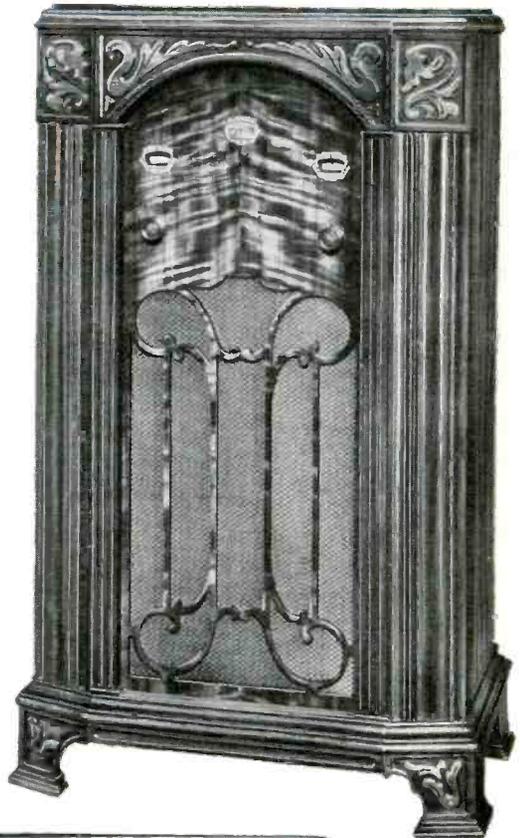
This is the new 1933-1934 Zenith Challenger Line!

Read the descriptions of each model illustrated. Remember, they are six, eight, and nine tube superheterodynes with new-type tubes . . . automatic volume control . . . vernier tuning . . . especially constructed over-size dynamic speakers . . . cabinet designs that introduce *a new trend in radio furniture!*

Only Zenith's experience in building high-priced QUALITY radio receivers could have produced this low-priced QUALITY LINE.

See this new line QUICK!—Communicate with the Zenith Distributor serving your territory!

ZENITH RADIO CORPORATION
3620 Iron Street • Chicago, Illinois



MODEL 750 →

6 tube advanced type AC superheterodyne circuit. *Shadowgraph Tuning* . . . Automatic Volume Control . . . Dynamic Speaker . . . dial calibrated in kilocycles—tuning range 1750 to 535 . . . gets police calls! Never before has a Zenith console radio with *Shadowgraph Tuning* been sold at such a low price. Front panel of this console is of matched, mottled Australian laurel wood, with genuine wood carvings. 38" high; 13" deep; 22" wide.

MODEL 705 →

6 tube advanced type AC superheterodyne circuit. Automatic Volume Control . . . Vernier Tuning . . . Dynamic Speaker . . . dial calibrated in kilocycles—tuning range 1750 to 535 . . . gets police calls! Cabinet has beautifully figured butt walnut front—genuine imported marquetry inlay with top border finished in maple burl—solid walnut top—fluted ends. 8½" high; 15¼" wide; 6½" deep.



← **MODEL 706**

A cabinet of modern design. 6 tube advanced type AC superheterodyne circuit. Automatic volume control . . . Vernier Tuning . . . dynamic speaker . . . dial calibrated in kilocycles—tuning range 1750 to 535 . . . gets police calls! The cabinet is of solid walnut with butt walnut panel. 8½" high; 15¼" wide; 7½" deep.

ZENITH

"YOUR CONCEPTION OF RADIO VALUES WILL BE COMPLETELY

Radio Retailing, June, 1933. Vol. 17, No. 6. Published monthly. McGraw-Hill Publishing Company, Inc., 330 West Forty-second Street, New York, N. Y. \$2 per year. 25 cents per copy. Central and South American countries, \$2. Foreign, \$3 U. S. Currency, or 15 shillings. Canada (including Canadian duty), \$2.50. Entered as second-class matter April 10, 1925, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Printed in U. S. A.

IN THIS MARKET!

THE PROFIT WAY... at \$24.95 and up!



← MODEL 755

8 tube advanced type AC superheterodyne circuit. *Shadowgraph Tuning* . . . automatic volume control . . . 8 inch dynamic speaker . . . dial calibrated in kilocycles . . . tuning range 1750 to 535. Cabinet is 6 legged console of graceful design. Front panel of butt walnut with Pilaster panels of butt walnut. Top arch of California maple burl. 40" high; 24 1/4" wide; 14" deep.



MODEL 760 →

Console of modern design. 9 tube advanced type AC superheterodyne circuit. Automobile (dash-type) es-cutcheon including *Shadow-graph Tuning* . . . visual tone indicator . . . visual volume indicator . . . automatic volume control . . . twin 8" dynamic speakers. An exceptionally beautiful cabinet of modern design—top side panels are of California maple burl separated with genuine imported marquetry. 38 1/2" high; 23 1/2" wide; 23" deep.

MODEL 707 →

6 tube advanced type AC superheterodyne circuit. Automatic volume control . . . Vernier Tuning . . . dynamic speaker . . . dial calibrated in kilocycles—tuning range 1750 to 535 . . . gets police calls! The cabinet is butt walnut in front and has "book-end" style construction. Border across the top and bottom of genuine imported marquetry. 8" high; 17" wide; 6 1/2" deep.



← MODEL 711

6 tube advanced type AC superheterodyne circuit. *Shadowgraph Tuning* . . . automatic volume control . . . dynamic speaker . . . dial calibrated in kilocycles—tuning range 1750 to 535 . . . gets police calls! Entire cabinet of beautifully figured butt walnut . . . gold plated metal trimming inlay . . . border of genuine imported marquetry. 8 1/2" high; 16" wide; 6 1/2" deep.



CHANGED WHEN YOU SEE THIS NEW ZENITH LINE!"

Now
Stromberg-Carlson's New
Radio Quality in

TE-LEK-TOR

MODELS

WITH the new Nos. 52 and 54, Stromberg-Carlson makes available in luxurious Te-lek-tor models the same startling new quality of radio performance which has been increasing like magic the sales of the recently introduced standard models.

Stromberg-Carlson sales during March were 65% better than February. And sales in April were more than 35% above those of March.

Here in these new Te-lek-tor models is merchandise of even greater attractiveness to your choice patrons—something which brings new people to your store by its unusual features—and best of all—has the “repeat” sales possibilities only found in Stromberg-Carlson Te-lek-tor. Remember, the lure of Te-lek-tor is so great . . . it is so fascinating . . . that it becomes a salesman's most potent ally in raising a prospect up to a sale of profitable size.

*Stromberg-Carlson's range in price from \$125 to \$592.50
(East of Rockies)*

STROMBERG-CARLSON TELEPHONE MFG. CO., ROCHESTER, N. Y.



Radio's
Latest
Advance

No. 52 Radio

No. 54 Radio
and Automatic
Phonograph
(below)



*With a Te-lek-tor Radio you can,
from any place in the house—*

1. Start and Stop *either* Radio or Automatic Phonograph.
2. Control Volume of *either* Radio or Automatic Phonograph.
3. Select and switch loud speakers on or off from any control position.
4. Tune Silently and Automatically to eight favorite stations.
5. Tune Silently and Visually (meter tuning) to all other stations.

*“There is nothing finer
than a Stromberg-Carlson”*



1894

Stromberg-Carlson



1933

MAKERS OF VOICE TRANSMISSION AND VOICE RECEPTION APPARATUS FOR MORE THAN THIRTY-FIVE YEARS

Meet the **UNIVERSAL PERSONAL**
 —made by the *ORIGINATORS* of the Personal Radio

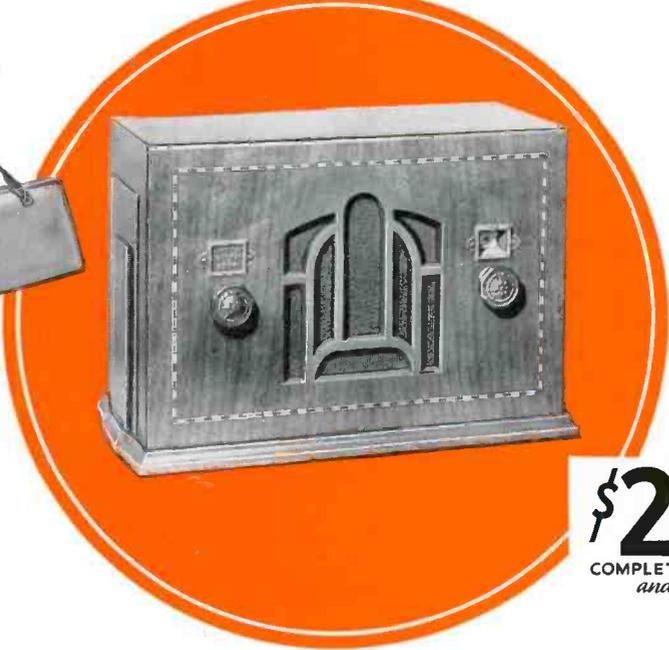


**Model 500 AC—DC
 PERSONAL RADIO**

Features at a Glance

- 5 Tubes
- For use on AC or DC Current
- Size 10" wide x 5" deep x 7" high
- Improved superheterodyne circuit
- Full Floating Dynamic Speaker
- Automatic volume control to hold programs which fade out in other sets
- Illuminated Dial
- Kilocycle Dial Markings
- Less than 8 pounds in weight
- Range includes many police calls
- Amazing power and tone quality
- Utilizes newest proved tubes
- Antenna contained in set
- All wood cabinet—not metal—with figured walnut veneers with actual inlay of holly, ebony black and green
- Bronze escutcheon plates
- Hand rubbed, piano-case-finish cabinet
- Includes all the superior engineering, precision construction and performance quality for which American Bosch Radio has been famous for so many years.

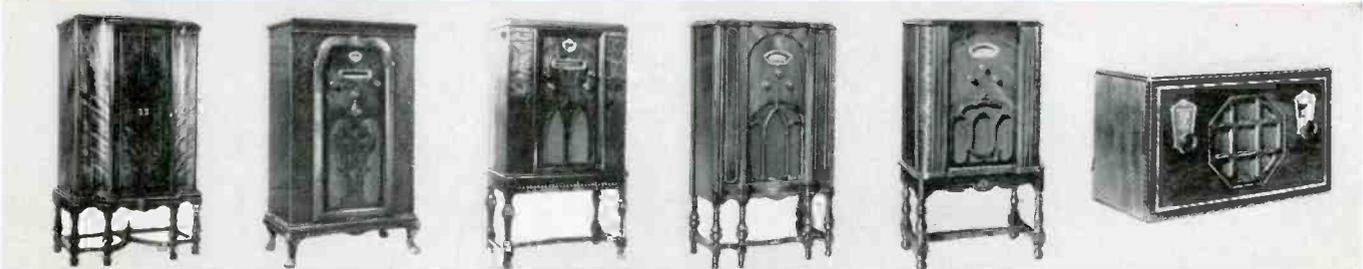
IT was just two years ago that American Bosch originated the Personal Radio. On the anniversary of its introduction there is new cause for celebration ••• A Personal Radio that weighs less than 8 lbs. and measures only ten inches wide by five inches deep by seven inches high. A Universal-Personal Radio, for A. C. and D. C. A Personal Radio in a class by itself on such determining factors as sensitivity, selectivity, *effective full automatic volume control* ••• **TONE!** A Personal Radio not in a metal cabinet but in an all-wood, hand rubbed piano-case-finished cabinet that delights the eye as the radio itself delights the ear. If you like to sell the best there is ••• **HERE IT IS** ••• at a price that moves merchandise. Ask your distributor for details or wire direct.



\$24⁹⁵
 TAX PAID
 COMPLETE WITH TUBES
 and ANTENNA

UNITED AMERICAN BOSCH CORPORATION
 SPRINGFIELD, MASS. Branches: New York Chicago Detroit
Manufactured under Patents and Applications of R C A

AMERICAN BOSCH VIBRO-POWER RADIO



- Grand Opera model 312-G Vibro-Power 12 tube triple-action, superheterodyne, cabinet deluxe . . . \$178.95.
- Grand Concert Model 312-C Vibro-Power 12 tube triple-action, superheterodyne, magnificent walnut cabinet . . . \$147.95.
- World Rover model 260-R Vibro-Power 10 tube double action, superheterodyne, long and short wave, \$119.95. In cabinet deluxe, model 260-C . . . \$139.95.
- Model 310, Vibro-Power 10 tube superheterodyne with all star performance features, including Automatic Volume Control, Tone Control, etc. . . . \$89.95.
- Model 307-H, Vibro-Power 7 tube, superheterodyne, Automatic Volume Control, Adjustable Pitch Tone Control, Handsome Cabinet . . . \$49.50.
- Super 5 Popularity model, Vibro-Power 5 tube, superheterodyne, Automatic Volume Control, solid wood cabinet, 3 watts power . . . \$24.95

Engineers and FADA Leads the

Five years ago Fada engineers began making Auto Radio sets—and began to make America “Auto Radio conscious”. Today, when many other manufacturers are still experimenting in this field, Mr. and Mrs. Public have fully waked up to enjoyment of owning a *good* Auto Radio. And

Fada meets the sudden big demand with the PERFECTED PRODUCT: **MOTOSSET**. Engineers and Distributors agree that it equals the finest console in performance, with all the interference and vibration wrinkles ironed out. The market is **RIPE!** The set is **RIGHT!**



FADA Radio MOTOSSET

America's Finest Auto Radio

NOTHING in Auto Radio can approach these specifications:

STANDARD MODEL No. 104..... \$49.95

Single Unit, 6 tube All-Electric
Super Heterodyne Receiver with
Dynamic Speaker
All-Electric
6 Tubes
Super Heterodyne Circuit
One-Unit—Simplified Installation
Dynamic Speaker
Multiple Automatic Volume
Control
Shock-proof Micrometer Tuning
Positive Remote Control—No
Backlash
Non-Glare Illuminated Tuning
Dial Calibrated in Kilocycles

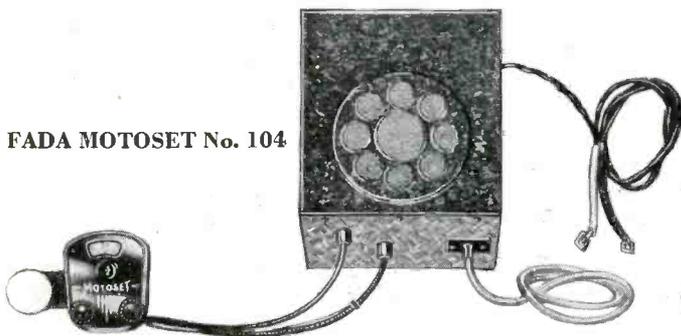
Tone Control
Automatic YALE Remote Control
Lock
Electric Power Supply with Single
Vibrator and Tube Rectifier
Low Battery Drain
Requires Minimum Dashboard
Space for Installation
Noise Suppression Kit Furnished
Shielded Lead-in Furnished
Fractional Micro-volt Sensitivity
10-Kilocycle Selectivity
Greater Output without distortion
Broader Tone Range

DE LUXE MODEL No. 102..... \$74.50

Two Unit Super-Power De Luxe
8-Tube
Super Heterodyne Receiver with
Dynamic Speaker
All-Electric
8-Tubes—11-tube Performance
Class B Output (5 Watts)
Triple Automatic Volume Control
Shock-proof Worm Drive Tuning
Positive Remote Control—No
Backlash
Non-Glare Illuminated Tuning
Dial
Variable Tone Control

Automatic YALE Remote Control
Lock
Electric Power Supply with Single
Vibrator and Tube Rectifier
Noise Suppression Kit Furnished
Shielded Lead-in Furnished
Single Unit Receiver and Electric
Power Supply
Separate 9-inch Dynamic Speaker
in Drum-type Housing
Fractional Micro-volt Sensitivity
10-Kilocycle Selectivity
Weather-proof
Full Tone Range

FADA MOTOSSET No. 104



FADA MOTOSSET No. 102



FADA RADIO & ELECTRIC CORPORATION

Distributors Agree . . . Auto Radio Parade!



Fada MOTOSETS are both the most sensitive and most powerful Auto Radios on the market. They provide tremendous volume without distortion. The car owner does not have to "stick around home" to get his pet stations. He can drive any place, any speed, any time, and his favorite radio programs travel with him. Full automatic volume control, approximately three times as efficient as in the highest grade household receivers, eliminates fading and distortion. Variations in broadcast strength when approaching steel structures, railroads, etc., or passing under bridges, require no volume readjustment.

Quick, easy installation is an important MOTOSET advantage. Even an amateur can install a MOTOSET in any car in a few minutes time. Low battery drain: the total current consumed by MOTOSET No. 104 is only 5 amperes, by No. 102 is only 6.25 amperes, when battery is fully charged. Motor, ignition and spark plug noises have been completely eliminated, together with the mechanical and electric hums ordinarily found in all-electric auto receivers.

Tremendous Volume! Simplified Installation!

Fada MOTOSETS offer the merchant more than quick, liberal profits. They offer him the opportunity of holding permanently satisfied customers, because he is selling "the Auto Radio with no kick-backs."



QUICKER TURNOVER through *National Advertising*

Through large space in national magazines and big metropolitan newspapers, Fada MOTOSETS are being intensively advertised to millions of American families that have never shaken off the habit of wanting the best of everything. Any family that can afford a car can afford a MOTOSET! Any family that *has* a car *wants* a MOTOSET! Every car owner is your prospect!

If you are a radio dealer you can make MOTOSETS the backbone of your sales and profits this summer.

One Dealer Sold **19 MOTOSETS** *the first 30 days*

A radio dealer in Mt. Vernon, N. Y., sold 19 MOTOSETS within a month from the day he placed his first order. Another dealer in Tuckahoe, N. Y. sold 8 MOTOSETS the first week. This was all *extra* business for these two dealers. Nobody has heard these gentlemen complaining that "business is rotten."

Write for attractive dealer and distributor proposition.

If you are an automobile or auto accessory dealer you can make MOTOSETS your most important and profitable sideline.

LONG ISLAND CITY, NEW YORK

ARVIN

OFFERS A COMPLETE
CAR RADIO LINE :

3

MODELS

5-tube, 6-tube and 7-tube all-electric superheterodyne sets—single and double unit types—with many distinctive sales features and easy installation.

NO. 10 A
39.50
LIST

NO. 20 A
49.50
LIST

NO. 30 A
59.50
LIST

The new No. 10A single unit Arvin to retail at \$39.50—the lowest price known for such a fine car radio—makes the Arvin line complete. With this one line you can sell all the car radio prospects in your community and make more money . . . Big national advertising campaign starting in The Saturday Evening Post and the American Magazine this month . . . Get in touch with your Arvin jobber—or mail the coupon below for full information now.

Noblitt-Sparks Industries, Inc., Columbus, Ind.

Send us full information about Arvin Car Radio and your registered dealer merchandising plan.

FIRM NAME.....

ADDRESS.....

Check whether you are retailer () or wholesaler ().

*There's Romance Everywhere
When You Drive with an*
ARVIN CAR RADIO



AMERICA, Here's Your Car Radio! A radio with volume to fill the whole outdoors with melody as you speed along the highways—with delicacy and tone to hum a quiet little tune that none but you can hear as you steer through city streets. A radio that makes every hour and mile you drive fly by—brings you all the favorite programs, *beautifully*. The name is *Arvin—Arvin Car Radio*.

This radio is a triumph! Automotive brains and radio brains got together and produced it—and now it is ready for your dealer to slip under the dash of your car and hook up. For those who are technical-minded,

here are a few of the many reasons why the Arvin is such a wonderful car radio: It is an all-electric superheterodyne, with automatic volume control, tone control, remote control, shielded units, and plenty of other features. No extra batteries required, installation is easy, doesn't interfere with heater or other accessories. Three models to choose from—priced as low as \$39.50.

Go to your Arvin dealer (automotive or radio) and lend an ear to one of these marvelous instruments. If you don't happen to know the name of an Arvin dealer near you, just write to us. Noblitt-Sparks Industries, Incorporated, Columbus, Indiana.

3 MODELS PRICED AT \$39.50 — \$49.50 — \$59.50

ARVIN CAR RADIO



*Designed and Built Solely for
Automobiles by the Makers of
Arvin Hot Water Car Heaters*

Powerful Advertisements in The Saturday Evening Post and American Magazine

A new
ATWATER KENT
Motor Car **RADIO**



MODEL 424

\$37⁹⁰

**As easy to install
 as a spark plug!**

FOR immediate and profitable sales—a complete, compact unit (speaker included), having all features consistent with the finest automotive reception and tone, plus Atwater Kent workmanship.

By the use of a perfected synchronous rectifier, the extra non-radio tube is avoided. The troublesome rectifying tube has been eliminated and with it the additional drain on battery and the replacement problem.

Installation? It can be made as easily and quickly

as you can put in a spark plug, saving *your* overhead and *your customer's* time.

Price? We honestly believe that this instrument panel control Motor Car Radio at \$37.90 is the best value offer in the history of Atwater Kent. If the steering post control type is preferred, it is available in Model 534 at \$39.90.

Let your customers see and hear this new

Atwater Kent Motor Car set—tell them the price and the sale's made.

For those desiring the utmost in Motor Car Radio, Atwater Kent dynamotor-powered models are priced at \$59.50 and \$64.50.

Prices slightly higher in Rocky Mountain region and West



I'VE THOUGHT OF A
BETTER WAY. KELVIN



Announcing Kelvinator
**AIR CONDITIONING
EQUIPMENT**

Kelvinator engineers have been studying air conditioning for years. Hundreds of experiments have been made. Days, months, years, have been spent in exhaustive research. And *the results* more than compensate for the time, effort, and money expended. Kelvinator has "found a better way," and the new Kelvinator Air Conditioning Equipment is unquestionably the most revolutionary and highly perfected on the market to-day. One of its noteworthy engineering features is the independent and automatic regulation of temperature and humidity.

Complete information both about the equipment and the money-making possibilities of the Kelvinator franchise, will be sent upon request. We suggest that you wire or write to-day because requests will be handled in the order in which they are received.

KELVINATOR CORPORATION
Specialists in Temperature Control since 1914
14263 Plymouth Road, Detroit, Michigan
Factories also in London, Ontario, and London, England

Kelvinator

LICENSED UNDER PATENTS OF R C A

What DEALERS like
 about selling
TUNG-SOL
 RADIO TUBES



. . . is the freedom from SERVICE WORRIES assured by the uniform quality of the TUNG-SOL Product. This, plus the unique TUNG-SOL selling plan, is making real tube profit possible to thousands of dealers today. . . Are you one of them?

TUNG-SOL RADIO TUBES INC., NEWARK, N. J.

BRANCHES

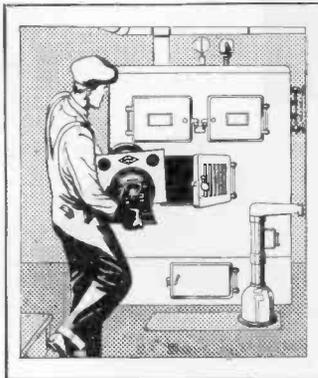
Atlanta Boston Charlotte Chicago Cleveland Dallas Detroit Kansas City Los Angeles New York St. Paul

Form No. T-97

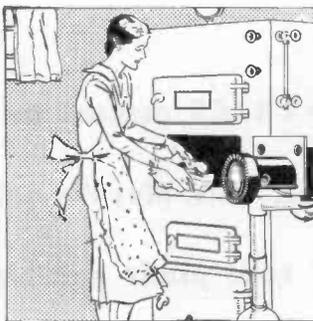


Slam the Door on Competition with **KELVINATOR'S**

SPLIT-DEGREE FLAME



Here is an oil burner you can sell as easily to home renters as to owners. It can be moved from house to house like any other electric appliance.



Grates are not removed; no hearth is built in—a factor simplifying installation. Furnace or boiler continues to serve as an incinerator.

YOU know, as all heating engineers know, that the points of difference between burners of the intermittent type are differences in design—not fundamental differences in the type and quality of the heating service rendered the customer.

Competition among old-line oil burner dealers thus becomes a battle of words—an effort to beat the other fellow to the sale by demonstrating some slight shade of superiority of design, rather than of service to the user.

Why attempt to sell a burner which is practically the same—at least from the standpoint of the service rendered to the user—as the burners sold by your competitors?

No Other Like It

Here is a burner that is revolutionary in principle. It isn't just "a little better" in one respect and "just as good" in another. The Kelvinator Oil Burner is different. It has so many advantages—and they are so clear-cut, so easily described, demonstrated and understood by your customers—that they literally shut out competition.

The Kelvinator Oil Burner is scientifically designed for the millions of solid-fuel heating plants already in use. It is delivered and installed as a unit—swung through the furnace door and started—without interrupting heating service

even in zero weather. This extends your selling season.

Chief among Kelvinator features is the Split-Degree Flame—a flame that burns constantly when any heat is needed—varying up or down with temperature requirements. A temperature change of 1/6 of one degree changes the oil flow. Constant, even heat! Warm air in constant circulation! No "cold 70°!"

No Electrical Controls

Hundreds of parts have been eliminated in the design of the Kelvinator Oil Burner. It has all the safety and operating controls that other burners have. They are positive, dependable, fully automatic—but non-electrical.

Territories are now open for those who wish to take advantage of this new profit opportunity. Write or wire the factory for details.

(110)

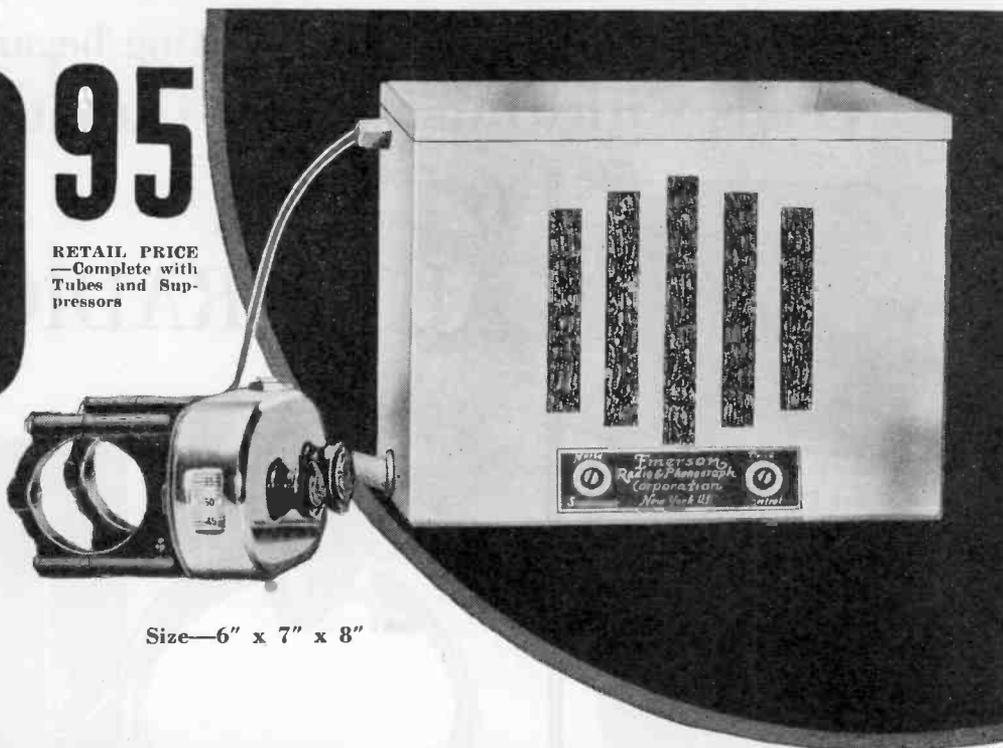
KELVINATOR CORPORATION • DETROIT
OIL BURNER DIVISION

Emerson AUTOMOBILE AND MOTORBOAT Radio

Only
49.95

RETAIL PRICE
—Complete with
Tubes and Sup-
pressors

and..



Size—6" x 7" x 8"

GREATER PROFITS

Here is your chance to make some *real* money on the enormous public interest in automobile radio. Don't be content with the short discounts common today. To successfully merchandise auto radio you need a quality product at a popular price, and

a REAL PROFIT MARGIN. Remember—Emerson has always protected your profit on home radios. With the Emerson Automobile Radio we make YOUR PROFIT EVEN GREATER than on Emerson home radios.

BETTER PERFORMANCE

Five Tubes, including new Pentagrid Converter giving eleven tube performance.
Extremely low battery drain, only 4.5 amperes.
Tubeless "B" Power Supply.
Superheterodyne Circuit.
Three-Gang Condenser (giving high signal to noise ratio and high ratio image suppression).
Six Tuned Circuits.
Separate Delayed Automatic Volume Control.
Full-wave Tubeless Synchronous Rectifier.
Automatic Tone Compensation.
Automatic Noise Suppression (a brand new feature).
First Stage Audio, resistance coupled.
Push-pull Power Output Stage, Transformer Coupled Class at A".
Four Watts Maximum Output.
Automatic Fidelity and Selectivity Control.
Full Electro-Dynamic Loud Speaker.

High Gain 172.5 K.C. Intermediate Frequency Amplification.
Sensitivity better than one microvolt per meter.
Neutralized Space-Charge Diode Detector.
Electron-coupled Oscillator.
High Efficiency Modulator.
Protective Fuse on Tuning Control.
Illuminated Tuning Dial.
Lock Switch on Tuning Control.
Simple, quick mounting.
Tubes can be checked without dismantling set.
Shielded Cables.
Tuning Range 1510 K.C.-530 K.C.
Full Heavy Chromium Plated Case.
Over-all dimensions 6" x 7" x 8".
Entire Set, including "B" supply, in this one case.
Tubes used—1 Type '78, 1 Type 6A7, 1 Type 6B7, 2 Type '41.



OUTSTANDING APPEARANCE

In line with Emerson's policy of creating unique designs with outstanding sales appeal, the Emerson Automobile Radio is not only *different*, but will stand out in your window, or on your counter, and will make an immediate quality appeal to

owners of cars and motorboats. The new Emerson features a gleaming full chrome-plate finish on the all-in-one chassis and on the remote control. It is a set of beauty, designed to harmonize with auto and boat fittings.

DEALERS: Jobbers handling the Emerson Automobile Radio are located in nearly every part of the country. Get in touch with the nearest Emerson jobber at once or wire us direct for information. Do not delay in taking advantage of the big selling season!

EMERSON RADIO AND PHONOGRAPH CORPORATION
641 Sixth Avenue Tel. WAtkins 9-2264 New York, N. Y.

Freed-Eisemann

famous since broadcasting began
Leads with Outstanding Quality Values

**6 TUBE
 AUTO RADIO \$49.50**



Model 77—7-Tube Superheterodyne.

Highest quality Universal compact ever offered. Push-pull amplification. Tunes from 75 to 560 meters. Pilot light; tone control; burl walnut cabinet. **\$39.50**



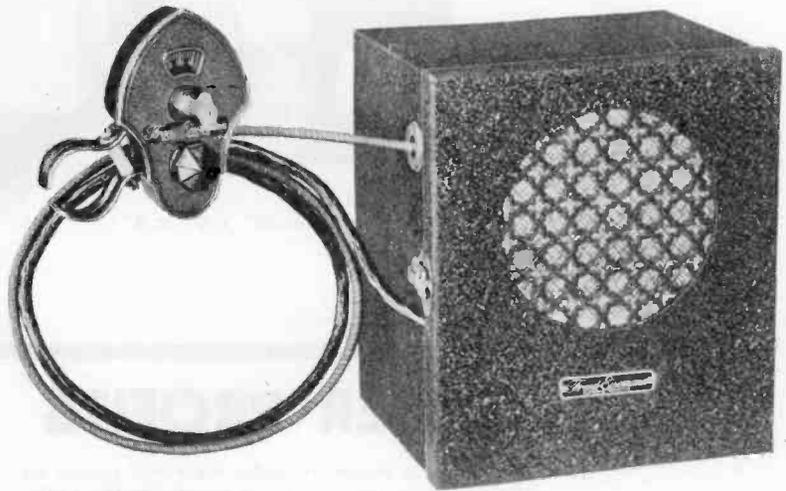
Model 55P—5-Tube Portable Universal Superheterodyne.

Dynamic Speaker; heatless chassis. In waterproof bakelite cases—black, blue, green, brown or red. **\$27.50**



Model 55—5-Tube Universal Superheterodyne.

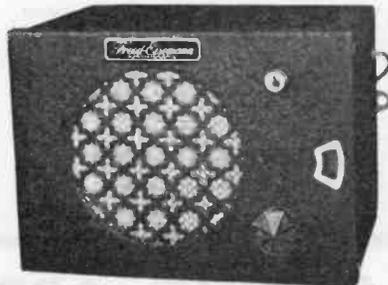
Dynamic Speaker; hand rubbed walnut veneer cabinet with marquetry inlays. Tunes from 1750 to 520 Kilocycles. Calibrated scale. **\$25.00**



Model A-9

A 6-Tube Set with performance of an 8.

Superheterodyne circuit. Full 6" dynamic speaker; 2 stage audio amplifier for tremendous power not obtainable with a smaller speaker. Tubeless "B" Power Unit. Only 2 wires to connect; 3 holes to drill. Can be installed in a few minutes. Illuminated dial; key switch volume control. Built by makers of fine radio sets since broadcasting began. Size: 9½" high x 8" wide x 7" deep.



Model A-7—4 Tube Compact Superheterodyne; latest type tubes; dynamic speaker. Can be installed anywhere in car—only 8" x 5½" x 5"; supplied with shielded power

cable. Can be used with any standard type of "B" eliminator. Price includes four tubes and power **\$24.50** cable.

FREED TELEVISION & RADIO CORPORATION

LONG ISLAND CITY

NEW YORK

On the Job
RAY SUTLIFFE
DON MILLER

RADIO RETAILING

HOTEL STEVENS
CHICAGO

June 5-6, 1933

REPORTS

By Radio, Telegraph and Telephone **The R.M.A. CONVENTION**

WILLIAMS, RMA DIRECTORS, RE-APPOINTED. INDUSTRY APPROVES FEDERAL CONTROL LAW

June 6—Fred O. Williams, vice-president and general manager of P. R. Mallory & Co., Inc., and for the past year president of the Radio Manufacturers' Association, has been re-elected to that post. Williams first attained fame in the radio

Directors was simultaneously re-appointed. President Williams will thus have the same associates during the 1933-34 season as in the year past.

The Association also, today, approved the Industry Control Law reported to be nearing enactment in Washington, assuring President Roosevelt that it would "do anything that may be required by the recovery act in cooperation with the Federal Government.

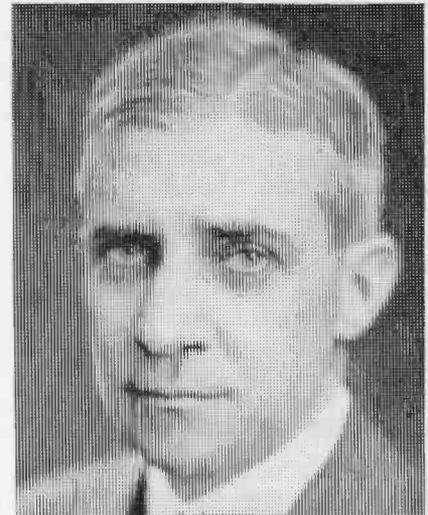


FRED WILLIAMS

business as president of the Dubilier Condenser Corporation, later becoming vice-president of the Raytheon Manufacturing Company and manager of National Carbon's tube division when that organization tied up with the Newton, Massachusetts concern.

The entire 1933 Board of

tion of statistics dealing with existing labor-hours and wage scales, also production costs. Roy McCanne of Stromberg-Carlson will direct the committee, which



ROY McCANNE

"INDUSTRY RECOVERY COMMITTEE" ESTABLISHED

Roy McCanne Heads Important Body. To Present RMA Code of Practices at Washington

June 5 — RMA directors today established an "Industry Recovery Committee" which will take immediate steps to collect data on present practice of radio manufacturers. This data, when developed, is to be submitted to Washington for consideration, under the provisions of the proposed Industry Control Bill.

Accountants working under committee direction are to proceed with the produc-

tion of statistics dealing with existing labor-hours and wage scales, also production costs. Roy McCanne of Stromberg-Carlson will direct the committee, which

includes Paul Klugh of Zenith, S. W. Muldowny of National Union and Arthur Murray of American Bosch. All divisions of the RMA will report through this central body. The Association's executive vice-president has been authorized to advise non-members that membership imposes no inequitable restrictions and is open to all in the industry who apply and qualify. Membership is also extended to all makers of electronic devices.

RMA TO SPONSOR NATIONWIDE

OUTSTANDING PROGRAMS TO BE

LOCAL PARTICIPATION WITH

TRADE TO STAGE NATIONAL SALES CAMPAIGN, BEGINNING IN SEPTEMBER

CHICAGO—JUNE 6. A nationwide plan to revise interest in radio and stimulate fall demand for the new sets was voted today by the directors of the Radio Manufacturers Association. This action confirms the decision of the RMA Board when, on April 25, it authorized President Williams and the RMA Executive Committee to proceed with the preliminary plans for an outstanding radio event next October and put teeth in this idea by voting a substantial sum of money to finance it. Much of the credit for this action goes to Mr. Williams.

PROGRAMS OF OUTSTANDING INTEREST SCHEDULED

The whole-hearted cooperation of every radio dealer, jobber and manufacturer in the country will be solicited. Here's the proposition:

During September the trade will tell the public about the new sets and about the big broadcasts that will be put on the air the first week in October. Copy will be prepared for national and local advertising. Special display material and window and store trims will be available. The managing director of this campaign

will personally talk to local groups of dealers and jobbers in strategic distribution centers and will explain in detail how to set up local activities.

The program events, beginning October 1, will be of a character never before presented. To this end the best brains of the country are being enlisted. The program directors of the large chains, cooperating with radio advertisers, will see that every night will have at least one special feature event.

The plan, in other words, calls for a definite schedule of preparatory work to be followed by a month of intensive merchandising of the new 1934 models, to culminate in a nationwide celebration of "Radio Progress Week"—October 2-7. During this week, besides the special broadcasts that will be put on the air over national hook-ups, many local programs of a similar nature will be encouraged.

SPECIAL "PROGRESS WEEK" ORGANIZATION TO BE SET UP

An indication of the aggressive manner with which the RMA will get behind this idea is seen in its appointment of an experienced manager and staff who will devote their entire time from now on to fur-

thering Jubilee Week and the important merchandising events which will logically precede it.

Earl Whitehorne, an out-



EARL WHITEHORNE

standing figure in the electrical industry, whose forceful personality and executive ability has insured the success of many industry promotional projects, was today engaged to direct this campaign.

In an address before the open membership meeting of the Association this afternoon, Mr. Whitehorne, by the thorough manner in which he presented and

RADIO PROGRESS WEEK IN OCT.

STAGED STOP PLANS CALL FOR

SPECIAL DISPLAY MATERIALS

visualized the details of the plan, received the enthusiastic and wholehearted support of his audience.

"It is my intention," said Mr. Whitehorne, "personally to visit many of the principal radio distribution centers in the United States between now and the middle of August to explain this plan to the local radio dealers and jobbers and to set up local committees to carry it out.

"For smaller cities and towns, the committee will issue a 'Plan Book' which will explain in detail how to set up the many local activities which, with the advertising aids available from headquarters, should be engaged in. The manufacturers and jobbers are expected to be a big factor in insuring the local success of 'September Selling Month' and of the Progress Week which will follow it.

PLAN BOOK AND PROMOTIONAL MATERIAL READY IN JULY

"The plan book, window streamers, copy suggestions and other promotional material will be available the latter part of July. Also we will know pretty definitely the nature of the unusual programs which will be run during Progress Week. While it is not advisable to mention at this

time the names of the participants, I can state that these air events will be of sufficient magnitude to create a vast amount of advance public interest. I have received assurance from the National Broadcasting Company and the Columbia Broadcasting System, from many of the leading advertising agencies and program sponsors and practically all of the set manufacturers that they will cooperate to originate program ideas and to obtain national figures and the best of entertainment talent for this week."

The executive committee of the RMA, comprising the chairmen of the four main divisions of the Association, is as follows: A. T. Murray, Set Division; S. W. Muldowny, Tube Division; Leslie F. Muter, Parts and Accessory Division; Richard O'Connor, Amplifier and Sound Equipment Division. Assisting this committee and Mr. Whitehorne will be Bond Geddes, executive vice-president and general manager of RMA. To profit by the experience of an advertising specialist, the services of H. H. Kynett have been secured. Mr. Kynett will act as Advisory Chairman.

Broadly speaking, the underlying objectives of this plan will be to first re-sell the radio industry on radio, to inspire it to merchandise intensively the better quality sets early

this fall and to encourage radio manufacturers to develop sales policies which will permit dealers and jobbers to make a worthwhile profit, and to offer a plan of radio entertainment which will reawaken the public to the value of the radio in the home.

"Radio Retailing," in its July and August issues, will present in detail the action of these executives, it will report the progress of the plans and will advise its readers as to the definite cooperative activities which they should institute locally. Special executive offices have been leased at 330 West 42nd Street, New York City. Address communications to Radio Progress Week Committee, care above address.

\$25,000 VOTED FOR PROMOTION

June 6--Display materials (further details will appear in the July issue of "Radio Retailing") designed to put over the October "Radio Progress Week" with a bang will shortly be forthcoming as a result of the RMA's decision to authorize a \$10,000 "revolving fund" for this purpose.

The fund was authorized by the Board of Directors meeting at the Stevens on Monday afternoon, and is in addition to a \$15,000 appropriation approved in April, when preliminary plans were formulated.

MULDOWNY WARNS AGAINST TOO MANY TUBE TYPES

One of the most important problems which the industry has to cope with intelligently has been the emphasis placed on the development of new tubes. Some of these types have been real contributions to the art, but the development of others might be termed only slight improvements over present types, in the opinion of S. W. Muldowny, reporting for the Tube Division.

This wholesale, uncontrolled development has increased the cost of manufacturing to the tube companies without the expected compensating benefit of being paid for this additional cost, his report continued. The result of this policy has been that all tube companies are selling their product below cost of manufacture. The continuation of such a

policy will eventually make the tube industry impotent as far as new inventions are concerned.

Even though this development has been allowed to run unbridled for most of the year, there is now available to the tube industry an informal board of engineers who do meet occasionally and exchange information; and who, in an informal way, are making an attempt to confine new developments along needed and legitimate channels it appears.

The competitive situation in the industry has been severe. The desire for volume precipitated about a 35 per cent decline in dollar value, whereas the unit volume was only off approximately 18 per cent.

The ground work has been laid for intelligent action on the part of the Tube Group, however, and the future looks promising as far as a comprehensive industry program is concerned, Mr. Muldowny concluded.

RMA SEAL PLAN LAUDED BY SET DIVISION CHAIRMAN MURRAY

A Major Accomplishment

The chief accomplishment of the Set Division, according to a report rendered by Chairman Murray, was the adoption of the RMA seal plan, which already has been put into use by a substantial majority of the members of the Association.

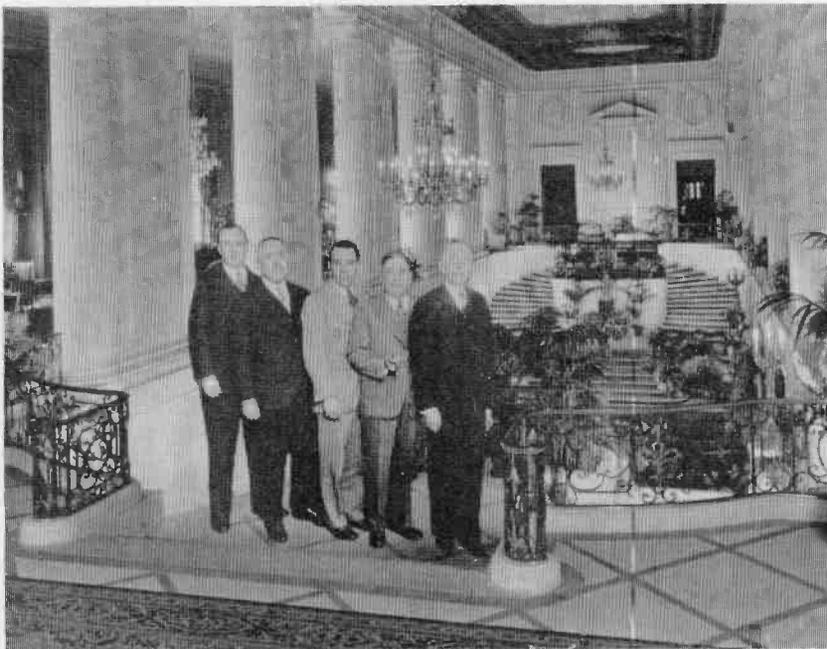
"There is still much to be done in making the seal stand for high integrity so far as the merchandise to which it is attached is concerned, but," said Mr. Murray, "I think that all of those who have the welfare of this particular matter at heart are pleased with the progress that has been made.

"Another action especially valuable has been the arrangement made with the Radio Corporation of America to secure its quarterly reports on receiving set production. These industry statistics are of much value and while their distribution is limited to set manufacturers of the Association, it is hoped that they will be the beginning of development of industry statistics for the whole industry."

JOY REIGNS UNREFINED AT INFORMAL DINNER

June 7 — The North Ball Room of the Stevens was taxed to capacity last night. Maybe it was the "new low" in the price per RMA banquet ticket . . . three dollars, which included two 12-ounce steins of Chicago's best 3.2 and a fat cigar. Also a quintet of vocal stars from the Chicago Grand Opera Company.

The chief speaker of the evening was Col. Thad Brown, Federal Radio Commissioner.



VETERANS OF NINE CONVENTIONS

1925 - 1933. They're just as active as ever on behalf of the RMA—these veterans of nine conventions, still on the job at the Stevens.

Left to right: Herb Frost, first president RMA; Henry Forster, Chicago; Les Muter, chairman parts division; Paul Klugh, banqueteer extraordinary, and Ben Grigsby, president of Majestic.

RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

O. H. CALDWELL, *Editor*

RAY V. SUTLIFF, *Managing Editor*
W. W. MACDONALD, *Technical Editor*
T. H. PURINTON, *Assistant Editor*

M. E. HERRING, *Publishing Director*
HARRY PHILLIPS, *Art Director*
P. WOOTON, *Washington*

For the First Time in Radio History

Summer Volume

Why?

*Auto-
Radio!*

THE cash register bell is ringing again. After three years of pioneering, automobile-radio definitely has captured the public fancy. From all sides come evidences of a buying wave. Based on present indications, we should equip 400,000 motor cars for radio reception during the present year—and establish a record for summer sales activity.

For the first time the radio dealer can afford to push radio during June, July and August. For the first time he has an outdoor radio product which can compete with other outdoor interests.

AND it is the radio dealer who is doing the job. In connection with his other lines, or as an installation specialist, the man with a radio background is accounting for the lion's share of the orders that are now taxing the immediate facilities of the set makers. Alert retailers will make the most of this situation.

In this connection a word of caution. Due to inexperience or to haste, some dealers are improperly installing these sets. Needless to say, this practice will react in short order, not only to the detriment of the individual concern guilty of such sloppy workmanship but of the entire industry.

Another note of warning must be sounded. Already there are signs that the manufacturer may over-produce—with the consequent price demoralization which inevitably follows. Already prices are lower than they should be, lower than the public demands. We must not repeat the mistakes of former years. We must not let the enthusiasm of the moment warp sound business judgment.

KEEP your fingers on the pulse of the market every day, Mr. Manufacturer, and think twice before announcing any further reductions in list prices.

If we ruin *this* business, we most certainly will have but ourselves to blame.

RADIO.....



TO RADIO men who hie Chicagoward this month, combining business with pleasure, the Electrical Group of buildings will prove the center of interest. Here, in the Radio and Communications Building, will be depicted the history of radio from the pioneer days of Marconi. Here, also, will be demonstrated the recent applications of the electronic tube to a vast number of diverse commercial uses. And here will be found the exhibits of many of the leading set, tube and radio accessory manufacturers of the country, together with an actual tube factory, operating at full blast.

In the adjoining Electrical Building the General

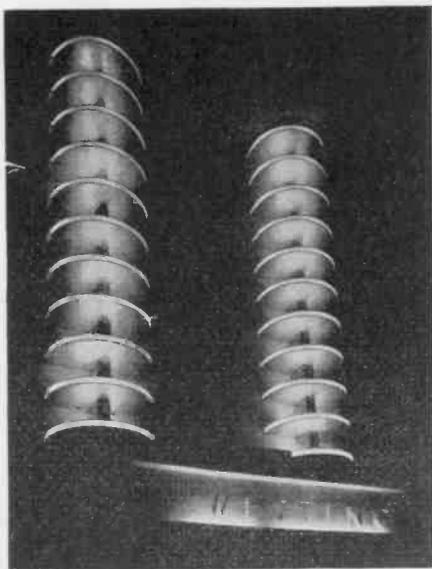
Electric Company has set up a bigger and better "House of Magic" and Westinghouse will be found making light lay down and turn over.

Special broadcast studios have been erected on the Fair grounds—and special programs will flood the country, from this source, in abundance.

MODERNISM! That's the keynote of the greatest show ever staged in the history of the world. A show which was opened, incidentally, by radio. Focused through the great Yerkes telescope of the University of Chicago, a super-sensitive photo-electric cell caught the rays of the star Arcturus . . . 240 trillion miles away—40 light years. Amplifiers stepped up the current, relays turned on the lights and started the motors—causing every building and every exhibit to spring into life and action on the night of May 27.

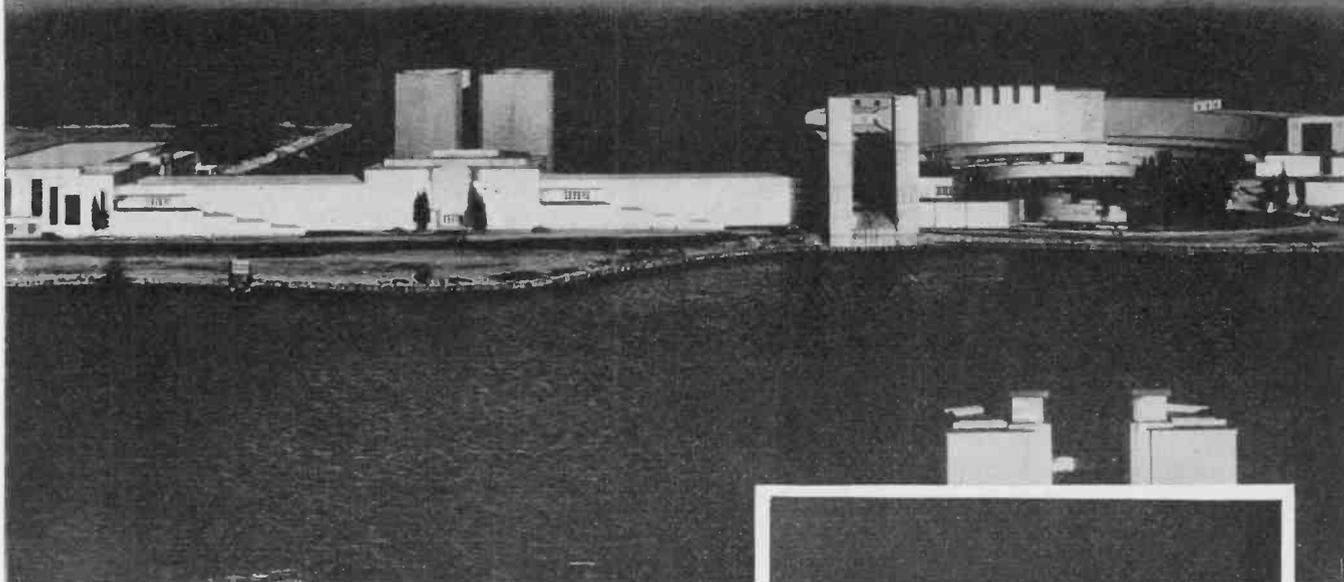
The many ways in which light, color and shape have been ingeniously and daringly manipulated will amaze the visitor. From the phantasmagoria of "The Midway" to the artificial Aurora Borealis and from the giant "Sky Ride" to the "never before" ideas in architecture, the mind of man has been permitted to run riot. And out of this modernism in building design may come a new public concept of styling. Certainly millions will be educated in this new handling of plane and curved surfaces. This may lead to the origination, and to the popular acceptance, of entirely new designs in radio cabinets . . . new styling in various metals as well as woods, which may obsolete today's sets and give fresh impetus to the demand for 1934 models.

Quoting Powel Crosley on this subject: "I look to see the World's Fair at Chicago this year quite definitely affect designs of furniture, radios and many other things. It is truly modernistic in the treatment of all its buildings and the many thousands of people who attend, and others who look at pictures, are bound to be influenced."



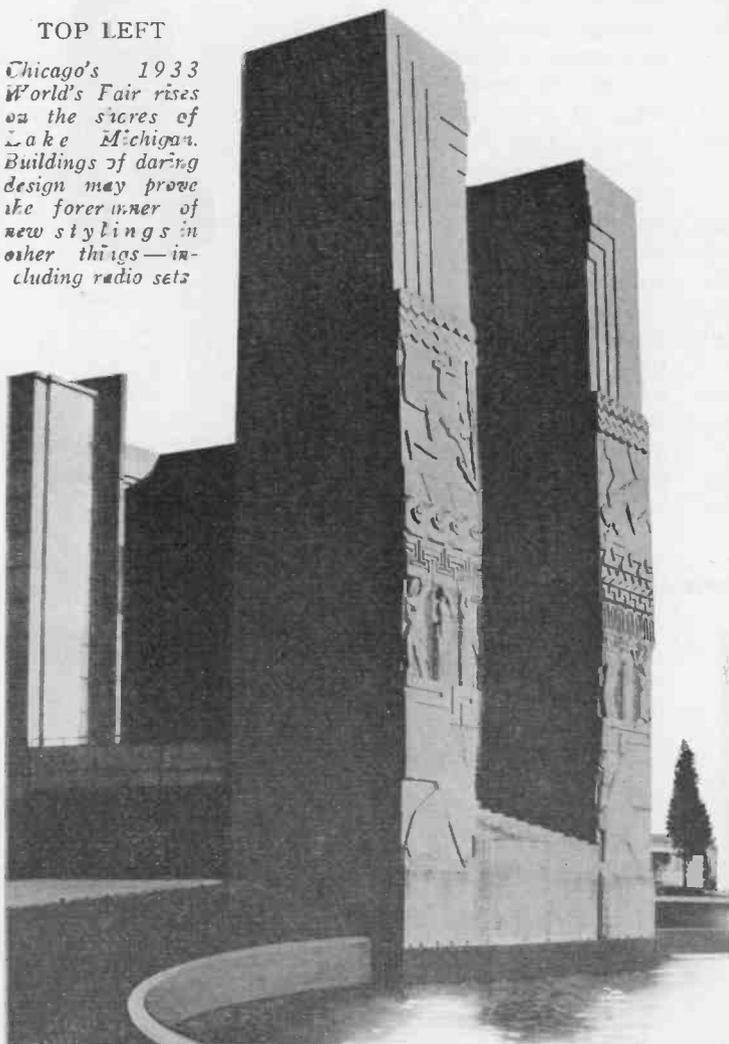
Functioning in new and startling roles, light, at the Century of Progress, will be made to perform many weird tricks. These illuminated discs, Westinghouse exhibit, are 10 ft. wide

at the World's Fair



TOP LEFT

Chicago's 1933 World's Fair rises on the shores of Lake Michigan. Buildings of daring design may prove the forerunner of new stylings in other things—including radio sets



ABOVE

Gigantic sculptured plaque, "Light." One of the two figures that flank the sides of the Electrical Building



TOP

Radio's wizardry will be unfolded at the Century of Progress in the group of electrical science buildings pictured above. Embellished with hanging gardens, electric cascades and fountains and gilded pylons, this structure—1,200 feet long—presents the last word in modern architectural phantasy

LEFT

Covered with symbolic bas reliefs of the forces of electricity, these twin pylons guard the water gate to the Electrical Building



A N

Appreciation

EARLY in 1924 a small group of radio men met in Chicago to discuss the possibility of cooperation along trade organization lines. The result was the formation of the Radio Manufacturers Association.

Major Herbert H. Frost served as its first president.



HERBERT FROST
"Father" of the
RMA and three
times its president

He was reelected the following year and was again unanimously chosen to head this organization for 1928-29. Associated with Mr. Frost in that historic first meeting were the following pioneer radio men: C. H. Belden, A. J. Carter, R. A. Connor, G. R. Hasse, A. A. Howard, W. H. Huth, A. Newcombe, E. N. Rauland, Frank Reichmann, Theodore Sheldon, W. H. Trimm, Frederick Will and J. C. Tully.

The meeting at the Stevens this month will be the ninth annual convention of the RMA. During this nine-year period six Trade Shows and numerous public expositions of radio have been held under the auspices of RMA. These exhibitions of the latest sets and accessories have done much to solidify the various radio interests into one compact industry and to promote the public demand for radio merchandise.

But this has not been the only major activity of the RMA which has benefited radio dealers and jobbers. The RMA has been a faithful watch dog of adverse legislation, both state and national. RMA should be largely credited with the fact that a radio tax of 10 per cent originally slated to be applied in 1926 was postponed until last year and then reduced to 5 per cent. It has effectively combated bills to operate broadcasting stations under direct governmental control.

A more recent accomplishment, of interest to dealers, is the institution of its official "Seal of Approval" plan.

As reported in *Radio Retailing*, sets which have passed exacting performance tests may carry this RMA designation. The object is to sell higher class merchandise.

RMA is in a strong financial position. It maintains an office and staff in Washington, D. C. Its membership represents practically every worthwhile manufacturer of sets, tubes, parts, accessories and amplification equipment in the country. It has many plans of a practical nature for the future. At present it is the only nationwide organization representing the interest of the radio dealer and jobber as well as the manufacturer.

IT is of vital concern that the RMA should be supported and should be continued under its present organizational set up. The immediate reason for this statement is that the trend of affairs in Washington indicates that in the near future industry will be controlled or brought under the "partnership" discipline of a secretariat. This contact between government and business must be cleared through strongly organized trade associations. Radio needs this type of friendly control by the government in order that a minority of "irresponsibles" may not be permitted to ruin us. The radio industry is not so unwieldy but that it readily could adapt itself to common sense regulations under proper auspices.



BOND GEDDES
Executive Vice
President and General
Manager of
RMA

Through its executive vice president, general manager and legislative representative, Bond Geddes, who is located at the seat of government and possesses a vast background of legislative experience, the RMA is in an ideal position to see to it that the rights of all branches of the radio industry will be properly safe guarded.

1932-33 Chairmen of the Four Divisions of the Radio Manufacturers Association



LESLIE F. MUTER
Chairman, Parts, Cabinet
and Accessory Div.



S. W. MULDOWNY
Chairman of the Tube
Division, New York City



ARTHUR T. MURRAY
Chairman of the Set
Division, Springfield



RICHARD O'CONNOR
Chairman, Amplifier and
Sound Equipment Div.

The NEW Sets



PERIOD DESIGNS

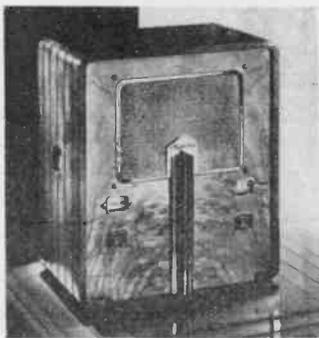
This table and chest are two of many occasional pieces made by the Imperial Furniture Co., Grand Rapids, Mich.



RCA-VICTOR NIGHT TABLE,
\$37.50

*Current Trends
for the
1933-34 Season*

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



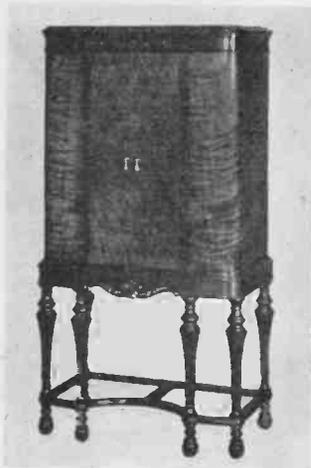
MAJESTIC 461, \$32.50
6 tubes, police calls



SENTINEL'S "DUOLA"

typifies a recent trend—a detached, console-type speaker operated in conjunction with a self-contained table set. \$67.50 for both set and console speaker. Portable set only, \$27.50

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



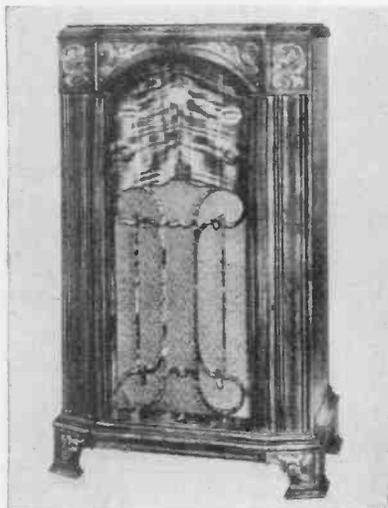
FADA 79, \$142
11 tubes



U. S. RADIO 3074, \$39.95
7 tubes



U. S. RADIO 3040, \$29.95
5 tubes



ZENITH 750, \$39.95
6 tubes

The Low-Down

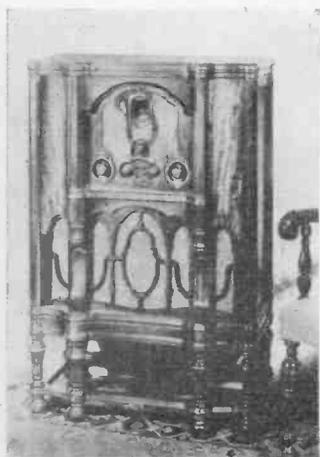
By W. MacDonald
Technical Editor

THE man in the street may have a console appetite, but he still has a midget pocketbook . . . if designers know their trends. Most of the sets bowing along the production lines are peewees. Fortunately, they have been dolled up to the Queen's taste, a majority of makers going modern, but not too much so. Moulded, metal and wood cases vie for honors. Pay your money and take your choice.

But looks are not everything. The designers have also equipped new miniatures with many modern gimmicks heretofore found only in con-



ZENITH 760, \$59.95
9 tubes Twin speakers



GE K-106, \$129.50
10 tubes



ATWATER KENT 808,
\$69.90
All-wave, 8 tubes



RCA-VICTOR CE-29,
\$247.50
Coin operated Victrola

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



MAJESTIC 77, \$46.50
7 tubes



MAJESTIC 344, \$149.50
11 tubes, twin speakers



AUDIOLA 10300D, \$85
10 tubes



STROMBERG - CARLSON
54, 12 TUBES \$592.50
*Te-Lek Tor-Type Automatic
Combination*

soles. This season we have "two-by-four" superhets with such refinements as automatic volume control, tone control, illuminated vernier dials and shortwave switches . . . in fact, everything but hot and cold running water.

Police calls are coming into their own, people are apparently listening to the "cops" in dead earnest. Midgets that tune down to 2,500 kc. are as common as dirt, and some even scoop in upper amateur bands at no extra charge. A.c.-d.c. operation has become extremely popular and a couple of transformerless consoles are on the market. The 25Z5 is being used as a doubler instead of just a half-wave rectifier, with improved results on a.c.



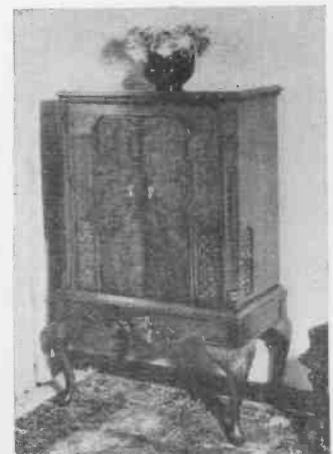
STROMBERG - CARLSON
52, 12 TUBES \$385
Te-Lek-Tor-Type



CROSLY FIVER D
\$29.99
5 tubes, dual range



CROSLY TWELVE
\$59.99
12 tubes



SPARTON
"TRIOLIAN", \$165
Model 28—13 tubes

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



FRESHMAN-BELMONT, 999
10 tubes—dual speakers



GULBRANSEN, 3225
12 tubes



CAPEHART 404A



PHILCO 16X, \$150
13 to 575 meters

A few of the things we were all excited about last June have, like the Arabs, folded their tents and scrambled. Among the missing are mercury vapor rectifiers and Class B audio. Noise-control, twin-speakers, visual tuning meters, remote tuners are temporarily depression-dodging. In their places we have reflexing, electron-coupled oscillators, double, triple and quadruple purpose tubes.

Auto-radio is by far the hottest thing in the business. What with airplane type controls, built-in speakers and eliminators and unprecedented price lows, volume business seems assured. Self-rectifying vibrator type eliminators are very much on the up. Installation time has been materially reduced.



PHILCO 16L, \$125
13 to 575 meters



COMMONWEALTH 170
7 tubes



U. S. RADIO "GLORITONE" 24, \$17.95
4 tubes



CROSLY LEADER D \$17.50
4 tubes, dual range

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



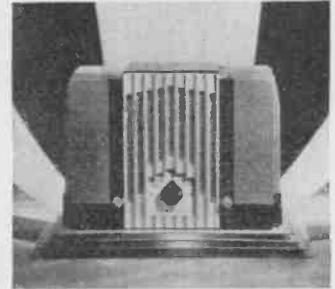
LYRIC U55, \$25
5 tubes, a.c.-d.c.



AIR KING, \$34.50
5 tubes



PHILCO 16B
\$75. 13-575 meters



**INTERNATIONAL
"KADETTE", \$25**
5 tube a.c.-d.c.



ATWATER KENT 165,
\$29.90
5 tubes, police calls



ATWATER KENT 708,
\$59.90
All-wave, 8 tubes

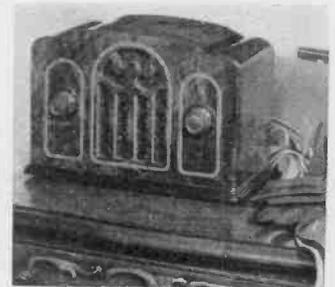
Now for a little predicting: We wouldn't be surprised if two-tube supers made their appearance some time this summer. And there is something brewing among the speaker makers that might bring back two-unit home radios . . . perhaps a wedding of the midget chassis with remote speakers on man-sized baffles. Already several set makers are equipping with separate speaker jacks.

Shielding has improved by leaps and bounds in car sets. Some bright boy is going to do without spark suppressors before many moons. Beer has had its aesthetic effect. Radios built in kegs and bars are on the market. Still no sign of television, sorry to say. But two bigbugs are primed to sell quality phonographs again, and that's something.

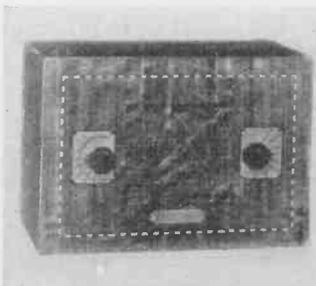
Price trends? Right now they can walk under a duck with a high hat on!



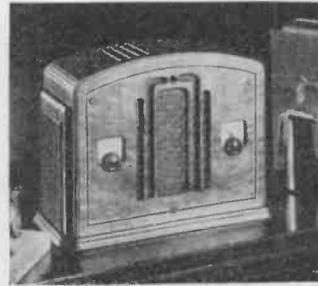
MAJESTIC 463, \$32.50
6 tubes, police calls



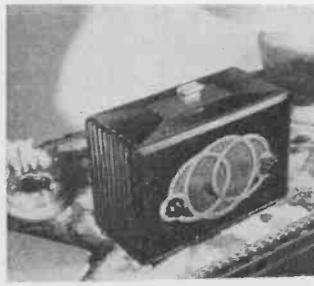
**PIERCE-AIRO
"DEWALD" 550, \$25**
5 tubes a.c.-d.c.



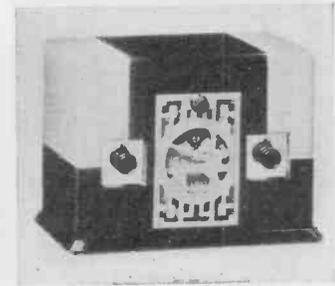
AUDIOLA 5W, \$25
5 tube a.c.-d.c.



PHILCO 54C, \$25
Police Calls—a.c.-d.c.



COLONIAL 300, \$30
5 tube a.c.-d.c.



CLUB RADIO
5 tube a.c.-d.c.

◀ Radio Retailing's TRADE SHOW ON PAPER ▶



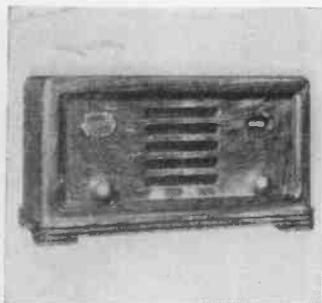
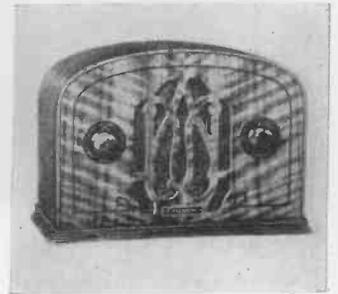
ZENITH 705, \$24.95
6 tubes

CLARION 450
6 tube a.c.-d.c.



RCA-VICTOR R-22-S
\$24.75
5 tubes, ac-dc, police calls

CLARION 422
5 tube a.c.-d.c.



ZENITH 706, \$27.95
6 tubes

GULBRANSEN
5 tube a.c.-d.c.



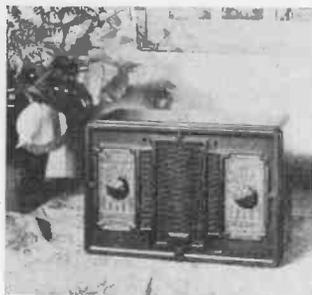
RCA-VICTOR R-22-W
\$24.75
5 tubes, ac-dc, police calls

U. S. RADIO 3092, \$19.95
5 tubes, a.c.-d.c. police calls



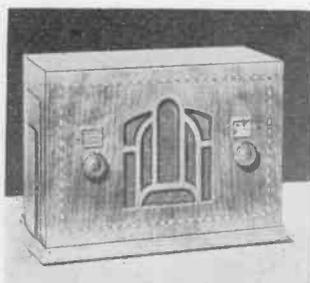
ZENITH 711, \$34.95
6 tubes

CROSLY "TRAVO",
\$12.99
4 tubes, a.c.-d.c.



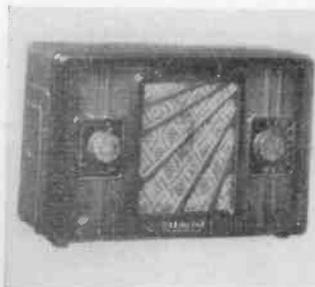
FRESHMAN-BELMONT
Model 545 5 tube a.c.-d.c.

PIERCE-AIRO
"DEWALD" 551, \$27.50
5 tubes, a.c.-d.c.



AMERICAN BOSCH
500, \$24.95
5 tubes, ac-dc

GE L-50, \$24.75
5 tube a.c.-d.c.



FRESHMAN-BELMONT 425
4 tube a.c.-d.c.

BALKEIT 44, \$17.50
4 tube, portable

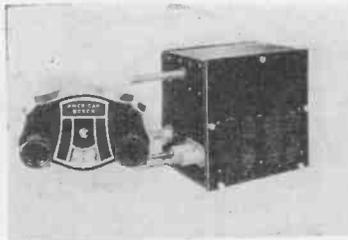
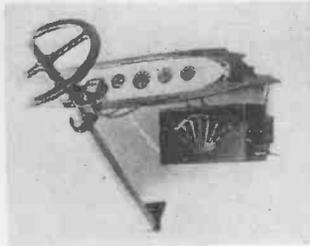


◀ Radio Retailing's **TRADE SHOW ON PAPER** ▶



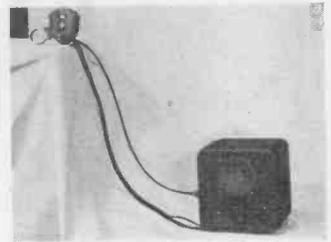
**FREED-EISEMANN
77, \$39.50**
7 tubes, ac-dc

GULBRANSEN V6Z2
6 tubes



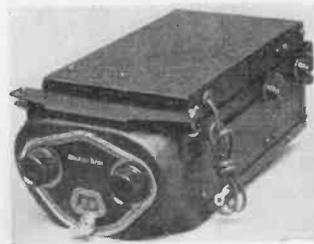
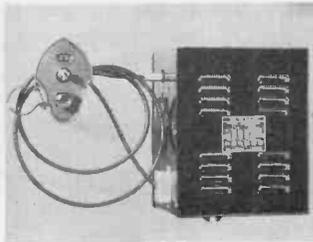
**AMERICAN BOSCH,
150, \$49.95**
6 tubes

**RCA-VICTOR M-34,
\$39.95**
Single unit, 4 tubes



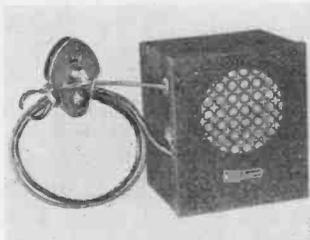
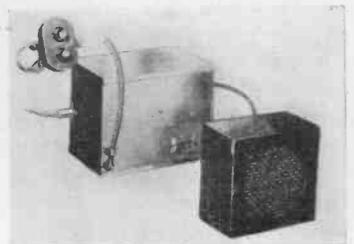
HOWARD COMPACT
6 tubes, a.c.-d.c. dual wave

**PIERCE-AIRO
MOTOR TONE 61**
6 tubes



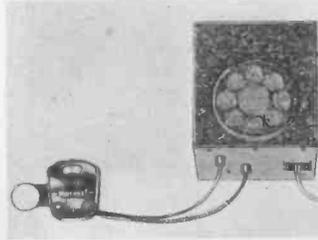
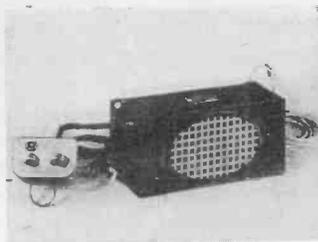
**ATWATER KENT 424,
\$37.90**
*4 tubes. With steering
column control \$39.90*

SPARTON 33, \$59.50
6 tubes



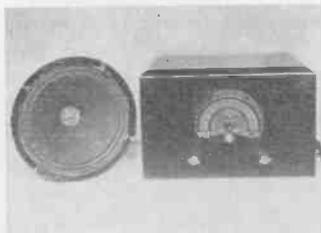
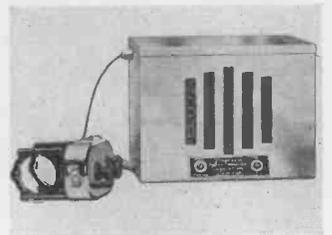
**FREED-EISEMANN
A-9, \$49.50**
6 tubes

**LYRIC "CRUISER"
A60, \$49.50**
6 tubes



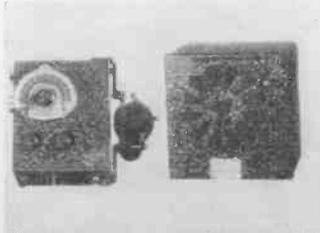
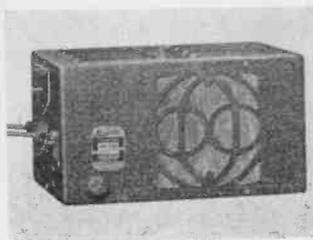
FADA 104, \$49.95
6 tubes.

EMERSON 678, \$49.95
*Autos and motorboats
5 tubes, all-in-one*



**ACRATONE
DISCOVERER, \$37.50**
*Shortwave receiver
Kit form, \$32.50*

**MAJESTIC TWIN SIX
\$39.95**
6 tubes



**TOM THUMB
(Automatic Mfg. Co.)**
*All electric \$34.95
Battery \$23.95*

**INSULINE "SCOUT"
CONVERTER**
60-200 meters, ac-dc, \$16.50



MERCHANDISING

in *the* Higher Price Brackets

By Mandus Bridston

DO YOU really know how to sell quality merchandise? Or are you afraid to look a \$100 price tag in the face? Most radio salesmen today are taking the path of least resistance. They are letting the customer walk out with the cheapest set in the shop. Yet, only by trading up will the average transaction show a profit.

To check this situation, I recently interviewed practically every radio dealer and radio salesman in Seattle. Where the average sale was less than \$30 the dealer, nine times out of ten, had a "depression" complex. On the other hand, where the survey uncovered a merchant who was doing a good selling job it disclosed a man who knew the values built in his better consoles, who felt that these sets were fairly priced, who was not licked by the depression—and who knew how to state a price convincingly.

Here's how the alert radio manager of a high-class department store put the matter: "The first essential in meeting low-price competition is the right mental atti-



Your customers work for you if they own the best. One customer makes another, when quality assures satisfaction

tude. If the salesman isn't convinced beyond the shadow of a doubt that the quality sets are the better buys, despite their higher costs, nothing he can say or do will convince the customer. Repeating stock arguments will not turn the trick. They lack the ring of sincerity. This means that a merchant must patiently analyze the quality radios from the customer's viewpoint. If a salesman on my staff has a penny-wise attitude, and I cannot change it, he must be dismissed—despite other qualifications."

A salesman gave me this important tip: "I thought I had every right to be awed by a set that sells for a sum the equal of my monthly pay check," he said. "Now I have learned to divorce the question of price from my own purchasing power. I realize that a \$150 purchase may mean far less to some customers, even in these times, than \$15 does to me."

PEOPLE who readily sell quality goods stress the importance of the proper voice inflection when stating a price. A man under 30, who has a fine downtown store, is *nonchalant* when he mentions the price. His easy manner suggests that it is of minor importance compared to what the merchandise stands for. I saw him sell a set for \$215 in this manner. There was not the slightest suggestion in his voice that this might be a big figure. On the contrary, the feeling was that it was a remarkable value.

One radio manager has a rule that the better merchandise must be shown first. Yes, that rule is in effect today. Further, he trains his salespeople to casually mention the price along with the other, and more interesting, facts about the merchandise. He reasons that if the price problem is handled in this fashion, along with the more important things, it will be minimized.

Another seller casually mentions the name of prominent customers, as he demonstrates the latest model. He finds that many a person is more interested in a particular radio when they learn that Mr. and Mrs. Somebody have chosen it for *their* home.

Some sell the higher priced sets on a day-to-day cost basis argument. They point out that the dollars difference between the cheaper radio and the quality set is easily absorbed over a period of time. The salesman says: "It will cost just two cents more a day while you are paying for your set to enjoy *this* marvelous genuine musical instrument." The figures are authentic. He figures it out under the prospect's gaze. Or he may put it on a monthly rate, or even on a five-year usage basis.

Figuring out how little a quality console costs by the week, month or year enables the customer to see the price in its true perspective. Instead of thinking only of the cost, he is led to weigh the advantages to be gained over the period of its operation against the outlay. Price is divided into the *same* units as is his radio enjoyment.



As soon as a newer model is announced, Wave King advertises its demonstrator auto set for sale. Thus it contacts the prospect seeking a bargain and also opens leads for new business

AUTO-RADIO— Publicity Sells It

WAVE KING RADIO COMPANY, Portland, Oregon, has been pushing radio sets for automobiles for five years. As a result this firm not only has made money but has accumulated a sales experience which should be of value to other dealers just starting in this business.

"Advertising has helped tremendously," states partner E. E. Holman. "Apart from the demonstrator cars, these three mediums have proven best: broadcasting, the classified ad column in the newspapers and display space in the telephone directory.

"Over the radio we stress our main theme: *'Why miss your favorite programs when you can have a car radio?'*" This line is mentioned daily in a 15-minute broadcast—monthly cost, \$45.

"Classified advertising also brings direct returns for motor car radio equipment. Generally we use a two-line ad in the radio column for a three-day, week-end period. As a rule we advertise a used set, which is quickly sold. Frequently we sell one or more new sets to other prospects.

"The telephone book display ad costs \$7.50 per month. It is an important factor in creating a steady demand for our sets and service."

Featuring themselves as service specialists is credited, by the owners of Wave King, with much of the success they have had with auto-radio. "Through the courtesy of a nearby filling station," says Mr. Holman, "we make use of their pit, which is needed for but a short time on each installation. The rest of the work is done in our own shop or at the curb.

"Sometimes, a motor radio prospect asks for the privilege of trying out a set in his own car, to which we consent, providing he is willing to pay the installation charge of from \$4 to \$7.

"Having been engaged in the retailing of motor car radios for the past five years, we have been able to do some good missionary work through the agency of our own *service car*, which is always equipped with the latest model available. As soon as a newer one is announced we advertise our own set for sale as a used offer, which when sold at cost, enables us to again equip with the latest type.

"Unit sales in former years were quite high. Today, however, our highest price installed set is \$77.50 and we have sold car sets for \$23.50. We have done very well recently on a set that retails for \$32.50, installed. At this price we always sell for cash. Only in rare instances do we arrange for a two- or three-payment installment plan. We are now featuring a 7-tube automatic volume control set on our own car, which we sell for \$59.50, installed."

Wave King draws most of its trade from widespread parts of the city. "This is because of our advertising," says Holman, "which brings us 'drive-in' patrons for whose convenience we keep open on Sunday.

Wave King is not alone in its endorsement of advertising as being especially effective when applied to auto-radio. Another Portland concern, fully as successful with this latest radio item, attributes 70 per cent of its business to its publicity activities. Also favors the Sunday newspaper.

News of the Month

PRICES UP . . . PRICES DOWN

RCA Jumps Auto Set from \$34.95 to \$39.95—Zenith Lowers Lists—Philco Threatens Increases—Other Revisionists

PRICES, like water, are seeking their "own" level these days—wherever that may be. Of basic import is the announcement, as of June 1, that RCA increases the list on its auto-radio, Model M34, from the sharp low of \$34.95 to \$39.95.

"Breaking all precedents," the Zenith Radio Corp., Chicago, announced, the middle of May, a new line of small sets in the lower price brackets. For the first time Zenith stresses price but does not, of course, overlook quality. The new midgets start at \$24.95, six tubes. "With this new line, Zenith plans to dominate the summer market," states sales manager Tracey.

On the other hand, the trade will recall that Philco recently bulletined an advance warning that it may be forced to increase its prices all along the line.

Others who have decided to lower prices, in specific instances, are Majestic (Twin Six Auto-Radio, \$54.50 to \$39.95); Fada (Super-Fadalette Model 106, \$29.50 to \$24.95; Model 107, \$31.50 to \$26.95).

Stromberg Carlson continues to "fight it out on this line if it takes all summer." Its recently announced two deluxe models are priced as usual in the upper registers. It refuses to be influenced by the expediencies of the moment.

Majestic Exhibits at the Fair

Grigsby-Grunow Company is exhibiting its products at the Century of Progress Exposition. The exhibit is located in the Plaza of the Electrical Building on Northerly Island, and in-

cludes five large display windows. Photographic reproductions visualize the different steps in a number of important operations in the manufacture of Majestic refrigerators, radios, auto radios and tubes.

Raytheon Moves Office to N. Y.



E. S. Riedel

General sales headquarters of the Raytheon Production Corporation, radio tube manufacturers, have been moved to 30 E. 42nd Street, New York City, according to announcement by David T. Schultz, vice-president.

Effective May 15, Edgar S. Riedel, formerly of Chicago, became general sales manager and Alvin Zinkan, assistant general sales manager for sales through jobber-dealer channels.

Mr. Riedel was at one time vice-president of the Reichmann Co., makers of the "Thorola" speaker, then general sales manager for Raytheon; later in the same position with the Utah Radio Products Co. and more recently assistant general sales manager of Grigsby-Grunow in charge of the tube division.

With a Boom, Boom, Boom and a Rat-E-Tat-Tat



A. A. Schneiderhan, Des Moines, pulls another publicity splurge! Recently purchased the Motor Car Service Company and set up shop in elaborate new quarters at Eleventh and Walnut Streets. Now represents a bunch of radio, electric appliance and auto accessory concerns as long as your arm. The dedication was preceded by a street parade, followed by a monster banquet graced by no less a personage than the Governor of Iowa. Three hundred dealers pronounced the 3.2 excellent.

AT CHICAGO THIS MONTH

- RMA Convention
Stevens Hotel June 5-6
- National Assoc. of Music Merchants
(32nd annual convention)
Stevens Hotel June 5-7
- Edison Electric Institute
Palmer House June 5-8
- Institute of Radio Engineers
Hotel Sherman June 26-28
- American Inst. of Elec'l Engineers
Edgewater Beach Hotel June 26-30
- Engineers' Day
At the Century of Progress June 28

Stewart-Warner Promotes J. E. Otis, Jr. and F. A. Hiter Reorganization Plans Under Way

Joseph E. Otis, Jr., vice-president and general manager of the Alemite Corporation, Chicago, has been elected to the same position with the Stewart-Warner Corporation and its subsidiaries. At the same time, May 8, F. A. Hiter, formerly general sales manager of Alemite, was elevated to that position with Stewart-Warner.

Mr. Otis, who has been in the engineering field since 1920, became vice-president of Alemite in 1923.

"This team," states President C. B. Smith, "can be counted on for aggressive leadership in practical merchandising. This step also means that further important changes in the personnel of the Corporation will follow as soon as other reorganization plans are perfected. These plans include a complete revamping of our territorial and distributing organization."

Federal Parts Available

The National Radio Service Co., 657 Broadway, Buffalo, N. Y., announces that it has on hand the entire service department inventory of the late Federal Radio Corporation, and will cooperate with former Federal wholesalers and dealers in the distribution of these parts.

Hamburg Brothers Entertain

Seven hundred dealers—and that's a lot in these times—were the guests of Hamburg Brothers, Pittsburg, last month. The well-known Harry Alter was the chief expounder of the many merits of the Majestic line of radios and refrigerators which this Pennsylvania jobber carries.



Rather Nifty. Eh! Wot?

If you're a New Yorker you've probably caught a flying glimpse of this new Special Delivery motorcycle which rushes Emerson radios to impatient dealers anywhere from Cortland Street to Fordham Road.

Merger of U. S. Radio and Grunow Corp. Completed

On June 1, announcement was received that a contract had been signed for the merger of the Grunow Corp., Chicago, and the U. S. Radio and Television Co., Marion, Ind., subject to approval of the stockholders.

J. Clarke Coit, president of U. S. Radio, will be the chairman of the combination and William C. Grunow, formerly of Grigsby-Grunow fame and now head of the Grunow Corp., specializing in electric refrigerators, will be the president.

The new company will ultimately be expanded to a general household utility manufacturing concern making a variety of appliances.

The reasons for this merger are still a matter of speculation. The financial interests involved are said to be largely responsible for this move in the interest of economy and strengthening capital structure.

Smiley with Continental Electric Co.

R. E. Smiley has been made general sales manager of the Continental Electric Company of St. Louis. Dick Smiley, who is well known in the radio industry,

ELECTRICAL MARVELS OF 1933 • SEPT. 20-30

a National Electrical Exposition

Presentation at Madison Square Garden

The above head is reproduced from the latest "progress" bulletin issued by Joseph Bernhart, manager of the National Electrical Exposition, to be held in New York City—time and place as stated.

"Already," declares Mr. Bernhart, "space sales are ahead of expectations. Most of the prominent radio concerns will display at this, the only large public showing of new radio products to be held this year."

Although the plans for the feature entertainment events have not entirely materialized, Chairman D. W. May assures us that they will be new and startling.

Radio Retailing, June, 1933

APPLIANCE MERCHANDISING

New York Utilities Withdraw—While Commonwealth-Edison (Chicago) Increases Sales Aggressiveness

was formerly associated with Atwater Kent as assistant sales manager and with KenRad as sales and advertising manager. Continental manufactures photo electric cells, special and radio tubes and other electronic devices.

JOBBER APPOINTMENTS

Electrical Specialties Company are now wholesale agents for Tung-Sol in the Detroit area. Give price maintenance plan as a reason why.

Jenkins Music Company, Kansas City, will distribute Majestic products in the Kansas territory. The "House of Jenkins" is one of the largest institutions of its kind in the country. Employs over 500 people and operates 12 branches in four states.

Biehl's, Inc., with branches in Pottsville, Scranton and Wilkes Barre, recently signed up with Grunow. The contract was accompanied by a five-carload order.

Martin Music Company, Springfield, Mo., has contracted with G-G to represent Majestic in southwest Missouri and northern Arkansas.

Houran Sales Company, Seattle, have been appointed Northwest representatives for the Arcturus Radio Tube Company.

Distributors who have recently hoisted the Sparton banner are: Philadelphia Motor Accessories Company; Wakeman and Whipple, Chicago; Foster Auto Supply Company, Denver; New Castle Hardware Company, New Castle, Pa.; Joseph Straus Company, Buffalo and the Essex Distributing Co., Newark, N. J.

Roskin Gets Boston Area for Philco

On May 1, Roskin Distributors, Inc., Albany, N. Y., took on extensive additional territory as Philco jobbers. Six years ago, when Sam and Jacob Roskin first tied up with Philco, their ambition was to become at least second largest jobber of this line in the country. With the addition of the Boston area which means that they now cover all New England with the exception of Hartford, Conn., Springfield, Mass., and Providence, R. I., their ambition has been realized.

B & O Now Fada Jobber

L. C. Chatten, vice president of the Fada Radio and Electric Corp., Long Island City, N. Y., announces the appointment of B & O Radio, Inc., Newark, N. J., as its exclusive distributor for northern New Jersey.

B. J. Oppenheim, president of this well known house which has been distributing sets for many years, expressed himself as immensely pleased with this new connection, when interviewed by a representative of Radio Retailing.

Believing that the time has come when electrical equipment, from lamps to heavy duty appliances, has demonstrated its merit and sufficient public acceptance has been built up for it, all New York City electric utilities will withdraw from direct selling activities on July 1. Those affected are N. Y. Edison, United Electric Light and Power, Brooklyn Edison and N. Y. and Queens Electric Light and Power.

Salesrooms will become demonstration stations and all advertising will sell the idea of using electricity. No copy on a particular brand or type will be used. The Home Economics Bureaus will continue in their valuable work.

On the other hand, Commonwealth-Edison, operating in the second largest city in the country, is increasing its activity—The most recent promotion stunt being a Refrigeration Show. Various inducements to attend were extended by companies represented—Majestic, for instance, gave away an electric clock each day to the holder of the lucky number. At the close, a drawing was held of all names registered at the booth. An electric refrigerator was drawn by one lucky winner and an a.c.-d.c. radio by another.

Changes In TCA Organization

Immediately following a special stockholders' meeting of the Transformer Corporation of America, May 25 at Chicago, and the election of a new board of directors, the following officers were appointed: Ross D. Siragusa, president; Edward Raffel, first vice-president, Douglas C. Smith, vice-president in charge of sales; R. T. Phillips, treasurer, and Frank Hooks, secretary.

TCA announces that it is in a sound financial position and, under its new organization, fully capable of filling all orders promptly.

Completes 4,000 mile Auto Trip Check-up on Auto-Radio



1933 will be a banner year for auto-radio, says E. N. Sampson, Radio Sales Department, General Electric Company. Sampson has just returned from a 4,000 mile motor car trip accompanied all the way by auto-radio music—so he should know.

"As the trip progressed," he states, "I became convinced that auto-radio has come into its own. Distributors and dealers were most enthusiastic, their feelings being based on actual public buying."



SELLS THE CLUBS.—Clubs are excellent prospects for portable electric phonographs, dealer W. E. Miller has found. Here's one of his Ansley Dynaphones in use at a popular West Palm Beach resort

Selling the Second Set First

E. W. LeRoy of Alhambra, California, claims a material increase in sales due to the effort put behind the second set idea. LeRoy has a novel method of doubly equipping homes; he sells the second set first!

A \$13 to \$25 midget is frequently the first set that goes into a home and in selling it he plants the thought in the customer's mind that while the midget is a good temporary stopgap it is, of course, not a permanent fixture for the living room. Each midget buyer is told that within 90 days he may trade in the small set on a larger one and get full allowance.

When customers come back to make the exchange the small investment in the midget is stressed and they are urged to buy a larger model and retain the small one for use up in the bedroom, sun-parlor or den. One out of every 12 midget buyers take advantage of the allowance offer while two in 12 eventually buy a larger set and retain the small one too.

Publicity Rings the Service Bell

There is nothing like publicity to swell service business, according to J. P. Kennedy, of South Bend, Indiana, a past-master of the art. He suggests the following methods of securing it at low cost: "Personal letters bring the biggest results if each is individual and really personal. Whenever business slacks off and I have idle time, out go the personal letters, at the slow rate of three per hour, but certain of bringing 50 per cent results.

"The letters usually open with pure Blarney, flattering the customer's lovely home, or his children. The next paragraph reminds him of previous service and asks for his future business. The last tells of some gadget that will improve his radio, possibly a tone-control, tuning meter, new tubes, shielded aerial or short-wave adapter.

"Seek publicity in your community: Join an active club, mingle with the men you want to do business with. Get into politics if you can. Volunteer your services when there is a community fund drive. Offer to service free a radio that some charitable organization will give

Try These **CASH-**

*Nine Profit-Producing
Successfully Used by*

to the local Orphans' Home or to the country poor farm. Start a bowling team, if you like that sport, under your firm name. If you play a good game of golf in the summer enter every tournament possible and meet people who should know you and know your business. Get out of the rut. Be somebody important in your town."

A New Wrinkle in Large-Scale Service

Large-scale servicing operations strike one very troublesome snag. In order to maintain their sizable organizations it is necessary to cover a relatively large area and this requires the establishment of branch offices, unless the management wishes to support the expense of frequent long hauls. Several distributing points seem essential, also, in order to render service with speed.

Now branch offices, no matter how small, are expensive and this expense has heretofore limited the size of servicing organizations, requirements of good service pulling in one direction and overhead straining in the other. A large eastern operator is endeavoring to solve the problem in a new way. He has hired office space in a centrally located building, advertising his name far and wide via classified directories, the air, newspapers. And he has secured the services of "free lance" servicemen working from their homes in widely scattered districts on a commission basis, maintaining no full-time technical organization of his own.

People who need radio service are attracted by the

What Do You Feed YOUR Radio Set?

Do you know that—
The aerial on your house is the mouth
to your radio?

Aerials, through age, corrosion and poor
connections may cause fading, noise and loss of volume.
Have you a lightning arrester protecting
your radio?

Estimate gladly given on cost of repair or
replacement of your aerial and ground system.

Repair work on all electric and battery
radios. New cords, plugs and switches installed on
irons, sweepers, toasters and all electrical appliances.

Ask to see the new line-voltage regulator
protecting both your tubes and radio.

MARION L. RHODES
Culbertson Bldg.
Knightstown Ind.

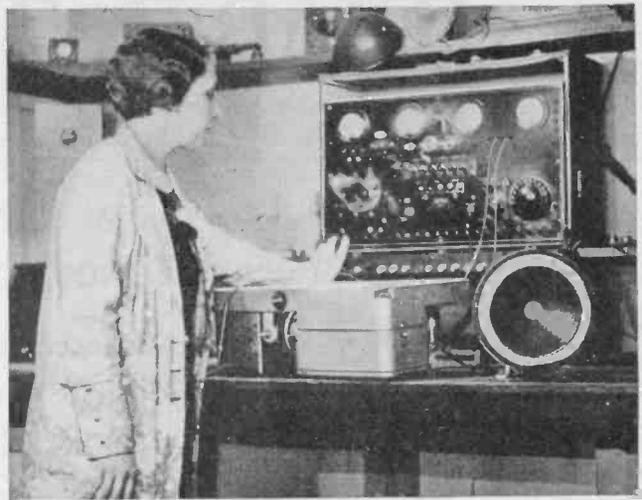
SET-FODDER.—Service-
man Rhodes is distributing
this circular that ties in beau-
tifully with the antenna reno-
vation campaign launched by
"Radio Retailing" in May.
His sales effort goes hand-
in-glove with Editor Cald-
well's frequent chain broad-
casts

On Your Register

Sales Promotion Ideas Dealers and Servicemen

continuous advertising of this concern. They phone the central office, where a man remains on duty constantly, and the calls are relayed by telephone to the nearest service representative, who does the work, reports its nature later to the main office. A bill is rendered from headquarters, the customer forwards a check and the office relays the sum collected, less sales commission, to the local man.

The customer, of course, assumes that the serviceman performing the work came from the main office, or a nearby branch.



SHE LIKES 'PHONEBOOK ADS THE BEST.—"A classified ad in the phonebook brings me more service work than anything else," states Mrs. A. L. Bolen, owner and manager of the Panhandle Radio Service Company, Amarillo, Texas. "Women may read the grocery and lingerie ads in the daily papers but when the canary develops a cough or an emergency of any kind occurs they rush to the classified. And newcomers generally depend upon it for shopping aid. Broadcasting is the next best bet as sets frequently wheeze while we are announcing our phone number"



DEPARTMENT STORE FORMULA.—Fred Hoyt, of Sanger Brothers, Dallas, Texas, has a formula which enables him to keep radio displayed on the valuable first floor: "Have at least one woman on the salesforce, she will be able to sell where men fail. Get all the sets you can in the floor-space available without making it impossible to walk between them, homelike displays don't pay. Put a card listing the price and outstanding sales features on each set, this speeds up selling. Change the sets as often as possible, displays soon get stale. Send the salesman who first contacts a customer out on the follow-up, new faces often queer sales. Follow up store leads promptly by telephone, its cheap and effective."

Folding Screen Display Sells Auto-Radio

Stands made of wood and composition board are in common use as display panels for auto-radio, but Lincoln Radio of Brooklyn, N. Y., goes this idea one better. Lincoln has made up a four-section hinged board which resembles a decorative screen. A radio of different make is mounted on each section. A length of bare wire thumb-tacked around the top (connected to an outside antenna) makes it possible to clip any set to the antenna quickly.

Photos of Stars Stop 'Em

The "Radio Doctors of Buffalo" (N. Y.) have only 7 feet of store front, 4 of which is taken up by the door. Stopping shoppers and bringing them in was always a serious problem because of the limited display space available, according to Edward Slepian, until it was solved by obtaining free publicity photos of radio stars from Columbia and NBC, posting these on narrow billboards at eye-level and filling the remainder of the boards with sales copy.

Prints of Myrt & Marge, Buck Rogers, Jack Benny and Gertrude Nissen have been the most popular, new faces going on the board each week in order to keep it interesting. Sales copy advertising free tube tests, automobile radio installations and general repair work pull well and many universal model receivers have also been sold as a direct result of the billboard postings.

Slepian reports an increase, by actual test, of 200 per cent in the number of people stopping to look at the boards 45 per cent coming in to ask for details. Sales have increased 20 per cent in the six weeks the photos have been in use.

TUBE TIDINGS

June, 1933

E. T. Cunningham, Inc.—RCA Radiotron Co., Inc.

Harrison, N. J.

Appointment of C. R. King Announced Named Sales Head of RCA Radiotron-Cunningham

C. R. King was made Sales Manager of E. T. Cunningham, Inc., and RCA Radiotron Company, Inc, effective June 1, an announcement by G. K. Throckmorton, President of Cunningham, and Executive Vice-President of Radiotron, said.



C. R. KING

Mr. King has been Equipment Sales Manager. In his letter to the trade, announcing the appointment, Mr. Throckmorton said: "Mr. King's many years in the radio tube field make him well qualified for this position."

Mr. King joined the executive staff of E. T. Cunningham, Inc., in 1923, as District Sales Manager in charge of the company's Chicago Office. Previous to his joining the Cunningham Company, he was connected in an executive capacity with one of the largest mail order houses in the country. In July, 1927, Mr. King was promoted to the New York Executive Headquarters of Cunningham with the title of Assistant General Manager. In the summer of 1927 he became Vice-President and Assistant General Manager.

Initial Program Carried by 41 Stations

The starting line-up of stations for the new Cunningham-Radiotron broadcast:

New York, WEFB; Hartford, WTIC; Providence, WJAR; Worcester, WTAG; Portland, Me., WCSH; Philadelphia, WFI; Baltimore, WFBR; Washington, D. C., WRC; Schenectady, WGY; Buffalo, WBEN; Pittsburgh, WCAE; Cleveland, WTAM; Detroit, WWJ; Cincinnati, WSAI; Chicago, WMAQ; St. Louis, KSD; Des Moines, WHO-WOC; Omaha, WOW; Kansas City, WDAF.

Memphis, WMC; Atlanta, WSB; New Orleans, WSMB.

Tulsa, KVOO (starts June 11) Oklahoma City, WKY; Dallas, WFAA; Houston, KPRC; San Antonio, WOAI.

Milwaukee, WTMJ; Madison, WIBA; Minneapolis-St. Paul, KSTP; Duluth-Superior, WEBC; Fargo, WDAY; Bismarck, KFYY.

Denver, KOA; Salt Lake City, KDYL; Butte, KGIR; Billings, KGHL.

San Francisco, KGO; Los Angeles, KFI; Portland, Oregon, KGW; Seattle, KOMO; Spokane, KHQ.

New Broadcast Brings Washington Closer to Average Man—Cunningham

Announcement Designed To Help Radio Dealer

Commercial announcements on the Radiotron-Cunningham sponsored Howe broadcast on alternate Sundays will be worded so as to be of the greatest possible benefit to the dealer and service man. A typical announcement follows:

Ladies and Gentlemen:

We trust Colonel Louis McHenry Howe's significant broadcast came to you clearly, distinctly and unmarred by noise. In other words, we hope that your radio set is in good condition for this, and the many other splendid radio programs that come to you each night—a million dollars' worth every week. If reception is NOT satisfactory, we urge you to have a reliable dealer or service-man check over your set and antenna. Have him test the radio tubes—for worn-out tubes are often the causes of poor reception. Then, have him replace any tubes that may be worn-out with genuine Cunningham Radio Tubes or RCA Radiotrons—the tubes that undergo at least 35 "perfection tests" in the factory—the tubes so marvelously constructed that they may be said to be not only the heart, but the BRAINS and other vital organs of your radio as well. And here's a parting tip—many popular types of RCA Radiotrons—and Cunningham Tubes have been reduced 43 PER CENT in price since January!

Publicity Based on Radio Log Proves Popular

Tips on *hearing* the Stars

THE SONGBIRD OF THE SOUTH

SHE DOESN'T MIND YOUR KIDDING HER ABOUT HER 237 POUNDS. SHE'S ONLY 23* SPENT A TOMBOY CHILDHOOD IN WASHINGTON, D.C. AFTER A YEAR TRAINING TO BE A NURSE SHE REBELLED AND HEADED FOR THE 'ROCK LIGHTS' HER FIRST LUCKY BREAK WAS IN 'HONEYMOON LANE' THEN IN 'FLYING HIGH' **KATE SMITH**

The Tip IF YOU ARE NOT SATISFIED WITH THE WAY YOUR RADIO IS BRINGING IN KATE'S RICH VIBRANT VOICE, TRY (1) ALLOWING SEVERAL INCHES CLEARANCE BETWEEN THE BACK OF THE SET AND THE WALL. (2) HAVING YOUR DEALER INSTALL NEW RCA RADIOTRONS - - -

Similar Feature for Cunningham

This is one of a series of publicity features issued weekly to home-town newspapers by RCA Radiotron Company, Inc. The inherent human interest in this type of material is shown by the fact that 100 original clippings have been received to date. Watch for insertions in your paper.

Advertisement

Radio Alone Capable of Supplying Link



E. T. CUNNINGHAM

The new Cunningham-Radiotron radio program, featuring Louis McHenry Howe, Secretary to President Roosevelt, and Walter Trumbull, outstanding newspaper correspondent, represents the fulfillment of a desire of E. T. Cunningham, President of RCA Radiotron Co., Inc., and founder of E. T. Cunningham, Inc., to supply an intimate connecting link, via radio, between the American public and its Government in Washington.

Complete and authentic as are the newspaper and radio reports from the nation's capital, Mr. Cunningham felt that a needed personal connection between the man on the street and his government was lacking—a connection that only radio could supply.

Inspired, perhaps, by the complete success of President Roosevelt's chair-to-chair chats with his constituents over the airwaves, the Radiotron chief welcomed enthusiastically the opportunity of presenting Colonel Howe, Secretary to the President, as a regular weekly feature.

Cunningham and RCA Radiotron will alternate with RCA Victor as commercial subjects on the Howe broadcasts.

Every Sunday Night

The Radiotron-Cunningham-RCA Victor Program went on the air over a nationwide NBC hook-up Sunday night, June 4, at 10 o'clock Eastern Daylight Time. It will be heard at the same time each Sunday.

Experts agree that a program with greater public appeal is hard to conceive. Things are happening fast in Washington. Public works, farm relief, stock market regulations, industry control, repeal, investigations, war debts, disarmament, tariffs and taxes—all are hot subjects for every American citizen. And all will figure in Colonel Howe's weekly report.

Mr. Trumbull Obliges

The idea of bringing Main Street and Washington closer together, a primary purpose of the new Louis Howe weekly broadcast, will be further carried out by a special arrangement whereby listeners may forward to Mr. Trumbull questions they would like him to ask Mr. Howe.

Needless to say, this will lend added interest to a program that already promises to be one of the most interesting on the air—to the ultimate advantage of the sellers of Cunningham Tubes and Radiotrons.

Louis McHenry Howe Knows Washington Affairs from A to Z

No one is better equipped than Colonel Louis McHenry Howe, who is heard weekly in the new Cunningham - Radiotron - RCA Victor program, to tell the real story behind the news.



LOUIS HOWE

He has been confident, advisor and friend of the President since he entered public life. Many say Roosevelt would never have reached his high station without Howe's untiring devotion, encouragement and efforts in his behalf. As head of the "Kitchen Cabinet," he knows the ins and outs of Washington and the White House as probably no one else does.

Howe was born in Fall River, Mass., 62 years ago. His father owned a newspaper in Saratoga, N. Y. At seventeen he came with the N. Y. Herald, under James Gordon Bennett, and some years later became Albany correspondent for that paper. It was here he was first attracted to the man with whose future he became bound up.

From the very first Howe felt that Franklin D. Roosevelt was destined for great things and when the Senator began making his plans for seeking re-election Howe offered his services, was accepted, and became the campaign manager. He has been with Roosevelt ever since.

Dome Bulb Representative of Year's Tube Advances

"The past year," said D. F. Schmit, Manager of the Application Engineering Section, E. T. Cunningham, Inc., and RCA Radiotron Co., Inc., "has marked the introduction of many improvements in the design and construction of Cunningham Radio Tubes and RCA Radiotrons—as an example, dome-bulb construction.

"The introduction of the dome-bulb type of construction has made possible greater uniformity. This dome-bulb construction has been incorporated in most of the newer types. Older types are being adapted to this form of construction as rapidly as development and manufacturing activities permit.

"A mica spacer at the top of the electrode assembly fits into the dome of the bulb, bracing the tube's structure against mechanical displacement. Furthermore, the greater strength of the electrode assembly secured by the dome support has made it possible to simplify the construction of the tube, thus eliminating many welds and parts, and reducing the chances of error during assembly.

"The resulting increase in uniformity of tube characteristics is a decided benefit to the set engineer, since it permits him to design receivers with closer tolerances and consequently better performance. The greater strength and rigidity of the dome bulb, preventing mechanical injury to the electrodes during shipment, is assurance that the tubes used by the consumer will meet the exacting requirements of the set engineer."

"Another Amos 'n' Andy"

"I predict tremendous success for the new RCA Program," said Sheldon R. Coons, Vice President of Lord & Thomas, leading advertising agency in the field of radio as well as the printed word.

"A broadcast featuring Colonel Louis McHenry Howe and Walter Trumbull is certainly the find of the year," Mr. Coons said. "The only adequate way of describing its potentialities is to say 'another Amos 'n' Andy for popularity.'"

Lord & Thomas have developed such outstanding hits as Amos 'n' Andy, Rise of the Goldbergs, Lucky Strike Program, Cities Service Program—in addition to a great many others.

Good News Spread Tells the Consumer Story

The "Good News" center spread, so popular with Radiotron and Cunningham Dealers as an attention-getter for their windows, is being currently devoted in its entirety to a pictorial story of the Howe-Trumbull broadcast.

Attention is focused on large-sized pictures of Colonel Howe and Mr. Trumbull in the center. The main caption is "A NEW RADIO PROGRAM". A sub-head, in large type under the pictures, runs "He Saw a President in the Making". Smaller photographs depict high lights of President Roosevelt's political life, with explanatory captions telling Colonel Howe's connection with Mr. Roosevelt in each.

The current spread should serve to give the significant new Radiotron-Cunningham Program a tremendous send-off. Use it!

Warner Heads Delegation of Engineers to Institute of Radio Engineers in Chicago

J. C. Warner, Vice-President of E. T. Cunningham, Inc. and RCA Radiotron Co., Inc. in charge of engineering, will head the delegation of the above companies to the convention of the Institute of Radio Engineers in Chicago the last week in June.

Mr. Warner will lead an informal technical conference on "Criteria for the Introduction of New Tubes."

B. J. Thompson and G. M. Rose, Jr. of the Radiotron-Cunningham Research Section will present a paper on "Tubes for Ultra High Frequencies."

E. E. Stipzer of the Development Section will read a paper on "Use of Graphite Anodes for Transmitting Tubes."

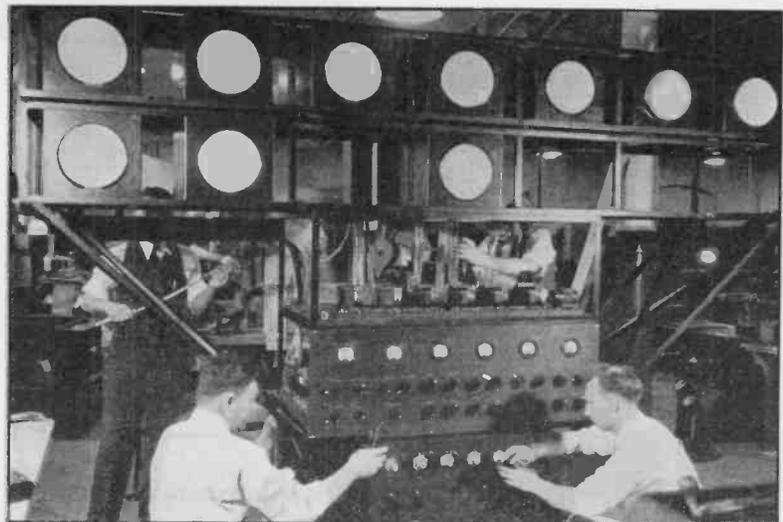
D. F. Schmit, manager of the Application Engineering Section, and D. W. Ritter of the Development Section, also will attend.

There will be a complete display of Radiotron and Cunningham radio tubes.

Strong Representation at R.M.A. Convention

RCA Radiotron Co., Inc. and E. T. Cunningham, Inc. were represented at the ninth annual convention of the Radio Manufacturers Association in Chicago, June 6, by the following: E. T. Cunningham, Meade Brunet, F. H. Engel, Paul Pfohl.

One of Thrills at Century of Progress



Cathode-Ray Oscillograph Under Construction

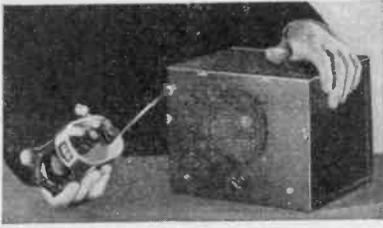
Playing the leading role in the RCA Radiotron-Cunningham space at the World's Fair is the unique Cathode-Ray Oscillograph Demonstration providing the layman for the first time with a graphic, understandable explanation of the mystery of radio reception—in other words, what happens when a radio set in Peoria picks up a faint signal and amplifies it to an ex-

act reproduction of a voice emanating from a New York studio.

This sensational assembly of apparatus employs one of the most complicated circuits ever evolved. It was designed by Cunningham Radio Tube and RCA Radiotron engineers. It required the equivalent of two months to build and operates on a current of 7,000 volts.

Advertisement

NEW MERCHANDISE



Stewart Model 50 Auto Radio

The new Model 50 of the Stewart Radio Corp., 674 N. Kingsbury St., Chicago, (formerly located at 40 W. Milwaukee Ave., Detroit), is a 5-tube superheterodyne—the receiver, speaker and B-power unit all built into a single unit measuring 6 $\frac{3}{4}$ x6 $\frac{3}{4}$ x8 $\frac{1}{2}$ in. It mounts by means of a single bolt, with brackets both on side and rear permitting a choice of mounting positions. It has a continuously variable tone control, a.v.c. and is easy to install. The list price complete with all suppression accessories is \$39.50.—*Radio Retailing*, June, 1933.

Roots Auto Radio

The chassis, eliminator and speaker of the Model R-34, all-electric auto-radio of the Roots Auto Radio Mfg. Corp., 2800 S. Parkway, Chicago, are mounted in one compact unit. It is a five tube superhet using a 6A7, 6B7, 78, 89 and 84. The B eliminator is of the vibrator type. Output approximately 2 to 2.5 watts; current consumption 4 amp. The list price is \$34.75 complete with suppressors, etc., ready to install.—*Radio Retailing*, June, 1933.

Majestic 950 Refrigerators

A new all-porcelain refrigerator model 950 has been placed on the market by the Grigsby-Grunow Co., 5801 Dickens Ave., Chicago. The double doors are edged in black and the lid and bottom of the skirt are also bordered in black. This gives a striking modernistic appearance to the cabinet. This refrigerator has all the features of the model 900 and the gross capacity is 9.6 cu.ft. and the shelf area 16.4 sq.ft.—*Radio Retailing*, June, 1933.



Speakers

Arlab Mfg. Co. Inc., 1250 N. Paulina St., Chicago, announces a line of 5 in., 6 $\frac{1}{2}$ in. and 8 $\frac{1}{2}$ in. dynamic speakers in both regular and auto types.

The 5 in. dynamic has been designed to fit the new a.c.-d.c. sets and lists at \$2.

The 6 $\frac{1}{2}$ in. dynamic comes in two types; type S is 3 $\frac{1}{2}$ in. high and type D is 4 in. high. List \$2.

The 7 $\frac{1}{2}$ in. auto speaker is \$4; 8 $\frac{1}{2}$ in. size, \$5.—*Radio Retailing*, June, 1933.

Simplex Line

Model V is a four tube a.c.-d.c. square midget, \$17. Same for short and ultra short waves only or for long and ultra long waves only, \$19. The following accessories are offered for this set: All-electric automobile adapter kit, \$10; instrument panel mounting bracket, \$2.50; all-electric 32 v. farm light plant adapter kit, \$7.50; 220 v. a.c.-d.c. adapter plug, \$1.50.

Model R, long and short wave, \$18. Both a.c. and d.c. models available. Gothic cabinet. Equipped with phonograph jack. Chassis or speaker may be purchased separately.

Model U long or short wave a.c.-d.c. square midget, \$25. Model V accessories may also be used with this set.

Model P, long and short wave, is a 5 tube rounded top midget for a.c. operation. \$27. For battery operation, \$27.

Model S same as above except that it is a five tube t.r.f. all-wave-export-special set. Covers ultra short to ultra long wave bands. Designed to European requirements. \$40. Chassis and speaker may be purchased separately.

Model T all-electric auto-radio is a 4 tube superhet with a.v.c. It is self-contained in one unit. \$42.

Simplex also offers a console cabinet for \$13.50. With R chassis and 8 in. speaker, \$32.50; P chassis, \$40.50; S chassis, \$53.50. Simplex Radio Co., Sandusky, Ohio.—*Radio Retailing*, June, 1933.



Preceptor Tube Tester

Designed so that all tubes are tested against a standard color and light intensity chart, the "Preceptor" tube tester announced by Radiophone, Inc., 1212 19th Avenue, Oakland, Calif., will test all tubes. The Preceptor tests each individual element of the tube. The testing method employed is such that damage to the instrument is impossible in event of a short-circuited tube.

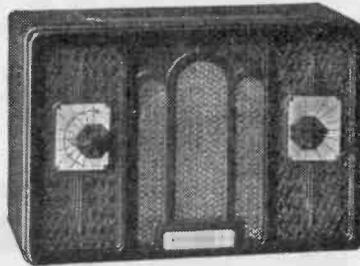
The company manufactures two models: portable and counter type, listing at \$79.50 and \$109.50, f.o.b. factory.—*Radio Retailing*, June, 1933.

Emerson B-Power Unit

A B-power unit which operates from 32 volt farm lighting plants has been introduced by the Emerson Electric Mfg. Co., 2018 Washington Ave., St. Louis, Mo.

This unit is equipped with the same features as Emerson B-power unit for auto-radios. Current consumption, 15 watts. Measuring only 7 $\frac{1}{2}$ x4 $\frac{1}{2}$ x6 $\frac{1}{2}$ in., it consists of a dynamotor (rubber mounted) and filter mounted on a steel base plate. Adjustable sliders supply voltages of 22 $\frac{1}{2}$ or 45, 67 $\frac{1}{2}$, 90, 135 and 180 volts as required by the set. It comes complete and ready to mount so no installation problem is involved. \$24.50.

Emerson also announces a price reduction on its B-power unit for auto radios which is now priced at \$19.50 list.—*Radio Retailing*, June, 1933.



Audiola Receivers

The 6-tube all-electric auto-radio of the Audiola Radio Co., 430 S. Green St., Chicago, lists at \$59.95. The 7-tube model has a list of \$69.95.

These sets are self contained compact units using the Elkonode power supply. It is claimed that no spark plug suppressors are required. They have a.v.c. and use the new type auto radio tubes. The speaker is a Jensen dynamic. Model S7, the 7-tube set has Class "B" amplification.

Audiola also makes a 4 and a 5-tube a.c.-d.c. midget both of which receive 175 meter police calls. The 4-tube set lists at \$17.99 and the 5-tube at \$25.—*Radio Retailing*, June, 1933.



Na-Ald Composite Sockets

To keep servicemen in touch with the parade of new tubes, the Alden Products Co., Brockton, Mass., has brought out a line of composite sockets.

Four models to contact 4, 5, 6 and 7 prong tubes and UY tubes are made. The above are for 1 $\frac{1}{8}$ in. internal panel hole with 1 $\frac{1}{2}$ in. mounting hole spacing. They may also be obtained for 1 $\frac{1}{4}$ in. panel hole and 1 $\frac{1}{2}$ in. mounting hole spacing.

Alden also announces sockets for the small based 7 prong tubes to bring analyzing, checking and testing equipment up to date.

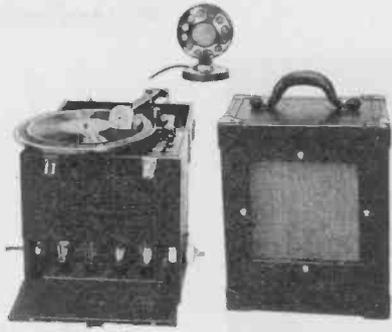
Model 9CL universal output meter adaptor has a clip so designed that it will contact the plate prongs or any other small prongs of any tube. It is handy in connecting mikes, tone controls, pick-ups, speakers, etc.—*Radio Retailing*, June, 1933.

New International Kadette

An unusual-attractive rather than bizarre—Kadette has been brought out by the International Radio Corporation, Ann Arbor, Mich. Its feature is an aluminum finish fluted grille which contrasts with black, gray and wine color panels. In the deluxe model the entire set is handled in black and silver.

This set is a five-tube superheterodyne using the new tubes and has tone control and a.v.c. It operates on a 110 volt a.c. or d.c. any cycle.

For traveling purposes, the Kadette is available in Bakelite. The regular model lists at \$25; the deluxe style at \$27.50.—*Radio Retailing*, June, 1933.



Portable Sound System

Such refinements as full-sized, electro-dynamic speaker and synchronous type dual speed phonograph motor are employed in the new model EAP-4SD portable sound system of the Electro Acoustic Products Co., Fort Wayne, Ind.

The amplifier is two stage resistance coupled with a frequency response uniform from 60 to 7,000 cycles. The power output is 4½ watts.

The complete equipment is supplied in two reinforced plywood cases covered with leather fabric. Phonograph record storage space is provided in the cover of the speaker section. The complete equipment, less microphone, is \$150.—*Radio Retailing*, June, 1933.

Country Club Radio

Following the new trend in restyling radios to appeal to women, Club Radio, 28 E. Jackson Blvd., Chicago, has brought out a smart new midjet in black in combination with rose, ivory, orchid, or green corners and chromium attachments. The cabinet is solid maple. It is a five-tube superheterodyne for a.c. or d.c., long and short wave. Suggested retail price, \$25 to \$32.50.—*Radio Retailing*, June, 1933.

Premier B-Power Unit

The improved No. 181 B-power Unit of the Premier Electric Co., Grace and Ravenswood Ave., Chicago, has a new reduced price of \$11.50. It has a universal mounting bracket and measures 3½x5½x5½ in. Output 30 milliamperes at 180 volts. A-current drain approximately 2 amp.—*Radio Retailing*, June, 1933.



Radio Keg

Following popular trends in design that have come into prominence since the legalization of beer, the "Radio Keg" of the R.K. Radio Laboratories, 6300 Northwest Highway, Chicago, is encased in a small, quarter sawed white oak, walnut-finished keg with burnished copper hoops and ornamented with copper spigot, bronze escutcheons, etc. It is a five tube superheterodyne with a.v.c. using one each of the 77, 78, 85, 43 and 25Z5 tubes. It operates on a.c. or d.c. and receives police calls. The dimensions are 8 in. at the ends; length 12 in.; height 10 in. at the center. The retail price is \$29.75. Other models are available.—*Radio Retailing*, June, 1933.

Radio Retailing, June, 1933

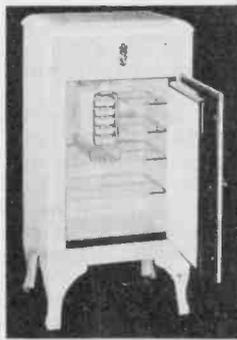
Majestic Twin-Six Auto Radio

A jack for an extension speaker is furnished with the new "twin-six" Majestic auto radio made by the Grigsby-Grunow Co., 5801 Dickens Ave., Chicago. This is a six-tube set with the new airplane dial. It is an all-electric, all-in-one model with a.v.c., tone control and on-and-off light indicator. The price complete with tubes and suppressors has been reduced from \$54.50 to \$39.95. The list price of an extra speaker is \$9.95.—*Radio Retailing*, June, 1933.

U. S. Radio Refrigerators

The U. S. Radio & Television Corp., Marion, Ind., has released announcements on its 1933 line of U. S. Hermetic refrigerators.

Six models are included, all with seamless porcelain interiors and a choice of porcelain exterior and Pyroxylin lacquer. All have the exclusive "Roto Pulse," hermetically sealed refrigerating unit. Some of the features of these refrigerators are: Ten-point cold control, Safe-D-Froster, four position adjustable door handle, automatic dome light. There are six models starting at \$99.50.—*Radio Retailing*, June, 1933.



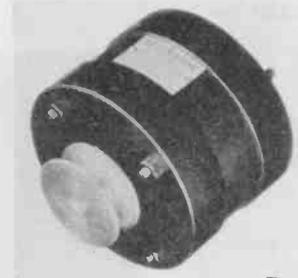
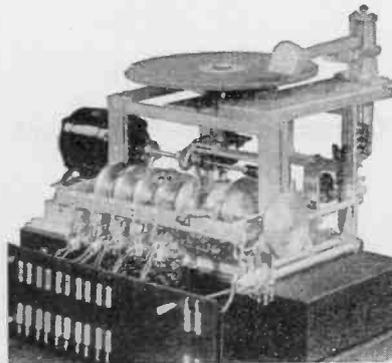
Arvin Auto Radio

An addition to the line of Arvin auto radios made by Noblitt Sparks Industries, Inc., Columbus, Ind., is announced in Model 10-A, a single unit, 5 tube, all-electric superheterodyne with a.v.c. to retail for \$39.50. Installation is easy as there is only one small unit that bolts on the dash in addition to the distinctive Arvin remote control which clamps on the steering column.—*Radio Retailing*, June, 1933.

"Talk-A-Lite" Automatic Synchronizer

A new automatic phonograph and synchronizer called the "Talk-A-Lite" is announced by the Operadio Mfg. Co., St. Charles, Ill. It is used for animating displays and automatically synchronizes voice and sound effects on a phonograph record with changing lights, mechanical movement, or other electrically-controlled animation. This device can be ordered to play 3, 4½, 6, 9, 12, or 15 minute recordings.

For installations requiring only an explanatory lecture, Model 53 is available.—*Radio Retailing*, June, 1933.



Autonator

Taking no drain from the auto battery and having no brushes, collector rings, commutator or wire wound armature to require service, the "Autonator" built by the Autonator Laboratories, Inc., 8440 S. Chicago Ave., Chicago, furnishes 110 volts, 60 cycle a.c. in automobiles, trucks and buses for the operation of radios, sound systems, electric lights and appliances.

It is easily installed to operate from the fan belt and provision is made for regulation of voltage at all speeds.

It is available in six sizes: 50, 100, 150, 250, 350 and 500 watts. Lists at \$32.50, \$37.50, \$49.50, \$65, \$80 and \$98.50.—*Radio Retailing*, June, 1933.

American Bosch Auto-Radio

Six tuned circuits, push-pull output, in-built electro-dynamic speaker, tubeless rectifier, these are a few of the features of the new Model 150 auto-radio just brought out by the United American Bosch Corp., Springfield, Mass. It is a compact, one-piece radio with the set, battery eliminator and speaker all in one housing no larger than a portable typewriter. Full a.v.c. is incorporated, as well as "Vibro-Power," heretofore available only in American Bosch home receivers.

The retail price is \$49.95.—*Radio Retailing*, June, 1933.



Replacement Suppressor Kits

Replacement auto-radio ignition suppressor kits for 4, 6 and 8 cylinder cars, complete—including one Continental certified suppressor for each spark plug lead and for the high tension lead from the ignition coil to the distributor, each suppressor packed in cellophane—may be obtained from the Continental Carbon Co., Inc., 13900 Lorain Ave., Cleveland, Ohio. A metal-enclosed generator filter condenser is also included in each kit.—*Radio Retailing*, June, 1933.

RCA Victor Coin Victrola

An all-electric coin operated Victrola with a powerful amplification unit, is now a part of the line of the RCA-Victor Co., Inc., Camden, N. J. A volume control combined with an automatic tone compensator allows control of volume without distortion. The record changer is of the hopper type, which plays and repeats continuously a series of ten 10-inch records. These records may be of either the standard or long-playing type.

The coin box has a capacity of twenty-three nickels. \$247.50, complete.—*Radio Retailing*, June, 1933.

SERVICE AND INSTALLATION SECTION

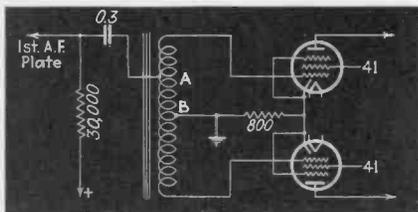


CIRCUITS of the MONTH

Auto-Transformer Push-Pull Input

An interesting method of driving push-pull power tubes is incorporated in Gulbransen's series 06W auto-radios. The output of an a.f. driver stage is fed through a .3 mfd. condenser to an inductance which serves as the input load for the 41's.

The signal is applied between A and B, stepped up by auto-transformer action and



applied to the grid of the upper tube. The lower half of the inductance, which is simultaneously energized by virtue of the common core, is wound in such a manner that the lower 41 receives equal signal voltage, opposite in phase.

Harmonic Operation of Superhet Oscillator

GE's new a.c.-d.c. superhets have a normal frequency range of from 540 to 1700 kc. and by throwing a switch police calls between 2400 and 2500 kc. may also be received. Examination of the circuit indicates that all the switch does is connect small condensers (3 to 16 mmfd. trimmers) in series with the gang condenser sections shunting r.f. and 1st detector coils (r.f. and 1st detector circuits are virtually fixed-tuned when the high-frequency range is used). No change takes place in the oscillator circuit and the question arises: How does the electron-coupled oscillator, designed to track 175 kc. away from stations in the broadcast band, also manage to supply the difference frequency required by

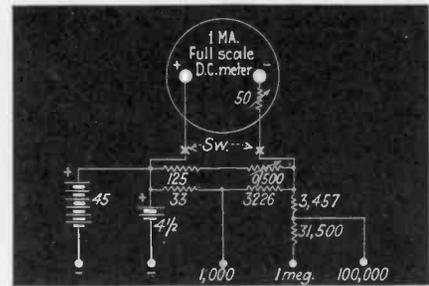
the tuned i.f. transformer when 2400 kc. police calls are received?

Here is the answer: The fundamental frequency of the oscillator beats with the incoming signal in the usual manner when receiving in the broadcast band but the *second harmonic* is mixed with the signal when high-frequency police calls are received. When the set is tuned to 2400 kc., for example, the oscillator's second harmonic is 2575 kc. while the fundamental is 1287½, representing approximately the same setting as for a 1110 kc. broadcast signal. Local broadcasts may obviously be heard with the range-change switch in the high-frequency position if they happen to be 175 kc. away from the oscillator fundamental and are strong enough to get by the r.f. and 1st detector circuits. Two spot tuning is also experienced when using the 2400-2500 kc. range.

Alignment is a little tricky. Connect test oscillator between first detector control grid and ground, set it at 175 kc. and align i.f. trimmers for maximum output. Then, with the range-switch in the broadcast position (counter-clockwise) connect oscillator across antenna coil, set it at 1710 kc. and the receiver dial at 8 and adjust r.f., detector and oscillator trimmers. (Located on top of the gang). Re-set test oscillator at 1400, turn receiver dial to 18 and re-align r.f. and detector trimmers, leaving oscillator trimmer alone. Turn the range switch to the shortwave (clockwise) position, set the test oscillator at 2400 kc. and tune it in on the set. It will be audible at two points and either will do. Adjust the high-frequency trimmers (located beneath the gang) for maximum output.

Ohmmeter Zero-Adjustment Shunt

A variable shunt for zero adjustment of the ohmmeter is incorporated in Supreme model 401 analyzers for diminishing test battery potential, eliminating the error inherent in series resistor systems. The diagram shows the multiplier and shunt network designed for a 1 ma.

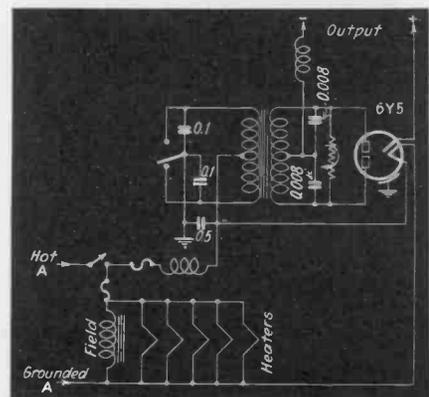


full-scale d.c. instrument with 50-ohms internal resistance. For measurements between 100,000 and 1,000,000 ohms the 45 volt block is used.

"Twin-Six" Vibrator Eliminator

A number of unusual features are incorporated in the vibrator type B-eliminator of Majestic's model 66 auto-radio. In the first place, the interrupter armature is magnetically driven by the power transformer core and has no actuating winding of its own.

Arcing, sometimes experienced with units of this type due to the extremely



high voltages built up when starting under no-load conditions by "back e.m.f.," is avoided by placing a special "Globar" load resistor (made under

"Thyrite" Patents) across the transformer output. The value of this resistor changes in inverse proportion to the applied voltage. At 2,500 volts, for example, its resistance is 2,500 ohms, which is sufficient to load up the vibrator and quickly reduce its output. At 500 volts, the normal operating potential across the transformer secondary, the resistance rises to 500,000 ohms, and current wasted through it is therefore negligible. The resistor is *not* mechanically variable. The eliminator therefore starts with a dummy load, which is removed when the normal load assumes proper proportions.

More Tubes

And still they come. The 6A4 is a power amplifier pentode designed for use in automotive set output stages. Filament voltage, 6.3; current, 0.3 amps. Plate voltage, 180; current, 22 mils. Screen voltage, 180; current 3.9 mils. Control grid bias, minus 12. Plate resistance, 45,500 ohms. Amplification factor, 100. Mutual conductance, 2,200 ohms. Load resistance, 8,000 ohms. Power output, 1.4 watts (Whew!)

The base is a medium 5-pin affair, same connections as the familiar 47. Transformer or impedance coupling is recommended. If resistance coupled the grid resistor will be about 0.5 megohms.

2F7, 6F7

These are detector-oscillators and include the elements of an r.f. pentode and a small triode in the one bulb. The two are separate except for a common cathode sleeve, upon which there are two active emitting surfaces. The pentode has a remote-cutoff grid, which permits the output of the first detector to be volume controlled. Coupling may be accomplished by returning the cathode circuit through a portion of the external oscillator coil (the tube is *not* electron-coupled) to ground, or by introducing some of the oscillator voltage into the pentode circuit.

Heater voltage, (2F7) 2.5., (6F7) 6.3. Heater current (2F7) 0.8 amps., (6F7) 0.3 amps. Characteristics when used as "translators": Pentode plate voltage, 250, current, 5.5 mils. Screen voltage, 100, current, 1.5 mils. Triode plate voltage, (through 50,000 ohms) 250, current, 2.75 mils. Grid leak, 100,000 ohms. Conversion conductance, 550 ohms. Plate impedance, 600,000 ohms.

Small 7-pin base. Connections will probably be the same as the 2A7 and 6A7 (RR49Apr) but there may be a last minute change.

2A6

A 2.5 volt, 2 amp., heater type tube similar to the 75 (RR49Apr) and intended to perform the simultaneous functions of a.v.c., detector and amplifier.

12A5

The 12A5 is a power output pentode of the indirect cathode type. It has a 12.6 volt, 0.3 amp. heater (for use in a.c.-d.c. receivers) with a tap which permits the two heater halves to be connected in par-

allel for storage battery operation at 6.3 volts, 0.6 amps. When used in auto-radio receivers with heater sections in parallel it has approximately 75 per cent greater output than the 43.

The tube uses a 7-prong socket. Looking at the base from below, reading clockwise from the two large 12.6 volt heater prongs, connections are: Heater, heater, plate, screen-grid, control-grid, suppressor-grid and heater center-tap.

G2, G4

These are Majestic duo-diode detectors, the first having a 2.5 volt, 1.75 amp. and the second a 2.5 volt, 1 amp. heater. With 20 volts d.c. on the G2 current per plate will be approximately 11 mils., while the application of 20 volts to the G4 produces a current drain of approximately 9 mils. per plate.

Socket connection are the same as those of the 6Z4 (RR49Apr).

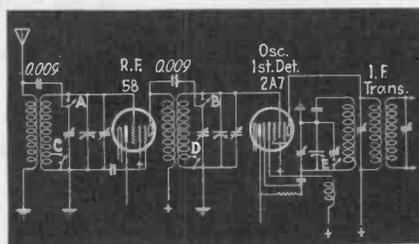
Special 30

Triad makes this one. It is like the standard 2-volt, low-drain battery type but element spacing and the carrying of the plate lead to a cap on the top instead of the usual base prong makes it especially suitable for low-power 5 meter transmission.

Servicemen won't see many. It's a tube for the hams.

Inductive-Capacitive Coupling

The switching arrangement which permits GE double-range a.c. supers (not to be confused with the "universal" models) to cover the broadcast band from 540 to 1500 kc. and also a 1400 to 2800 kc. high-frequency range is of general interest



because it not only permits tuning of the r.f., first detector and oscillator circuits to both bands but also adjusts the coupling so that efficient operation may be obtained in each.

When the range-change switch is in the broadcast band position A, B, C, D and E are open. When thrown to the high-frequency band all contacts close and A, B and E connect high-frequency trimmers in the r.f., first detector and oscillator circuits. C and D simultaneously short out turns of the r.f. and first detector coils and the second harmonic of the oscillator supplies the necessary difference frequency. In addition, .009 mfd. fixed condensers are placed between antenna and r.f. grid, r.f. plate and first detector control grid. These capacities are required to supplement inductive coupling in the 1400-2800 kc. band as the coil primaries resonate above the broadcast band, energy transfer becoming less efficient as frequency increases.

"AUDIO FREQUENCY"

IT HAS OFTEN BEEN SAID THAT all the really good circuit ideas were thought of years ago—only we didn't have the mechanical equipment with which to take advantage of them. And every day the truth of this statement seems more apparent. Reflexing was born (and shelved) in 1924. Now it is back again in RCA's new auto-radio.

SO MANUFACTURERS MAY BE expected to go in for reflexing in a big way, (RFL is up to its ears in research) although there is some question whether or not anything but space is to be gained. Incidentally, this brings two-tube supers, predicted some months ago, even closer.

THEN TOO, TWO-UNIT RADIOS are again being seriously considered, one proposal being the design of a sub-mid-get chassis without a speaker, the reproducer to be mounted in the nearest door, or on a man-size baffle concealed behind the sofa, secretary or what have you. This would take cumbersome consoles out of crowded rooms and still provide equivalent tone quality. What we really need is a new type of dynamic speaker unit that can utilize existing flat surfaces for baffling. Elaborate speaker cabinets give us remote control but are no answer to the public's demand for space conservation.

EVEN PHONOGRAPHS ARE FAR from a dead issue. Only the other day we listened to some translucent records made of cellulose acetate, cut in the hill-and-dale manner (this was Edison's original method), which reproduce faithfully up as high as 10,000 cycles. They add at least another octave to the usual scale and will be used to put over really high-class "canned music" this fall. Radio may or may not be included.

FACTORIES ARE RAPIDLY cleaning up their stock of old type tubes, such as the O1A and 26, and it is rumored that when they are gone replacements will be brought out with dome-shaped bulbs. These will be interchangeable but more rigid construction is a good excuse to jack the price up (temporarily) a few pennies.

BATTERY SETS HAVE NOT BEEN forgotten. One of the leading laboratories is working (with a foreign tube maker) to produce a set that will draw plate current only when modulated signals are received. Class-B does this for audio but r.f. stages still eat up the dries.

THE STOKOWSKI-BELL "Binaural" transmission scheme, tried out over land-wires with some success, has the broadcast boys worried. It does for sound transmission what the stereoscope did for photographic stills back in Grandma's day; provides a third dimension and realism. Already there is talk of shooting a trial program over two air channels for simultaneous reception with two receivers. This will put two chickens in every pot—excuse please—two radios in every home. (If it works.)

**TODAYS...
Greatest TUBE-
TESTER Value!**



*Tests all
Tubes now out
...and those
coming soon!*

Readrite

Tester No. 410

A flood of new tubes is coming out today—and here's the tester that will check all of them! This new Readrite Tester will test every tube in general use today, as well as many which have not yet appeared on the market.

Outstanding New Features!

Simply designed, compactly constructed, this new Readrite Tester is ideal both for outside service work and for counter use. Test card gives simple instructions. Anyone can operate. A push button provides two plate current readings for determining the conductance and worth of a tube. A new and outstanding feature applies the same test to rectifier as with all other types of tubes. Has combination socket for testing large and small 7-prong tubes.

**Only \$15 Net to Dealers
List, \$25.00**

Your jobber can supply you at the dealer's net price of \$15.00. Never before has so complete and reliable a tester been offered at so low a price! This is today's greatest tube-tester value!

*new
catalog
FREE*

READRITE METER WORKS
69 College Avenue
BLUFFTON, OHIO

Mail This Coupon TODAY!

READRITE METER WORKS,
69 College Avenue, Bluffton, Ohio.

Gentlemen:
Please send me information about Readrite No. 410 Tube Tester. Also catalog of other servicing instruments.

Name
Address
City State

TAKES NO MORE

G A S



WE blush to admit it . . . but some suppressors cut down the m.p.gallons somethin' awful.

If your auto radio "eats gas" change to **CENTRALAB MOTOR RADIO SUPPRESSORS** and note the difference in gas consumption.

The unique one piece construction "Baptised with Fire" in the making guarantees absolute permanence, regardless of operating temperature or humidity.

*All good jobbers stock 'em at
40c each, list.*

CENTRAL RADIO LABORATORIES, MILWAUKEE, WIS.

★ **Centralab**
★ **MOTOR RADIO**
★ **SUPPRESSORS**

SHOP SHORTCUTS

Calibrating A.F. Oscillators from Synchronous Clocks

By E. R. Meissner

A convenient method of calibrating the low frequencies of an audio oscillator is to use an electric clock. Now most oscillators do not deliver sufficient power to drive the ordinary house clock. However the power stage of an a.-c. radio makes an excellent amplifier, especially if it will deliver three to four watts, which is the power required by most clocks. Of course this power must be delivered at a voltage somewhere near the line voltage previously used by the clock.

Using a clock of the "manual start" type frequencies from 30 to 130 cycles can easily be measured. For frequencies higher than this it is necessary to insert a condenser in series with the clock to tune the circuit to resonance. This extends the range of frequencies up to 240 cycles. The series capacity required at this frequency is approximately 0.045 mf. The clock is naturally harder to start on the higher frequencies but with practice one learns to do it readily.

The procedure in measuring a frequency is to start the clock and then by means of another timepiece, note the number of minutes recorded by the clock running on the unknown frequency in a given interval of time. The unknown frequency can then be calculated by the relation:

$$f_s = \frac{T_o}{T_a} f_o$$

Where f_s = Unknown frequency in cycles per second.

f_o = Frequency at which clock keeps correct time in cycles per second.

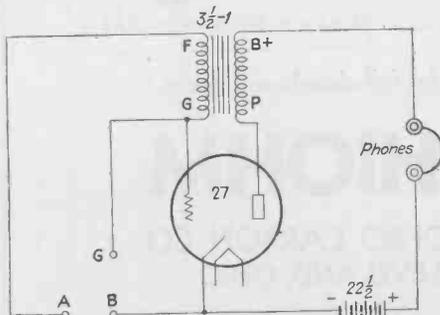
T_o = Interval of time recorded by running on unknown frequency.

T_a = Actual interval of time as acted by watch or other accurate timepiece.

Sound Test for Resistors and Condensers

By W. T. Golson

Noisy fixed condensers and resistors of the carbon type can be sound-tested with



Radio Retailing, June, 1933

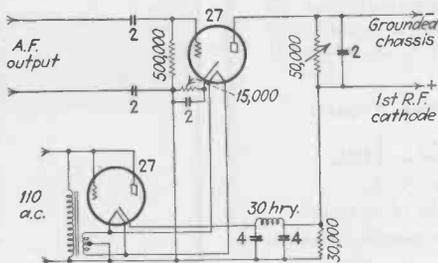
a simple audio oscillator. To check a resistor simply connect it across terminals A-B and listen for about two minutes. Variation in the pitch of the tone heard indicates a noisy unit.

Small fixed condensers may be tested in the same manner, first connecting a 30,000 ohm resistor known to be good across A-B to provide bias and then hooking the condenser across A-C. The '27 heater may be either a.c. or d.c. operated.

A. F. Operated A.V.C. Accessory

By Morris Chernow

I have designed for sale to my own clientele a two-tube a.v.c. accessory that may be connected to practically any receiver without breaking into the circuit.



The diagram is self-explanatory. The two leads marked a.f. output are connected either across the output transformer secondary or directly across the plate circuit of the output tubes. A third lead is connected to the grounded chassis and the fourth twisted around the cathode prong of the first r.f. tube. The 110 leads are carried either directly to the line or cut into the receiver supply cable.

The operation of the unit is easily understood. It is simply a vacuum-tube voltmeter whose grid is biased to cut-off by means of a 15,000 ohm cathode resistor. When a signal is impressed upon the grid through the 2 mfd. condensers current flows in the plate circuit, producing in turn a voltage drop across the variable 50,000 ohm resistor in its plate circuit. This resistor being variable, the amount of drop can be controlled. It is therefore used as the manual volume control when the a.v.c. accessory is connected, the set's original control being set at maximum and left there.

The voltage drop across the 50,000 ohm resistor varies with input signal strength and inasmuch as it is connected in parallel with the r.f. tube bias resistor automatically regulates gain in this stage. At first glance it might be supposed that this shunt resistor would decrease the bias originally provided by the set manufacturer. The external resistor is, however, in reality a separate voltage source which acts more in the nature of a battery in parallel with the normal bias resistor.

Half-wave rectification is provided for

the a.v.c. tube. It is conventional in design, employs a brute-force filter of its own plus a 30,000 ohm bleeder. Just a filament supply transformer is used, plate voltage being obtained directly from the line in order to save the cost of a step-up unit.

Field Excitation for Extra Dynamics

By R. G. Vaughn, Jr.

Where one or more extra dynamic speakers are to be used with an existing receiver the new 25Z5 voltage doubling rectifiers offer an ideal solution to the problem of providing direct current for field excitation. An exciter can be made which takes up very little space and a minimum of apparatus.

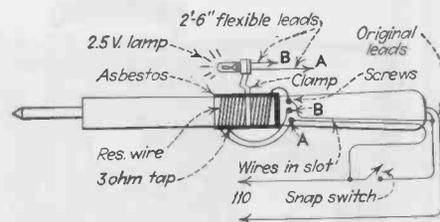
Connect the 25Z5 as a doubler using the standard circuit (RR41May) with a 300-ohm, 50 watt resistor in series with the heater to reduce line voltage to 25 volts. A six prong socket and two filter condensers are the only other parts necessary. Output varies with the capacity of the condensers. I use two 3 1/2 mfd. units, which furnished 125 volts of d.c. to a 2,500-ohm field. No hum is experienced.

Soldering Iron "Headlight"

By B. O. Bass

By utilizing the voltage drop across a tapped resistor connected in series with a soldering iron a 2.5 volt pilot light can be illuminated to make soldering independent of room lighting. The heat of the iron may also be controlled to prevent oxidation.

Wrap two layers of sheet asbestos on the neck, back of the heating element, and moisten till it molds tightly in place. Heat the iron and let the asbestos dry, forming a solid, molded form of fibre. Countersink three small, flat-headed wood screws 1/2 in. apart in the wood at the front of the handle.



Moisten the asbestos slightly and space-wind 50 to 60 ohms of resistance wire on the partly softened mass, bringing out a tap at 3 ohms. (Rheostat wire is ok and straightens easily if heated in a flame first). Carry the tap to the center of the three countersunk screws and the ends of the wire to the two others. Wrap a single protective layer of soaked asbestos sheet over the winding and let it dry.

Saw a shallow 1/8 in. slot the length of the handle, on the side, and bring three

GIVE SERVICE . . . *with a*

Here is the Best **SMALL INVENTORY**
Volume Control
Proposition on the Market » » » »

Here are the reasons why!

1. Over 400 "exact duplicate" controls in the "X" SERIES.
2. Yet with SIX controls in the original AD-A-SWITCH SERIES 477 sets can be serviced.
3. By combining controls in both lines any requirement can be met with minimum stock investment.
4. CLAROSTAT with its two separate lines offers the widest range of controls to choose from.
5. CLAROSTAT CONTROLS are inseparable from Quality Service Work.

CLAROSTAT "X" line has over 400 controls to choose from—exact as to electrical overall resistance, taper, bushing, shaft length, and will fit into exact space in set.
CLAROSTAT AD-A-SWITCH line comprises the maximum utility with minimum stock investment. Series W (Wire Wound) obtainable from 50 to 50,000 ohms. Series C (new composition element) obtainable from 10,000 to 5,000,000 ohms. Both lines obtainable in all tapers—insulated shaft 1½" long. Wide use is indicated as follows: W-28 will service 128 sets; C-28, 106 sets; W-29, 77 sets; C-59, 66 sets, etc., etc.

New Control Replacement Guide Upon Request

CLAROSTAT Mfg. Co., Inc.

287 North 6th Street, Brooklyn, N. Y.

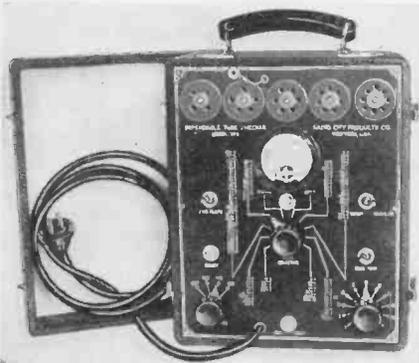
"AD-A-SWITCH" was originated by Clarostat

ONLY \$16.50 TO DEALER & SERVICEMAN

Does more than any checker on market within double the price

Special Exclusive Features

- Provides for 8 & 9 prong tubes—special socket is included.
- High grade D'Arsonval type moving coil meter—insures accuracy.
- Simple to operate—only two selector switches to adjust.
- Tests all new tubes brought out to date—more than 120 different tube types indicated on panel.
- Provides for future—present switching arrangement & spare contacts allow for approximately 50 more new tube types.
- Short test with pilot light indication—gas test.
- Second plate tests on all types of full wave rectifiers.
- Bias shift test for relative mutual conductance.
- Line voltage adjustment switch.
- Beautiful etched panel & leatherette carrying case.
- PRICE \$16.50 to dealer & serviceman. List \$30.00.



New Dependable Tube Tester Model 303.

Send for One Today

RADIO CITY PRODUCTS CO.

48 West Broadway, New York, N. Y.

Please send me one of your new Dependable Tube Testers, Model 303. I'll pay the expressman \$16.50 plus expressage. You'll refund my money in 5 days, if I'm not completely satisfied.

Name.....
Company.....
Address.....

RR 6

- SMALL BUSINESS
- MEDIUM BUSINESS
- BIG BUSINESS HOUSES

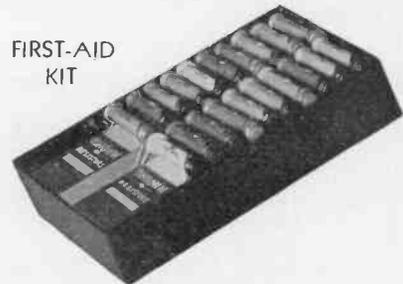
...all can profit with **O H I O H M**
P R O D U C T S
P L A N S
P R O S P E R I T Y

The Ohio Carbon Co., manufacturers of Ohiohm products, has a proposition including the exact type of product and merchandising plans to conform with the requirements of any size business from the individual service man to the largest distributor or radio manufacturer.

Success tells the story. And, success could only have been met in thousands of cases by quality products backed by sound methods of marketing.

FIRST-AID KIT

Even when it comes to packing, Ohiohms are exclusively superior. Protection-packed results in correct installations.



For eliminating ignition interference in automobile radios, Ohiohm Spark Suppressor Sets are an ideal summer sales item for you.



SPARK SUPPRESSOR SET

Write for full details and prices.

O H I O H M

THE OHIO CARBON CO.
CLEVELAND, OHIO

Made in Canada by C. C. Meredith & Co., Ltd. Toronto

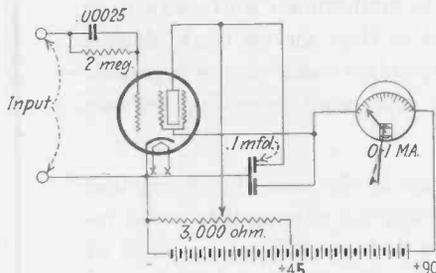
flexible leads from binding posts to cord through this "channel." Connect the 50 ohm winding across the poles of a single pole snap switch. Break the 110 volt lead to switch and connect to 3 ohm (end) lead. Mount a Christmas tree miniature socket by means of spring clips, on the asbestos winding and feed it with twisted 30 inch leads connected to the 3 ohm binding posts. The spring mounted pilot light can, naturally, be removed from the iron and clipped to a chassis. The light is on whenever the iron is connected.

Using this scheme the iron is turned on as usual but when the switch is snapped off resistance is introduced in the 110 circuit, curtailing heat.

Dynatron V.T. Voltmeter

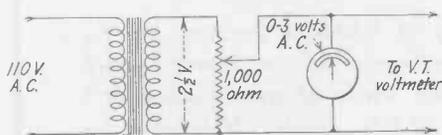
By Joseph E. Soos

Here is a circuit diagram of a dynatron vacuum-tube voltmeter which will measure small a.c. voltages without the use of an ultra-sensitive instrument. An



input of .05 volts gives a reading of approximately .2 mils. The potentiometer is used to adjust the voltmeter to its correct operating point.

The instrument may be calibrated accurately enough for most shop purposes by connecting it across the output terminals

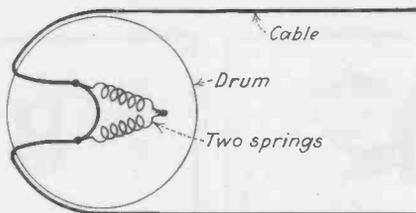


of the device here shown diagrammatically. The 1,000-ohm potentiometer of the calibrating unit is varied, readings of the a.c. voltmeter noted and a graph of the corresponding milliammeter readings made. Do not use a variable-mu tube.

Improving Drum Dial Action

By Frank J. Billiams

On many old models using drum dials the cord is continually either breaking or slipping off the drum. This is due to faultiness of the original method of applying tension. The most common method used some years ago did not use springs, merely a screw and nut to take up tension. This is hard on cables because when the dial is set at either



1,500 or 550 kc. any strain in the wrong direction soon breaks them. A later method used a single spring, anchored at one point on the cable. When the dial is at either end turning it in the wrong direction tightens one side of the cable but slackens up on the other side, with the result that it often slips off the drum.

To remedy these troubles use two tension springs as shown. This keeps the cable taut at all times. It will not break because the springs allow a certain amount of free movement when the knob is turned in the wrong direction and one spring always keeps the cable taut, preventing slips. It also produces a smoother working dial.

Gas Test for Tubes

By R. A. Holmes

Gassy tubes may be detected by applying normal plate, heater and grid voltages, noting plate current, and then inserting a 1/2 to 1 megohm resistor in series with the grid. Any appreciable change in current indicates that the tube is gassy as gas current flowing through the resistor will affect the bias.

Artist's Brush Instruments

By William Brown

A handy wire brush useful in cleaning out-of-the-way joints in a chassis, also nut and screw holders, can be made of the cheap variety of artist's brush having the hairs set in a tin sleeve with about a 1/4 in. aperture. The medium size is the best.

Pull the hairs out of the brush and replace these with stiff wire bristles about 1 in. long from an old fine wire brush. Squeeze the tin in a vice to hold the new bristles securely and then solder around the end of the tin. Cut the wires at a slight angle to sharpen them and also provide a good wiping contact.

Slotted screws are held nicely with a second instrument. Use the same type brush as a foundation but secure a piece of alarm clock spring and cut two strips about 1 in. long, inserting these side by side into the holder. Flatten the tin and solder as before. Spread the springs and it will be found that they have sufficient tension to hold small bolts while these are worked into place.

Make another clock-spring instrument but after soldering heat the extreme ends of the spring to soften them and bend them inward, toward each other, about 1/8 in. from the ends. These "jaws" hold nuts firmly.

TRICKS of the TRADE

RCA 60, 62. Low volume. Check for decline in value of the 20,000-ohm bleeder resistor located beneath the pack.

CROSLEY 148. Periodic drop in volume, distortion. See if the twin cub condenser in resistance-coupling network between detector and a.f. is reversed. The .03 should be the coupling condenser between 57 plate and 42 input grid. One terminal of the .001 should be grounded and the other connected to the detector plate. Some condensers have wrong markings and the .001 is incorrectly connected between ground and a.f. tube grid.

ZENITH 50, 60, 70. Persistent hum. By-pass detector cathode to ground with 1 or two mfd. condenser, supplementing the one already in the circuit.

SILVERTONE 110, 111. Defective volume control. Replace with 10,000-ohm unit and ground through 5 or 10 watt, 500-ohm resistor in series with the cathode circuit to give better control on locals.

PHILCO 90. Oscillation between 1,100 and 1,500 kc. when trimmers are adjusted to resonance. Shunt a 0.1 mfd., 200-volt condenser across first r.f. (24) and oscillator (27) 5,000-ohm cathode resistors.

MAJESTIC 60. Set stops playing suddenly, tuning meter pointer swings clear over to stop. Cause is shorting of by-pass condenser in plate circuit of i.f. tube. Unsolder leads from i.f. transformer, remove it from chassis and heat to melt wax. Remove can and melt wax from red lead with iron. Cut this lead, re-assemble the transformer with it projecting from case and mount replacement by-pass unit externally.

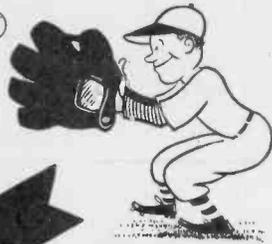
GULBRANSEN 9. Fading is usually due to defective local-dx switch. Move the wires leading to it and if fading occurs replace switch.

AK 37. Intermittent reception and rasping. Press rear of chassis. If this causes noise insulate shielded antenna cable leading from rear of metal cabinet to front of chassis. It frequently touches the bare ends of the power cable.

EVEREADY 1, 2, 3. No voltage on r.f. tubes. Look at large Pyrohm in B lead. Volume controls may be replaced without using the old pulley and cable arrangement by placing the new control where the old control arm was fastened, lengthening the leads and re-neutralizing.

VICTOR R35. Weak reception. Commonly either open detector screen resistor or first a.f. plate resistor. The first is located under resistor board on chassis. To replace connect pigtail unit of 1 1/2 megohms to two inside lugs on side of board toward the center of

Don't Miss it!



IT'S FREE!

Here you are! The newest and one of the most genuinely helpful service aids IRC has ever presented—an attractive house magazine brimful of authentic, well-written radio service kinks and methods. You'll not only enjoy reading it but you'll profit from every issue. Mailed monthly—FREE—to bona fide service men only. Get your name on the IRC mailing list today!

THE LATEST IRC SERVICE HELP

INTERNATIONAL RESISTANCE CO.

2006 Chestnut St., Philadelphia, Pa.

Sure—I'm a radio service man. Please send the "IRC SERVICER" regularly—at no cost to me.

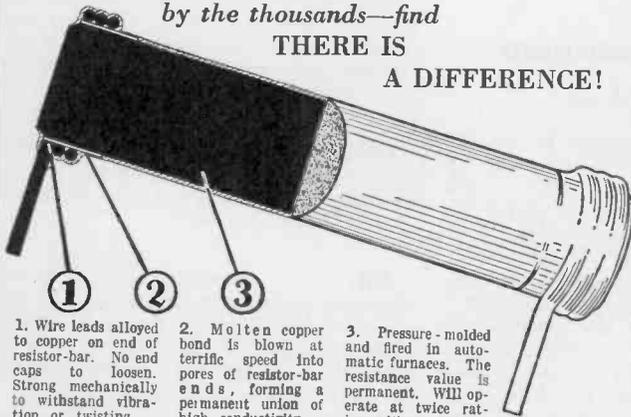
Name

Address

City State

SERVICEMEN

by the thousands—find
THERE IS
A DIFFERENCE!



1. Wire leads alloyed to copper on end of resistor-bar. No end caps to loosen. Strong mechanically to withstand vibration or twisting.

2. Molten copper bond is blown at terrific speed into pores of resistor-bar ends, forming a permanent union of high conductivity.

3. Pressure-molded and fired in automatic furnaces. The resistance value is permanent. Will operate at twice rating without injury.

Once servicemen bought just resistors. Now they demand "Certified" Continentals, identified by the distinctive GREEN label, for freedom from those troubles that destroy customer confidence and waste profits. Mail the coupon for the full story and the name of a nearby Continental jobber.

Mail this Coupon today.

Suppressors, too!

Having trouble with auto-radio ignition interference? Replace ineffective suppressors with Continentals, now wrapped in cellophane to reach you in perfect condition. Mail the coupon for prices and complete information.

CONTINENTAL CARBON Inc.

13902 LORAIN AVE. » CLEVELAND, OHIO
Canadian factory » Toronto, Ontario

Please send me full information about Continental "Certified" Resistors and Suppressors. Also the name of a nearby Continental jobber.

Name

Address

"Blue Sky!"

—that was the retort many radio dealers made back in the palmy days of 1929, when you tried to tell them that the radio parts business was coming back. They were so busy selling folks a new set every year or so that there was little if any time left over to cultivate the repair and service business.

But times have changed. Today, more and more dealers are depending on radio service work to keep the well-known wolf away from the door. And in their service work, dealers as well as independent radio service organizations are more and more depending on two things:

First, dealers and service men are finding that it pays to buy and use only quality radio replacement parts and accessories—the kind of radio parts that breed customer satisfaction and repeat business.

Second, dealers and service organizations have found that *Radio Retailing*, which so well serves them with selling helps is doing the same sort of helpful work with its "Service and Installation Section."

Arthur Risley of Richfield Springs, N. Y., says, "Just the 'Service Section' is worth more to me than the whole of most magazines." Roger Hertel of Clay Center, Neb., says the "Service Section" has helped him make money. C. S. Carter of Topeka, Kan., says he looks forward to each issue. Joseph Korb of New York, N. Y., says *Radio Retailing* is the finest magazine he's ever read. H. Friend of Philadelphia, Pa., likes both our "Shop Shortcuts" and our "Tricks of the Trade." Pat Daly of Beardstown, Ill., says, "*Radio Retailing* is fine." And so on—letters come in every day. Radio service work, the use of quality radio parts and the "Service and Installation Section" of *Radio Retailing* are all down to earth—the "blue sky" just doesn't exist. This accounts not only for reader-interest in *Radio Retailing* but also for the use of the magazine by manufacturers as an advertising medium.

chassis. To replace a.f. unit loosen pack but do not remove and tip up bottom sufficiently to clip out green and red pigtail resistor on terminal strip, replacing with 70,000 ohms.

RCA, GE. Many recent models using Bradleyometer variable resistors. If these become noisy remove the covers, with cloth, apply vaseline.

BRUNSWICK 15, 22, 42. Noisy volume controls. Unsolder the pigtail from the second r.f. variable condenser stator, remove the rubber sleeve and blow out the powderlike substance found in it. Wipe powder off pigtail and replace sleeve, resoldering.

PHILCO 20. Bad tone, pitched higher than normal. Replace old cone using solidified disc with new spider type cone.

STEWART-WARNER 950. Oscillation at low frequencies. Clean variable condenser contact clips and bend them to increase pressure. Oscillation at high frequencies. Look for open .25 mfd. r.f. by-pass condenser located close to r.f. coils. Tone distorted, set oscillates. Try replacing .25 mfd. r.f. grid by-pass condenser. If set oscillates when quick-heater tubes are used replace .25 mfd. screen-grid by-pass with .5 mfd. or more.

MAJESTIC 91, 92. Motorboating. Inspect flexible lead soldered to sliding arm attached to trimmer cup. After a time this wire wears, breaks.

MAJESTIC 90B, 100B. Noise, motorboating. Generally traceable to defective .5 mfd. r.f. by-pass condenser.

CLARION 60, 61. No reception. Check a.f. transformer primary, replace with factory original to insure good tone. Noise, intermittent signals, examine local-dx switch for loose contacts.

AUDIOLA. Oscillation when tone control is in treble position. Replace .01 mfd. condenser connected from plate to filament.

RCA 44, 46. Loss of volume, selectivity, sensitivity after several years of use. If voltages and tubes check ok trouble is usually caused by wear in the gang condenser, permitting the rotor sections to shift. Re-align these by means of the adjusting screws at each end of the stator sections. Select a station between 600 and 650 kc. and adjust for maximum volume. Then adjust the trimmers at the 1,500 kc. end and repeat both operations once again. A 235 in the 2nd r.f. stage will improve tone on local stations and low volume settings.

PHILCO 41DC. Pronounced nasal quality and choppy reception. Replace 500,000-ohm first audio stage grid coupling resistor with 100,000-ohms and insert a 3,000 current-limiting resistor in series with the primary winding of the push-pull input transformer.

AIRLINE. Fluctuating filament voltages in older models using 26's, or failure of r.f. tubes to light at all. Caused by loosening of riveted junction between binding posts and power transformer lead soldering lugs, due to shrinkage of mounting strip. Remove transformer and flood riveted junction with solder. Some local-distance switches test all right on 110 volts but fail to make contact when in actual use. Clean hardened flux or grease from contacts.

AK 40. When biasing resistor strip under terminal board is defective and original replacements can not be obtained use one 750 and one 3,500-ohm type.

MAJESTIC 381. Poor selectivity, volume. Many men remove the metal shield on the bottom of the chassis. Oscillation is kept under control by proper use of the volume adjustment.

RCA 42, 48. Defective volume control. Check r.f. 24's for plate to screen short to avoid repetition of the trouble. Such shorts put abnormal current through the controls but otherwise affect reception very little.

AUTO-RADIO How about shooting in some "Tricks of the Trade" about auto-radio, men? Here is a topic upon which much useful dope can be exchanged. What makes and models of cars require special suppression treatment? What models require "tricky" antenna installations? How are the sets themselves coming through?

VICTOR RE45, 52, 75. Chassis shorts. Often caused by steel needles falling down from phonograph compartment and shorting socket lugs to ground.

CROSLEY 127. Sudden drop in volume accompanied by failure of the tuning meter. Partial short in the i.f. transformers.

APEX 27. Intermittent oscillation. Increase the r.f. by-pass condenser from $\frac{1}{2}$ to 1 mfd.

GREBE SK4. Oscillation between 550 and 750 kc. Tighten all contact clips on variable condenser rotor shaft down all the way. If this cures the trouble release them enough to permit easy operation of the dial. Clean with pipe-cleaner dipped in alcohol and align.

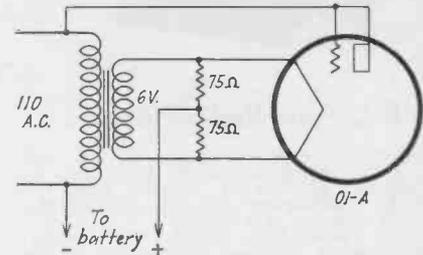
ZENITH 70. Fading or intermittent reception. Look for open or shorted .25 mfd. dual plate by-pass condenser located on the first and second r.f. stages, or .03 mfd. by-pass condenser located between the plate of the first a.f. tube and the primary of the first a.f. transformer. If signals vary from weak to normal suspect the first. If they are always weak check the second.

CONTRIBUTORS. Don't tell us about it unless it has happened at least half-a-dozen times. We're not interested in unusual troubles but, rather, want to know about the "bugs" that keep cropping up again and again in certain makes and models.

Charging Edison B's

By W. T. Golson

I find that a surprising number of Edison wet-cell plate batteries are in use on test oscillators, portable equipment, photocells and stand-by apparatus in theaters and broadcast stations. A very simple charger for these cells can be made from a bell-



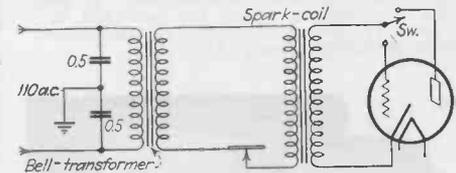
ringing transformer, center-tapped resistor and an -01-A tube.

Connect the equipment as shown in the diagram. With this arrangement a 90-volt block can be safely charged in 12 hours or less, depending upon the condition of the cells.

Gas and "Alignment" Test

By J. E. Fox

Gas content, or improper spacing between grid and cathode or plate and cathode of a tube, may be checked by means of the tester diagrammed. Gassy tubes



will glow blue or green. Those having poor element alignment will arc when connected.

Extending Magnetic Speakers

By Murl Ed. deBeauchamp

When extending a magnetic speaker circuit some distance, such as to a nearby building, a good ground connection at each speaker will serve in place of one lead, with a considerable saving in wire.

Condenser Kink

By Ralph L. LeBrun

In installing replacement condensers with the case marked "outside foil" be sure to connect this to the low-potential side of the circuit.



B-L Auto Radio Filterpac

Designed to operate any of the new auto radios using the heater type tube, the "Filterpac" of the B-L Electric Mfg. Co., 19th & Washington Ave., St. Louis, Mo., delivers 6 amp. at 6 volts.

It is especially useful for dealers demonstrating display panels or in the service department. It can also be used to operate auto-radios in the home.—*Radio Retailing*, June, 1933.

DeWald Motor Tone

The new 6-tube Motor Tone auto-radio now being marketed by the Pierce-Airo, Inc., 520 Sixth Avenue, New York City, carries a list of \$39.95. It is a super-heterodyne, using a 78, 6A7, 85, 37, 41, 84 and has a.v.c. It is quickly installed.—*Radio Retailing*, June, 1933.

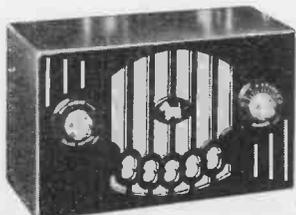
Acrocycle Oscillator

A self-contained, fully shielded service oscillator, designated as Model B, is announced by the J-M-P Mfg. Co. Inc., 3016 N. 34th St., Milwaukee, Wis. The two dial scales are calibrated exactly in kilocycles, the upper one for intermediate and the lower for broadcast frequencies. It provides frequencies from 100 to 1500 k.c. Price is \$18.88 net to the dealer complete.—*Radio Retailing*, June, 1933.



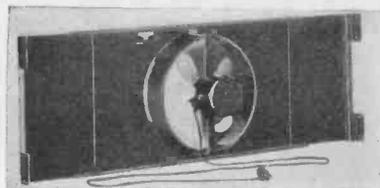
Remler AC-DC "Scottie"

The New "Scottie," Model 26, of the Remler Co. Ltd., 2101 Bryant St., San Francisco, Calif., is an a.c.-d.c. set measuring only 10 1/2 x 6 1/2 x 4 1/2 in. The housing is bakelite trimmed in ivory. Five tube super-het circuit with 2-77, 78, 43, 25Z5. Range: 540-1700 kc. The list price is \$27.90. Zipper carrying case, \$2.—*Radio Retailing*, June, 1933.



Sparton 33 Auto Radio

A compact, single unit, fully electric auto radio, Model 33, has been placed on the market by the Sparks-Withington Co., Jackson, Mich. It is a six-tube super-heterodyne (matched antenna input circuit) using the latest tubes 2-39, 36, 85, 41, 84). The size is 9 1/2 x 7 1/2 x 5 1/2 in. List price, \$59.50.—*Radio Retailing*, June, 1933.



Antenex

The "Antenex" made by M. M. Fleron & Son, Inc., Trenton, N. J., can be used not only as an indoor aerial but also by owners of sets equipped with an outdoor aerial who wish to connect an additional set to the present antenna so that both will operate from the one aerial. This can be accomplished by using two Antenexes.—*Radio Retailing*, June, 1933.



All-Purpose Tester

Developed by the National Radio Institute, 16th and U Sts., N. W., Washington, D. C., in collaboration with engineers of the Philco Radio & Television Co., Philadelphia, Pa., an all-purpose set tester is now ready.

It is for use on a.c., d.c., automobile and battery sets—any frequency, any voltage—and is entirely self-contained.

It combines the following: 5 a.c. and 5 d.c. voltmeter scales, 3 d.c. milliammeter scales, 3 ohmmeter scales, 5 a.c. output meter scales, capacity meter, complete tube tester, variable frequency I.F. and R.F. shielded oscillator.

To dealers and service men the net price is \$40.50. Obtainable either from Philco or N. R. I.—*Radio Retailing*, June, 1933.



Improved "Elasticord"

The elastic heater cord which contracts and expands as the attached device is moved, recently announced by the United Elastic Corp., East Hampton, Mass., has been improved so that it has lighter tension and is completely non-kinking and non-tangling. There is no slack cord to wrinkle or drag across the ironing. Approved by Good Housekeeping. The switchless set is 75c and Model 90B switch set is 90c.—*Radio Retailing*, June, 1933.

"Fan-O-Lator"

A suction window-fan-ventilator, which may be installed at the top or bottom of the window and which is adjustable to any width from 24 to 42 in., is being made by the Standard Transformer Corp., 850 Blackhawk St., Chicago. It may be permanently installed or left portable. Equipped with an 8 in. electric fan, mounted in a metal frame. The retail price is \$3.95.—*Radio Retailing*, June, 1933.

Acratone Amplifier

A self-contained, triple push-pull, three stage auto amplifier, known as the Acratone 770 has been developed by Federated Purchaser, Inc., 23 Park Place, New York City. This amplifier is designed to operate directly from any 6 volt storage battery. It uses 2-36's, 2-37's and 2-40's. A motor-generator is incorporated supplying 320 volts at 100 milliamperes. The undistorted power output is, the release states, 7 watts.

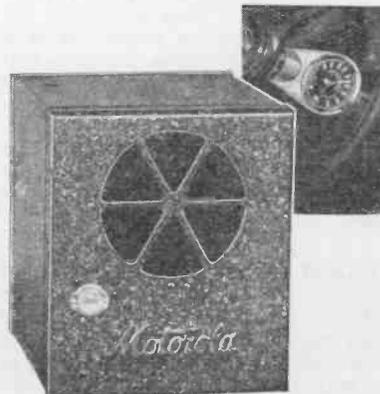
A mike is built-in and a phonograph matching transformer matches any single or double button mike. \$37.50 less tubes.—*Radio Retailing*, June, 1933.



Motorola 44 Auto-Radio

A new single unit all electric auto-radio has just been announced by the Galvin Mfg. Corp., 847 W. Harrison St., Chicago. Size, 8 x 8 1/2 x 7 1/2 in. Mounts in three positions under cowl in driver's compartment.

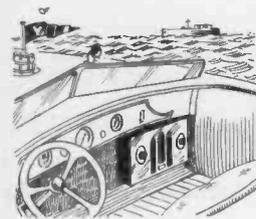
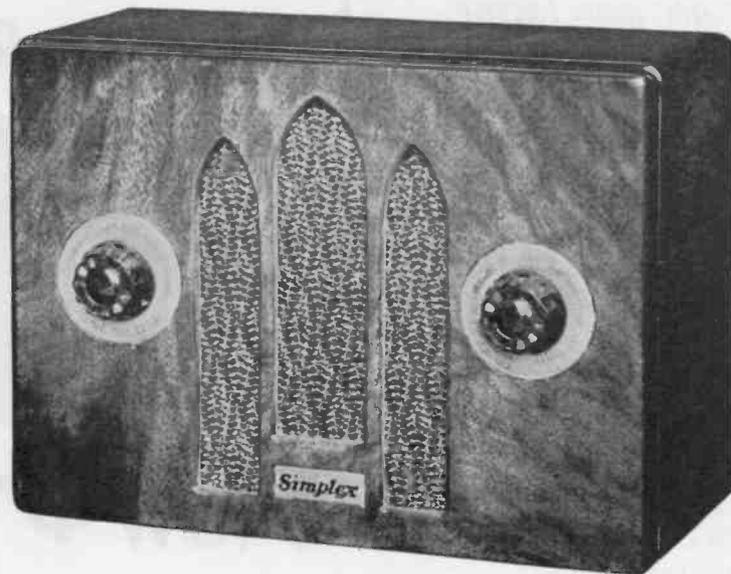
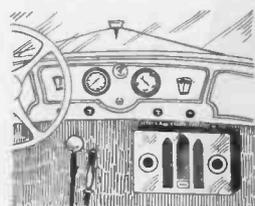
It is a five tube radio utilizing a 12A5, 6A7, 75 and 2-78's. Employs tubeless B power supply. Steering post one button control, airplane type indirect illuminated dial. \$39.95 including tubes and accessories.—*Radio Retailing*, June, 1933.



RADIO'S NEWEST SENSATION!

Combination *HOME* and *AUTO RADIO*

SIMPLEX AC-DC PRICED TO RETAIL AT **\$12⁹⁵**
110 VOLT
AC-DC



For 6-32-110 or 220 Volts

Slightly extra cost for 6-32-220 V. Adapter

1-25Z5 1-43 1-44 1-77
Tubes

Tunes 540-1710 kilocycles

Receives Police Calls

Steel Cabinet Burl Walnut
Finish

Dynamic Speaker

Built-in Aerial

Weighs 7½ lbs.

Size 9" x 6½" x 4"

All Electric—NO BATTERIES

Any Current—Any Cycle

The first practical all purpose radio made. For Homes—Automobiles—Hotels—Farm Light Plants—Steamships—Camps—Operates anywhere—on any current without the addition of batteries.

Wire for Sample and Jobber Prices

THE SIMPLEX RADIO CO.
SANDUSKY, OHIO

Rush prices and detailed information your new combination Home-Auto-Farm Rad'io.

.....
.....
.....

PLEASE NOTE:

*Radio dealers are now facing
the most critical period in the
history of radio*

There has never been a time when the business of selling radio was so needy of constructive action and so ready to suffer from the lack of it.

The war is over. The ranks have been greatly thinned. The folly of destructive competition has been demonstrated. The necessity for sane business practices is obvious.

Are *you* going to be among those who will help lift the trade from its present doldrums to the higher level it once held—to the level where legitimate profits can be realized by all legitimate factors in the industry?

If so, ask the manufacturer to give more than usual thought and study to the cabinets in which their sets are housed. For as you know, the cabinet represents the first and lasting impression of your product.

It must be advanced in design without being freakish. It must anticipate future trends and still avoid the impractical ultra. It must possess outstanding sales appeal without running hay-wire in cost.

For thirty years this company has faced and solved just such problems as these. Our designers have already produced a series of new and really remarkable designs—cabinets that combine that distinctive touch of Adler-Royal with prices surprisingly timely. It will pay you, as a dealer, to urge the use of Adler-Royal cabinets.

M. P. Bloom
President

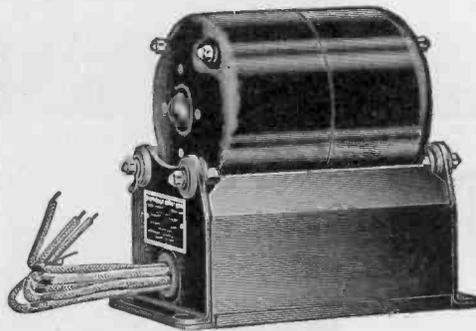
ADLER MANUFACTURING CO., Incorporated
Louisville, Ky.

EMERSON "B" POWER UNIT

Replaces "B" batteries. Maintains original volume, tone and reception qualities.

For

Auto Radios



For auto
radios, police
cars, air-
planes, busses,
motor boats,
etc.

Now \$19⁵⁰

LIST

Operates from standard 6 volt "A" battery. Low voltage tap provides "B" voltages for 180-90 volt or 135-67½ volt sets. Uses but 2 amperes current and only when set is operating.

*A New Unit to Operate from
32 volt, D.C., Farm Lighting
Plants*

\$24⁵⁰ List

For suburban homes, farms, summer cottages, club houses, etc.

Adjustable sliders supply voltages of 22½, or 45, 67½, 90, 135, and 180 volts as required by set.

Current consumption only about ½ ampere or about 15 watts. Unit is complete and easily installed in place of "B" batteries.

Ask your jobber for full information. Made by the makers of the famous Emerson fans and motors.

THE EMERSON ELECTRIC MFG. COMPANY

2018 Washington Avenue, Saint Louis
9 South Clinton St., Chicago
17 East 42nd Street, New York City

Majestic

MAKES KNOWN A SENSATIONAL PRICE ON
A SENSATIONAL AUTO RADIO

THE TWIN-SIX

THE 6-TUBE SUPERHETERODYNE WITH 6-INCH DYNAMIC SPEAKER

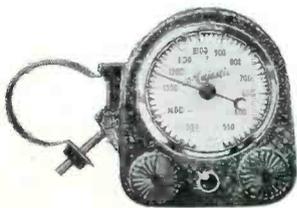
This is America's superlative auto radio. It is new and ahead of the times—with features found combined in *no other auto radio* at any price. 8-tube performance . . . all-electric . . . all-in-one . . . tone control . . . auto-

matic volume control . . . illuminated airplane dial on steering column . . . Majestic Spray Shield tubes . . . Majestic colorful tone . . . extreme sensitivity and selectivity . . . utmost compactness.



\$39.95

Complete with tubes, suppressors, and condensers.
Federal tax paid.
Slightly higher on west coast.



NEW, EXCLUSIVE AIRPLANE DIAL

Only Majestic Twin-Six has this beautiful, big, il-

luminated dial. Marked in kilocycles for easy tuning. Telltale light shows when set is on. Removable shut-off key prevents tampering when car is parked.

EXTENSION SPEAKER (2 Sets in One)

Another Twin-Six feature. Connect extension speaker to jacks on set and enjoy music on porch, indoors, or in camp while car is parked nearby! Speaker retails for only \$9.95.

Zipper carrying case available at slight extra cost.



PRICED FOR PROFITABLE VOLUME NOW!

Majestic

THREE NEW SUPERFINE MODELS



**THE QUEEN ANNE
CONSOLE
MODEL 77**

A simple, graceful example of careful cabinetwork, of authentic period design, done in matched butt walnut and V-matched Oriental wood. The cabinet stands 30 inches high; is 20 inches wide and 11 deep. It houses a 7-tube Majestic superheterodyne receiver, with automatic volume control, full-range tone control, and full-pentode amplification. The retail price is **\$46.50**

(Slightly higher on West Coast)

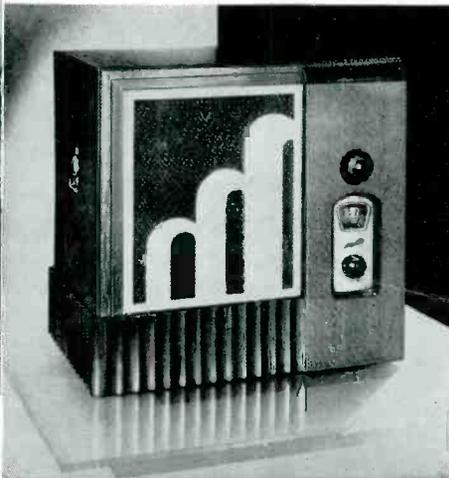
THE MASTER MODEL 461

Strikingly original in design and styling, this ornamental small radio is enriched by the chromium trim on the front panel of matched butt walnut. Dimensions: height, 17 inches; width, 13¼ inches; depth, 8¾ inches.



THE 461-463 CHASSIS

The Master and Century models pictured here employ the same chassis—a highly refined 6-tube superheterodyne. Noteworthy characteristics are full-range tone control; delayed automatic volume control; full-pentode amplification; latest-type Majestic Spray Shield tubes; rich, colorful tone; and great volume without distortion. Both models are made to retail at \$32.50. *(Slightly higher on West Coast)*



THE CENTURY MODEL... 463

Modern design lends new charm to this table model. Note the rich combination of black walnut and lacewood, and the polished chromium grille and escutcheon plate. Dimensions: height, 12¾ inches; width, 13¼ inches; depth, 9¼ inches.

Above two models receive Police Calls.

GRIGSBY-GRUNOW COMPANY, 5801 DICKENS AVENUE, CHICAGO

Thru the Years ~

THIS morning we had occasion to thumb thru a copy of *Radio Retailing's* first issue, published in January 1925. During the eight years that have elapsed, much water has flown under Radio's bridge. Manufacturers by the hundreds have come into the business and have gone out with amazing rapidity.

But advertising in that first issue of *Radio Retailing* were Grigsby-Grunow, Fada, RCA-Radiotron and Durham (now International Resistance). These same manufacturers are advertising in the June, 1933, issue of *Radio Retailing*. Thru the years they have utilized *Radio Retailing* as an advertising medium—as an aid in selling goods.

PERHAPS there's a moral in this tale for the manufacturer who hopes to be in business eight years hence—a moral that has to do with the place of *Radio Retailing* in the operations of the radio industry.

Radio Retailing

— a McGraw - Hill publication with the largest number of readers of any radio trade magazine. Member of the ABC and the ABP, two organizations whose membership is limited to the outstanding magazines in each field.

NO SUPPRESSORS

•
Audiola first to build an auto set free of motor noise without spark plug suppressors

•

Suppressors cut gas mileage . . . Suppressors make cars hard to start . . . Suppressors reduce speed . . . Suppressors cause grief.

•

SIMPLIFIED INSTALLATION
Audiola's 12 years' experience builds an automobile radio of superior quality.

•

AND
LESS EXPENSIVE

We are seeking individuals who are auto radio specialists as our distributors. Write or wire immediately for exclusive distributor's franchise and discounts.

AUDIOLA
RADIO COMPANY

"The Manufacturer of Radio Since Radio Began"

430 South Green Street
CHICAGO

Announcing RCA BIG SUMMER

A new deal for RCA Victor dealers . . .
with special sets for
AUTO-HOME-VACATION

— advertised on —

A gigantic coast-to-coast radio
hook-up . . . in national magazines
. . . newspapers . . . billboards . . .
exhibited at Chicago World's Fair!

HERE'S
HOW!



President Roosevelt's
Secretary, who is
broadcasting in RCA
Victor's unusual new
broadcast...the news
from Washington.
Sunday Night 10 P.M.
Eastern Daylight
Time—WEAF and
NBC network.

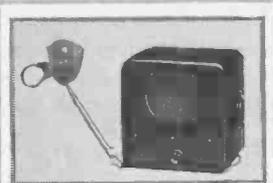
Here's the biggest news ever! RCA Victor has produced ideal sets for summer use! And to help you we are launching the largest summer radio selling campaign ever conceived! We are featuring special sets for the auto . . . the home . . . vacation. Note them on the opposite page. Smart sets . . . priced right . . . sets that are already breaking all records.

As you read this, the campaign is already under way! Smashing newspaper and magazine ads . . . billboards . . . and a coast-to-coast radio broadcast. There is dealer material by the ton ready for you! Get all the details from your RCA Victor distributor. At last the chance has come to make some real money all summer long!

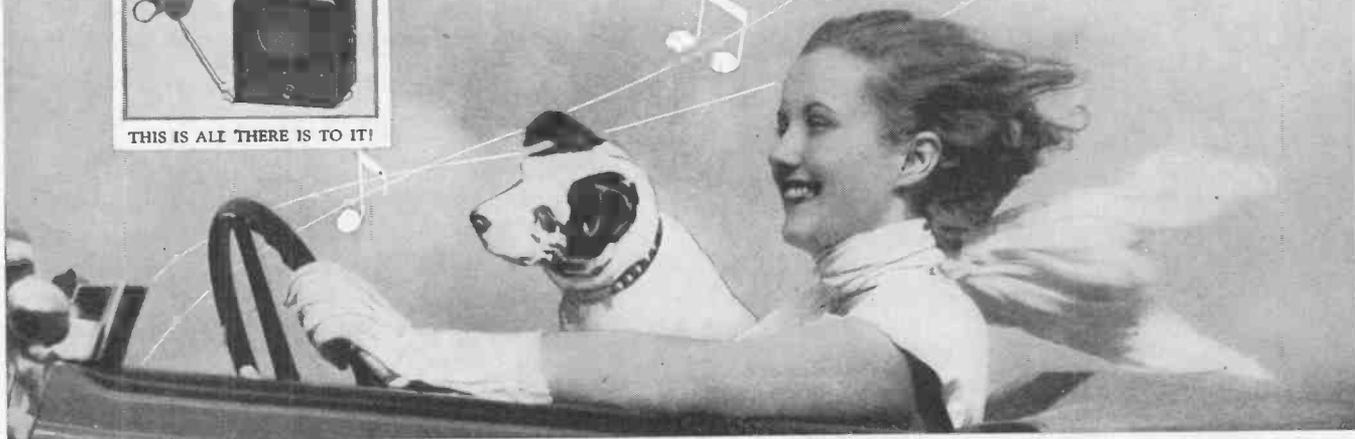
Victor's Startling SALES DRIVE!

RCA VICTOR AUTO RADIO \$39⁹⁵ COMPLETE

"His Master's Voice" on the Road!



THIS IS ALL THERE IS TO IT!



Model R-22S. Five-tube superhet, AC—DC. Police call band. Cabinet jewel case design, carved wood effect. List price **\$24⁷⁵**

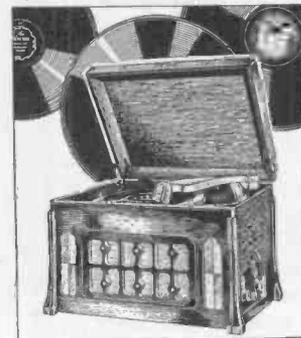


Model R-28B. One of 8 "Carryettes." All 5-tube superhets. Police call band. List prices from \$19.95 up. **\$24⁹⁵** This model, list

(All prices slightly higher west of Rockies)

Victor Records for "2 in One Music"

All advertising is featuring, not only Victor Records, but the new radio-phonograph combination, RE-40. Here's your chance to increase that profitable record **\$49⁹⁵** business. List Price



RCA Victor

RCA Victor Co., Inc. "RADIO HEADQUARTERS" Camden, N. J.
A Radio Corporation of America Subsidiary



TRADE MARKS REG. U.S. PAT. OFF.

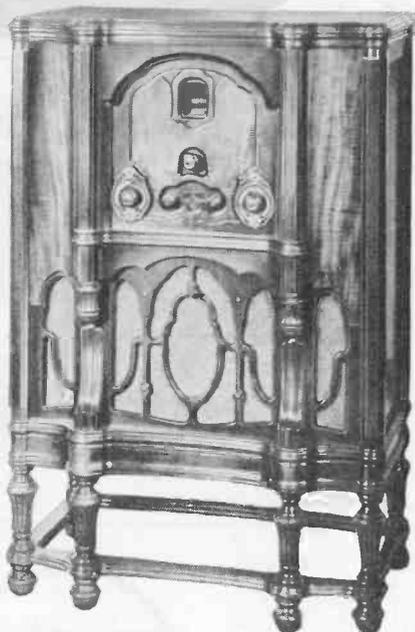
Let small sets butter your bread . . .

BUT PUSH THESE CONSOLES FOR YOUR LARGER PROFITS!



Model K-65, Early English Console. Six-tube superheterodyne. New type tubes. Police, aircraft and amateur reception. Price with tubes **\$49.95**

Model K-106, the new G-E Color-Radio Console. Ten-tube superheterodyne. Visual tuning and color control. Tone control at both ends of scale. Price with tubes **\$129.50**



Of course you shouldn't consider—not for a minute—any let up in your vigorous sales effort on your low-price, small set radio line!

. . . Especially when you know how phenomenally G-E's great low-price line is moving right now—moving as fast as the factory can produce—moving so profitably that General Electric was able to pass you that price reduction last month!

But Here's Your Big Profit Opportunity

Remember this, though . . . that often you can switch some of this booming customer interest from small sets to the larger, more profitable models.

And that's particularly easy when you can offer the big dollar value and wonderful performance of these two stunning consoles—Models K-106 and K-65.

Back up your bread-and-butter stock with these fine big-profit models! Put 'em out where they can be seen—push them—and cash in! Ask your G-E Distributor for all details and prices on the G-E Radio line. Or write to Section R-446, General Electric Co., Merchandise Dept., Bridgeport, Conn.

A REAL BUSINESS-WITH-PROFIT LOW PRICED RADIO LINE

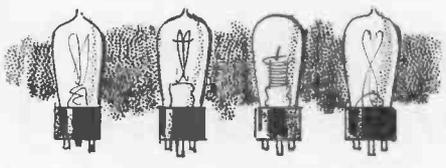
K-41—4 tubes, AC-DC, Metal Case . . .	\$12.95*
K-40A—4 tubes, AC-DC, Walnut Case . . .	17.95*
L-50—5 tubes, AC-DC, Superheterodyne . . .	24.75*
L-51—5 tubes, AC-DC, Superheterodyne . . .	24.75*
K-50—5 tubes, Superheterodyne	19.95*
K-51—5 tubes, Superheterodyne Chest	31.50*
K-54—5 tubes, Superhet. Radio-Phonograph Combination	49.95*
K-60—6 tubes, Superhet. Table Model	29.95
J-87A—8 tubes, Superheterodyne Console	89.50
B-40—Auto Radio, Superheterodyne	39.95*

*Price slightly higher Denver and West

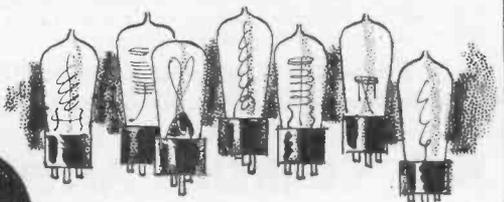
GENERAL  ELECTRIC RADIO

IMAGINE! A
GENERAL ELECTRIC AUTO RADIO
... AT ONLY **\$34.95!***
(\$39.95 after June 15)

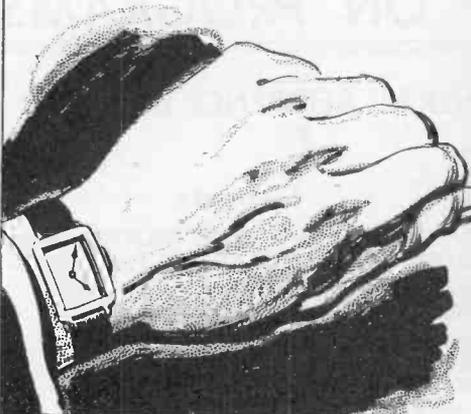


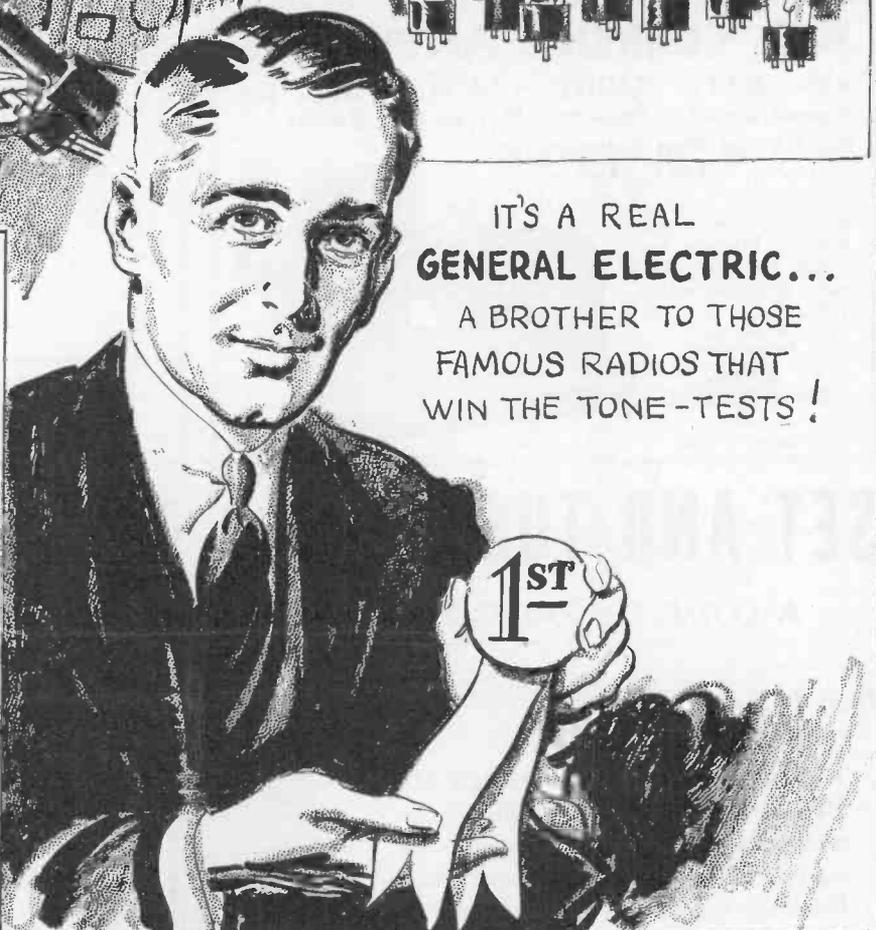


ITS NEW HOOK-UP
GIVES **4** TUBES THE
PERFORMANCE OF **7**



SO COMPACT . . . YOU
CAN HAVE IT INSTALLED
IN **LESS** THAN AN
HOUR!





IT'S A REAL
GENERAL ELECTRIC...
A BROTHER TO THOSE
FAMOUS RADIOS THAT
WIN THE TONE-TESTS!

The above appeared as a complete advertisement in the Saturday Evening Post

G-E cracks open a new, "QUICK-MONEY" market

THERE'S a source of quick profits—good profits—in a market that many have overlooked . . .

The market for auto radios!

Only a little over 1% of the cars in this country are equipped with radios. Indeed, there are millions of cars on the road today equipped with antennas—but with *no radios!* And to crack open this tremendous market—G-E offers you a new, truly remarkable set . . .

A small, compact set—with big set performance—with all the prestige of the G-E name—and selling for the sen-

sationally low price of \$34.95* (\$39.95 after June 15). Easily installed. One bolt. Two electrical connections.

Push this set. Sell this set. There's a raft of new customers waiting for it. Write today for complete details. Address Section R-446-A, General Electric Company, Merchandise Dept., Bridgeport, Conn.

*Price slightly higher Denver and West

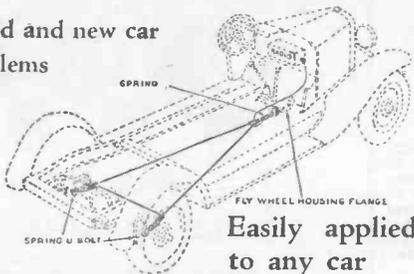
GENERAL  ELECTRIC
AUTO RADIO

FLERON AUTO RADIO AERIAL

The answer to old and new car installation problems

Saves time and insures customer satisfaction. Complete, tested equipment for auto aerial installation. Attractively priced.

Uses special alloy cable with indestructible Bakelite insulation. A reliable, quality



Easily applied to any car

product that produces profitable auto radio jobs. Write for prices.

M. M. Fleron & Son, Inc., 113 Broad St., Trenton, N. J.

memo for mfrs.

Another Summer

has rolled around. And Summer proverbially is the season when salesmen think of fishing, baseball parks, golf and the many other fancies that take a man off the job of selling. Fortunate, isn't it, that in Summer, Spring and the other two seasons, the advertising pages of Radio Retailing continue to carry, unobstructed, their message to readers*, just as this page has reached you.

*20,000 of them—distributors, dealers and sales executives of radio manufacturing companies.

A.C. CURRENT ANYWHERE

with KATO LIGHT PLANTS—Ideal for Sound Trucks, Summer Homes and Farms

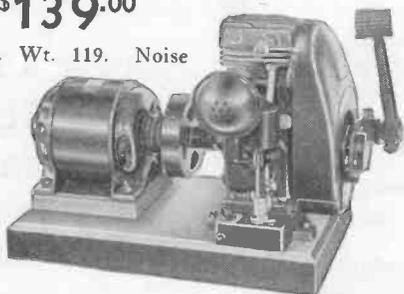
No. 1-A 300 Watt LIST \$139.00

Self-Starting. Appr. Wt. 119. Noise Reducing Cover and Special Muffler for sound trucks. Other sizes 500-1000 up to 3500.

Write for Information

KATO ENGINEERING CO.

Mankato, Minn.

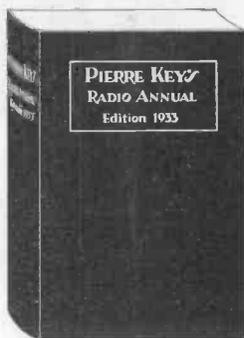


SET AND TUBE SALES DEPEND ON PROGRAMS

A COMPLETE RADIO PROGRAM ANNUAL and GENERAL REFERENCE BOOK

How It Helps the Sales Executive . . .

A STIMULANT FOR YOUR DEALER'S SALES EFFORT — Offering increased sales possibilities through the merchandising of programs and talent. Executive may send for details on how portions of the Annual are used in dealer premiums and promotion.



Contents

NATIONAL ADVERTISERS' PROGRAMS
OUTSTANDING SUSTAINING PROGRAMS
TALENT ON THE AIR
WORLD BROADCASTING PROGRESS
RADIO STATIONS OF THE WORLD
PROBLEMS OF TELEVISION
RADIO ORGANIZATIONS
PUBLICATIONS, etc.
And Many Other Program Features

How It Helps the Dealer . . .

[OVER 450 PAGES \$7.50 POSTPAID]
Bound in Library Buckram

A PRACTICAL RADIO DEMONSTRATION GUIDE — Serving as a key to the identification of famous radio characters and casts, outstanding sponsored and sustaining programs, station power and operating time. Informative articles on radio procedure and trends. Also — Behind the scenes — program-building in the studio.

SPECIAL INSPECTION OFFER

Send for 10 days examination Pierre Key's Radio Annual 1933 Edition. I will pay the postman upon arrival of the book but it is understood that I may return the book within 10 days, whereupon the full purchase price will be returned to me.

Special Offer until July 15— Send in your letterhead indicating your connection with the radio industry and \$5.00 for 1933 Annual. The ten-day inspection option still holds. Orders must be postmarked on or before July 15th to take advantage of this professional price.

Name Address

PIERRE KEY PUBLISHING CORP., 119 W. 57th St., New York City

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:
 Positions Wanted, 5 cents a word, minimum \$1.00 an insertion, payable in advance.
 (See ¶ on Box Numbers.)
 Positions Vacant and all other classifications, 10 cents a word, minimum charge \$2.00.
 Proposals, 40 cents a line an insertion.

INFORMATION:
 Box Numbers in care of our New York, Chicago and San Francisco offices count 10 words additional in undisplayed ads. Replies forwarded without extra charge. Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

DISPLAYED—RATE PER INCH:
 1 inch.....\$7.50
 2 to 3 inches..... 7.25 an inch
 4 to 7 inches..... 7.00 an inch
 Rates for larger spaces, or yearly rates, on request.
 An advertising inch is measured vertically on one column, 3 columns—30 inches—to a page. Radio Retailing

REPRESENTATIVE AVAILABLE

MANUFACTURERS: If you have a line that has sales possibilities in the southeast, I offer representation by a man with a proven record, actively contracting the jobber outlets, amply financed and a real worker. Write me, RA-179, Radio Retailing, 330 West 42d St., New York City.

REPRESENTATION WANTED

SUCCESSFUL manufacturer of full line of condensers, electrolytic and paper, also radio accessories. Write Dumont Electric Co., 453 Broome St., New York City, New York.

(POSITION VACANT)

ENGINEER: French company wants engineer thoroughly familiar and experienced in design and production of paper and electrolytic condensers. Must be capable and experienced in setting up plant and meeting all possible production problems. Excellent opportunity for man that knows his business. Knowledge of French not essential, but preferable.

P-178, Radio Retailing
 330 West 42nd St., New York City

THE TECHNICAL MAN SELLS HIS SERVICES

BY EDWARD HURST

New 230-page book describes successful analytical methods of job-getting. Written by manufacturing executive after 18 years' avocation helping technical students to get jobs. Demonstrates methods with actual case records covering wide variety of engineering occupations. Send \$2.00; 10 days' examination.

Money refunded if not satisfied.

McGraw-Hill Book Co., Inc.
 330 W. 42d St., New York City

SPECIAL NOTICE:

To the Radio Industry

Advertising in connection with legitimate offers of surplus stocks and discontinued models of radio merchandise is acceptable in this section of "Radio Retailing."

Extreme care will be exercised by the publishers to prevent the use of advertising in the Searchlight Section to encourage price cutting on current models of merchandise or equipment. Nor will advertising which invites violation of the dealer's contract with the manufacturer be acceptable.

All merchandise offered in the Searchlight Section must be accurately and fully described and must be available on order.

HUGE SAVINGS IN USED PUBLIC ADDRESS EQUIPMENT

Send for bargain lists. Motion Picture and Sound Systems

SALES ON SOUND CORP.
 Dept. RR, 1600 Broadway, New York

DEALERS and SERVICE MEN

Genuine Grebe factory made parts in stock for all model Grebe receivers manufactured prior to 1933. Power transformers for sets using from 4 to 12 tubes. Also audio transformers and filter chokes. Write for descriptive data and parts price list.

GREBE RADIO SALES & SERVICE CO.
 137-28 Jamaica Ave., Jamaica, N. Y.
 (Owner former Gen. Fact. Mgr. of A. H. Grebe & Co., Inc.)

SPECIAL

For \$2.00 and This Ad We Will Rewind 1 Armature and Rebristle 2 Brushes for Any Make of Vacuum Cleaner—Postpaid in U.S.A. All Work Done by Experts—Fully Guaranteed. Save Money on Vac Parts, Attachments and Wringer Rolls

GET OUR NEW PRICE LIST TODAY!
TRIANGLE APPLIANCE CO.
 2692 Pasadena Ave., Detroit, Mich.

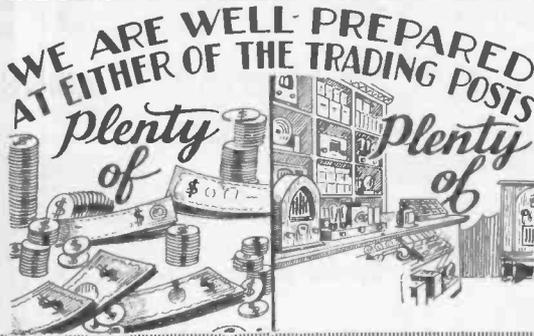
THE INDUSTRY'S LEADING SURPLUS SPECIALISTS

WE HAVE

plenty of cash to purchase any quantity of Radio Merchandise. **WHAT HAVE YOU TO OFFER?**

The Oldest and Largest Consistent Surplus Specialists in the East.

Make Our Office Your Headquarters When in Town.



IN OUR WAREHOUSE

We have enormous quantities of all types and brands of Radio Parts, Speakers and Equipment, for Manufacturer, Jobber or Retailer.

FULTON RADIO CORPORATION
 100 SIXTH AVENUE
 NEW YORK CITY
 Telephone
 WAlker 5-0127-9128

RADIO CONSTRUCTION LIBRARY

Including Construction of Short-Wave and Television Sets

By MOYER and WOSTREL

3 Volumes, 1087 pages, 6 x 9, 605 illustrations

FREE EXAMINATION

Easy terms
 Send this coupon



McGraw-Hill Book Co., Inc., 330 West 42d Street, New York
 Gentlemen:—Send me the RADIO CONSTRUCTION LIBRARY, all charges prepaid, for 10 days' Free Examination. If satisfactory, I will send \$1.50 in ten days and \$2.00 a month until \$7.50 has been paid. If not wanted I will return the books at your expense.

Name

Home Address

City and State

Name of Company

Occupation

FRR6-33

(Books sent on approval in U. S. and Canada only.)

Volume 1. Practical Radio. Presents the fundamental principles of radio so clearly and simply that anyone of average training will be able to understand and apply them. Deals with recent developments in television, including devices for its practical application. Latest types of photo-electric cells and neon glow tubes for television services, newer types of receiving tubes especially those for operating with alternating current, etc.

Volume 2. Practical Radio Construction and Repairing. Discusses fully all the elemental principles of radio construction and repair. Includes such subjects as: Sources of electricity for radio tubes—Audio frequency amplifiers—Construction of impedance coupled and "Universal" four type receiving sets—Short-wave receiver—The television receiver—and many others.

Volume 3. Radio Receiving Tubes. Clearly explains the essential principles underlying the operation of vacuum tubes. Includes complete information on the newest types of radio tubes and improvements which have been made in tubes already in general use. Gives complete descriptions of apparatus required for radio receiving sets and for industrial equipment; also of devices utilizing radio receiving tubes as essential parts.

CONTENTS FOR JUNE, 1933

Copyright, 1933, by McGraw-Hill Publishing Company, Inc.

Reporting the RMA Convention by Telegraph
Special Four-Page Section (a,b,c,d)

	Page
Summer Volume	An Editorial 13
Radio at the World's Fair	A Pictorial 14
The RMA—An Appreciation	16
The New Sets	17
Seven Pages Showing 1933-34 Trends	
Selling in the Higher Price Brackets By Mandus Bridston	24
Auto-Radio—Publicity Sells It	25
News of the Month	26
Try These On Your Cash Register	28
New Merchandise	32

SERVICE SECTION

Circuits of the Month	34
"Audio Frequency"	35
Shop Shortcuts	37
Tricks of the Trade	39

INDEX TO ADVERTISERS

This index is published as a convenience to the reader. Every care is taken to make it accurate, but *Radio Retailing* assumes no responsibility for errors or omissions

Page	Page
Adler Mfg. Co. 44	Pierre Key Pub. Corp. 52
Audiola Radio Co. 47	
Atwater Kent Mfg. Co. 7	
	Radio City Products Co. 38
Central Radio Laboratories. 36	RCA Radiotron Co. 30-31
Clarostat Mfg. Co. 38	RCA Victor Co., Inc. 48-49
Continental Carbon, Inc. 40	Readrite Meter Works 36
Crosley Radio Corporation, Inside Back Cover	R-K Radio Laboratories. 54
Cunningham, Inc., E. T. 30-31	
Emerson Elec. Mfg. Co. 44	Simplex Radio Co. 43
Emerson Radio & Phono. Corp. 11	Stromberg-Carlson Tel. Mfg. Co. 2
	Tung-Sol Radio Tubes, Inc. 9
Fada Radio & Elec. Corp. 4-5	
Fleron & Son, Inc., M. M. 52	United American Bosch Corp. 3
Freed Radio & Television Corp. 12	
General Electric Co. 50-51	Zenith Radio Corp. Inside Front Cover, 1
Grigsby-Grunow Co. 45-46	
Hygrade-Sylvania Corp. Back Cover	
International Resistance Co. 40	
Kato Eng. Co. 52	
Kelvinator Corp. 8, 10	
Mallory & Co., Inc., P. R. Front Cover	
Noblitt Sparks Industries, Inc. 6	
Ohio Carbon Co. 38	

SEARCHLIGHT SECTION

Classified Advertising

Classification	Page
EMPLOYMENT	53
REPAIRING	53
RADIO STOCKS	
Fulton Radio Co.	53
Grebe Radio Sales & Serv. Co.	53
Sales on Sound Corp.	53
Triangle Appliance Co.	53

McGraw-Hill Publishing Company, Inc., 330 West 42d Street, New York, N. Y. Branch offices: 520 North Michigan Ave., Chicago; 883 Mission St., San Francisco; Aldwych House, Aldwych, London, W. C. 2; Washington; Philadelphia; Cleveland; Detroit; St. Louis; Boston; Greenville, S. C. James H. McGraw, Chairman of the Board; Malcolm Muir, President; James H. McGraw, Jr., Vice-President and Treasurer; Mason Britton, Vice-President; Edgar Kobak, Vice-President; H. C. Parmelee, Vice-President; Harold W. McGraw, Vice-President; E. R. Putnam, Secretary. Member A.B.F. Member A.B.C. Printed in U. S. A.

NEW RADIO SENSATION SELLS ON SIGHT



Patent Applied for

JOBBER DEALERS ACT NOW

Radio Keg

TRADE MARK

Something New in Radio—RADIO KEG.

Right now people are "beer minded"—Here's the first real opportunity for the radio trade to tie in with the big idea of the day. You can sell this number—in fact, it sells itself wherever shown. A timely, up-to-the-minute, small portable quality radio. New, unique, in design. A fast moving number, all dealers say.

Take advantage of the opportunity that RADIO KEG offers. Increased sales—quick profits.

Radio Keg has tone qualities unsurpassed. A good looking instrument, too. Encased in a small quarter-sawed white oak keg. Beautifully finished in walnut, bound with highly polished copper hoops and copper spigot. Modern designed escutcheons and knobs . . . illuminated dial . . . mounted on a stand. Five tube super-heterodyne a.c., or d.c., covers complete broadcast band and gets police calls, operates on 110 volts, employing tubes of brand new type. Dynamic speaker, heat dissipating cord, automatic volume control. Selective . . . Sensitive . . . tremendous volume. Dimensions: diameter 8" ends; height (center) 10"; length 12". Carefully engineered and offered only after severe and exacting tests. Assures distributors, jobbers and dealers sales and satisfaction. Moderately priced.

Be the first in your territory to show RADIO KEG

R. K. RADIO LABORATORIES, Inc.
6300 Northwest Highway.
CHICAGO, ILL.

JOBBER DEALERS WRITE

Please mail at once your Merchandising Plan on RADIO KEG.

NAME

ADDRESS
If Dealer—
Your Jobber's Name

HERE'S THE SALES CLINCHER YOU'VE

BEEN

LOOKING FOR!



The
SHELVADOR

U. S. PATENT 1898922

An exclusive patented
feature of the
New CROSLEY
Electric
REFRIGERATOR

Only Crosley Offers It

And remember—only the Crosley Electric Refrigerator can use the Shelvador; for it is an exclusive, patented Crosley feature. Insulation is not sacrificed in the Shelvador—the exterior of the door is extended to permit the use of a standard thickness of insulation.

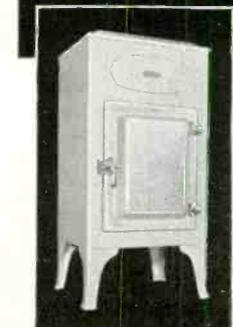
In addition to the Shelvador, the Crosley Electric Refrigerator—famous last year for its trouble-free, service-free operation, has been refined in several points to make it even better. See your nearest Crosley distributor or write direct to factory.

The Shelvador doesn't need explaining. One glance and the story is told. What a show-room and show-window feature!

With the Shelvador you're a mile ahead of competition. You have something every housewife wants in her new electric refrigerator or is sorry she hasn't in her present one.

Increases "Usable" Capacity 50%

Shelvador actually makes the "small" refrigerator "larger" by increasing the "usable" space. It saves the annoyance of "feeling around" for small, hard-to-find objects . . . puts them where they are easily reached.



Here is the most sensational selling feature ever thought of in ELECTRIC REFRIGERATION . . . the most sensational advance in cabinet design since the first ice box was brought out . . . a feature so self-evident, so new, so convenient and helpful that every housewife after one glance will say: "That's what I must have!"

MODEL D-35 NET contents — 3 1/2 cubic feet. Shelf area—8 square feet. Overall Dimensions: Height, 50 3/4"; Width, 23 3/4"; Depth, 24"; Leg Height, 10 7/8"; No. ice trays, 2; No. ice cubes, 42.



WITH SHELVADOR
\$89.50

MODEL D-45 NET contents — 4 1/2 cubic feet. Shelf area—10.6 square feet. Overall Dimensions: Height, 56 3/4"; Width, 23 3/4"; Depth, 24"; Leg Height, 10 7/8"; No. ice trays, 3; No. ice cubes, 63.



WITH SHELVADOR
\$99.50

MODEL D-60 NET contents—6 cubic feet. Shelf area—11.5 square feet. Overall Dimensions: Height, 57 1/2"; Width, 29 3/4"; Depth, 25 3/4"; Leg Height, 10 7/8"; No. ice trays, 3; No. ice cubes, 63.



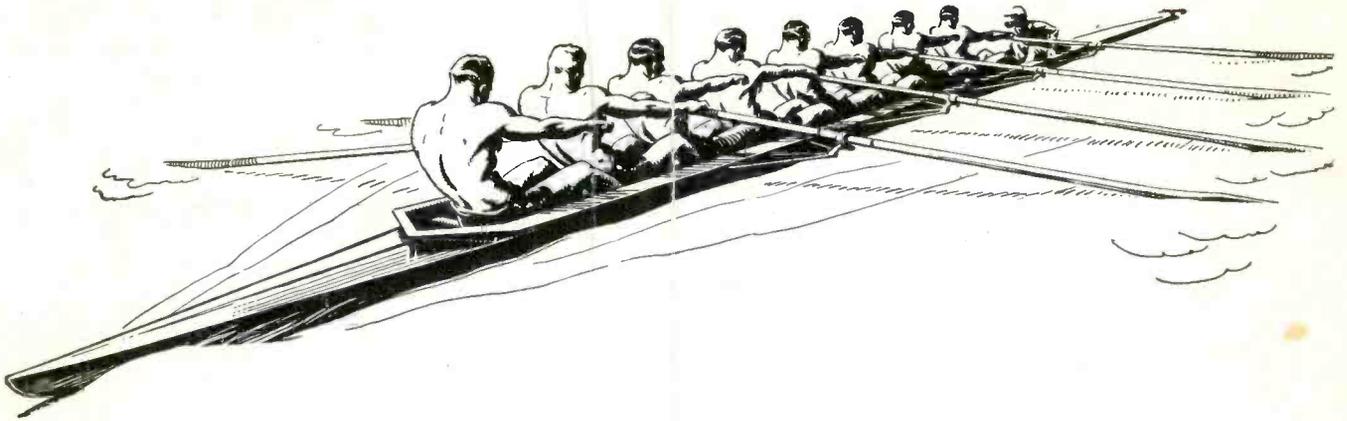
WITH SHELVADOR
\$130

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher
The Crosley Radio Corporation - Cincinnati
POWELL CROSLEY, Jr., President. Home of "the Nation's Station"—WLW

CROSLEY *Electric* **REFRIGERATOR**
WITH SHELVADOR
U. S. PATENT 1898922

Pulling...



Their weight in the boat

ABSENTEE owners have never controlled the destinies of the Hygrade Sylvania Corporation.

The men who own the major portion of the stock are all active in managing the business. They work hard. They put the success of their company above all else. They pull their weight in the boat.

This unswerving loyalty to one ideal is a large part of the reason why Hygrade Sylvania has increased its financial and dealer strength, even during the years of depression. Throughout 1930, 1931, 1932 . . . and today . . . the company's credit rating has always been AAA1.

The radio set owner has been given a high quality, carefully inspected tube. The radio set manufacturer has had expert

technical help and advice. It was Hygrade Sylvania who first pioneered the development of new and more efficient tubes for automobiles . . . and later, the new 6.3 volt group of tubes.

Dealers and jobbers have had the support of continued advertising, of fair price protection policies. Strong selling pressure from popular musical radio programs, and the fine quality of Sylvania Tubes themselves, provide unmatched sales opportunities.

The support of a company like the Hygrade Sylvania Corporation can mean much to your business. Write us for further details. A letter puts you under no obligation. Hygrade Sylvania Corporation, Sylvania Division, Emporium, Penna.



Sylvania

(Reg. U. S. Pat. Off.)

THE SET-TESTED PAID