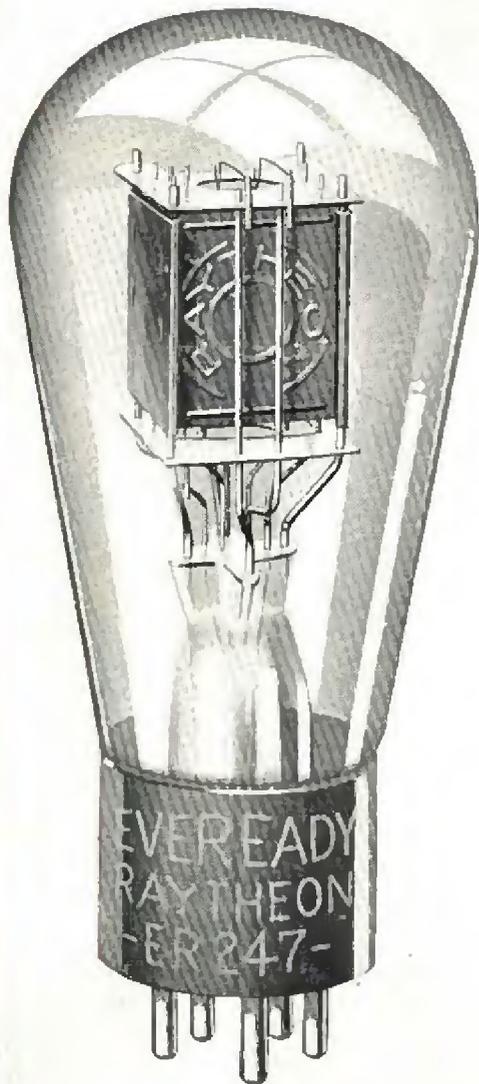


# RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

## EVEREADY RAYTHEON

### LEADS AGAIN IN CONSTRUCTION OF NEW 4-PILLAR PENTODE TUBE



MAKE this test right now — compare the 4-pillar power output Pentode tube with others. In the 4-pillar tube, you will notice:

- (1) Large clearances between electrodes, which helps to insure uniform characteristics.
- (2) Large radiating area to dissipate heat, contributing to safe operating temperature and long life.
- (3) Elements rigidly spaced both top and bottom, with a large number of supporting lead-wires.
- (4) *Four* sturdy pillars, one at each corner of a square, support the heavy elements. This is the *4-pillar construction*, an improvement more necessary than ever, in Pentode tube construction.

You can *hear* the difference and *see* the reason.

NATIONAL CARBON COMPANY, INC.

General Offices, New York, N. Y.

Branches: Chicago, Kansas City, New York, San Francisco

Unit of Union Carbide  and Carbon Corporation

## 4-PILLAR RADIO TUBES



## The lookout calls from the mast-head.

Perched far above the deck of the ship, the lookout man is in a position to sweep the farthest horizon. In industry, business leaders and the men at the top can see farther ahead than the rest of us.

The call from the mast-head now tells definitely of clearer horizons and fairer weather

ahead. Far-sighted dealers are preparing themselves now for this future business with fewer lines and merchandise of unquestioned quality and established reputation.

*Brunswick Radio Corporation*  
 MANUFACTURERS OF RADIO, PANATROPE AND  
 THE WORLD-FAMOUS BRUNSWICK RECORDS  
 NEW YORK — CHICAGO — TORONTO  
 SUBSIDIARY OF WARNER BROS. PICTURES, INC.



BRUNSWICK LOWBOY  
 MODEL 15

Armored chassis with 3 screen-grid tubes and two 45's in parallel. Uni-Selector and Illuminated Horizontal Tuning Scale. Tone Control. Cabinet of seasoned and selected hickory with carved front panels. **\$139.50**  
 Other models \$170 up (trans tubes)

# BRUNSWICK RADIO

# RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

O. H. CALDWELL, *Editor*

RAY V. SUTLIFFE, *Managing Editor* . . . W. W. MACDONALD, *Technical Editor* . . . T. H. PURINTON, *Assistant Editor* . . . HARRY PHILLIPS, *Art Director* . . . M. E. HERRING, *Publishing Director* . . . C. GRUNSKY, *San Francisco* . . . P. WOOTON, *Washington*

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### A Good "Second Best"—

Five red-letter days for the radio trade occur this month—the five days of the RMA Trade Show at Chicago. For the radio season really begins with *The Show*, where new models around which business revolves for the rest of the year first appear.

Every dealer who can delegate the job of "sweeping out" to someone else for a week will be on deck at the Stevens when the doors open. But those who cannot go must choose a "second

1931		JUNE					1931	
SUN	MON	TUE	WED	THU	FRI	SAT		
	1	2	3	4	5	6		
7	8	9	10	11	12	13		
14	15	16	17	18	19	20		
21								

best" method of familiarizing themselves with 1931 equipment. That "second best" method is to open Radio Retailing's June Trade Show Number to the special, eight-page pictorial section which will be devoted to new home entertainment merchandise exhibited at Chicago. In it will be found pictures, prices of the new radio sets, home-talkie devices and television receivers just as they will be shown at the Stevens—a "Show on Paper!"

McGRAW-HILL PUBLISHING COMPANY, INC., Tenth Ave. at 36th St., New York, N. Y.

Cable Address: "Machinist, N. Y."

JAMES H. MCGRAW, Chairman of the Board  
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LOS ANGELES, 632 Chamber of Commerce Bldg.  
LONDON, Aldwych House, Aldwych, London, W. C. 2

Member A.B.P. Member A.B.O. Printed in U.S.A.

# *An Enviably* MERCHANTISING RECORD

## *Guarantees the Value of a Stromberg-Carlson Franchise*

**T**HE Stromberg-Carlson franchise has always been fearlessly and justly administered, without favoritism . . . .

The factory has never reduced its consumer prices . . . .

Over-production has never necessitated dumping . . . .

No receiver has ever been dropped from the Stromberg-Carlson line until dealers' inventories are exhausted . . . .

Careful zoning of dealers has prevented over-crowding . . . .

The all-important principles which we have stated in this and previous advertisements give a Stromberg-Carlson franchise a real money value for the dealer.

By maintaining one of the most completely equipped acoustical laboratories in the world, Stromberg-Carlson insures that its product shall at all times represent the latest advancements known to the radio science.

Stromberg-Carlson has recently put into effect a workers' unemployment insurance plan. Such a plan is based on a manufacturer giving practically continuous employment to a standard-sized force of workers throughout the year—making for the development of expert workmen which is reflected in the quality of the product, and preventing mass seasonal production, which many times is *over-production*. A manufacturer who makes radio alone could not take this measure, as Stromberg-Carlson has done, which is so humane in itself, and results in such a high type of workmanship.

Stromberg-Carlson unsurpassed quality Receivers range in price from \$155 to \$369.  
The Multi-Record Radio, (automatic radio-phonograph combination, electrical), \$645.  
(Prices, less tubes, East of Rockies.)

*Listen to the Stromberg-Carlson Hour Monday Evenings in a Coast-to-Coast Broadcast of the Rochester Civic Orchestra over the NBC Blue Network and Associated Stations.*

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



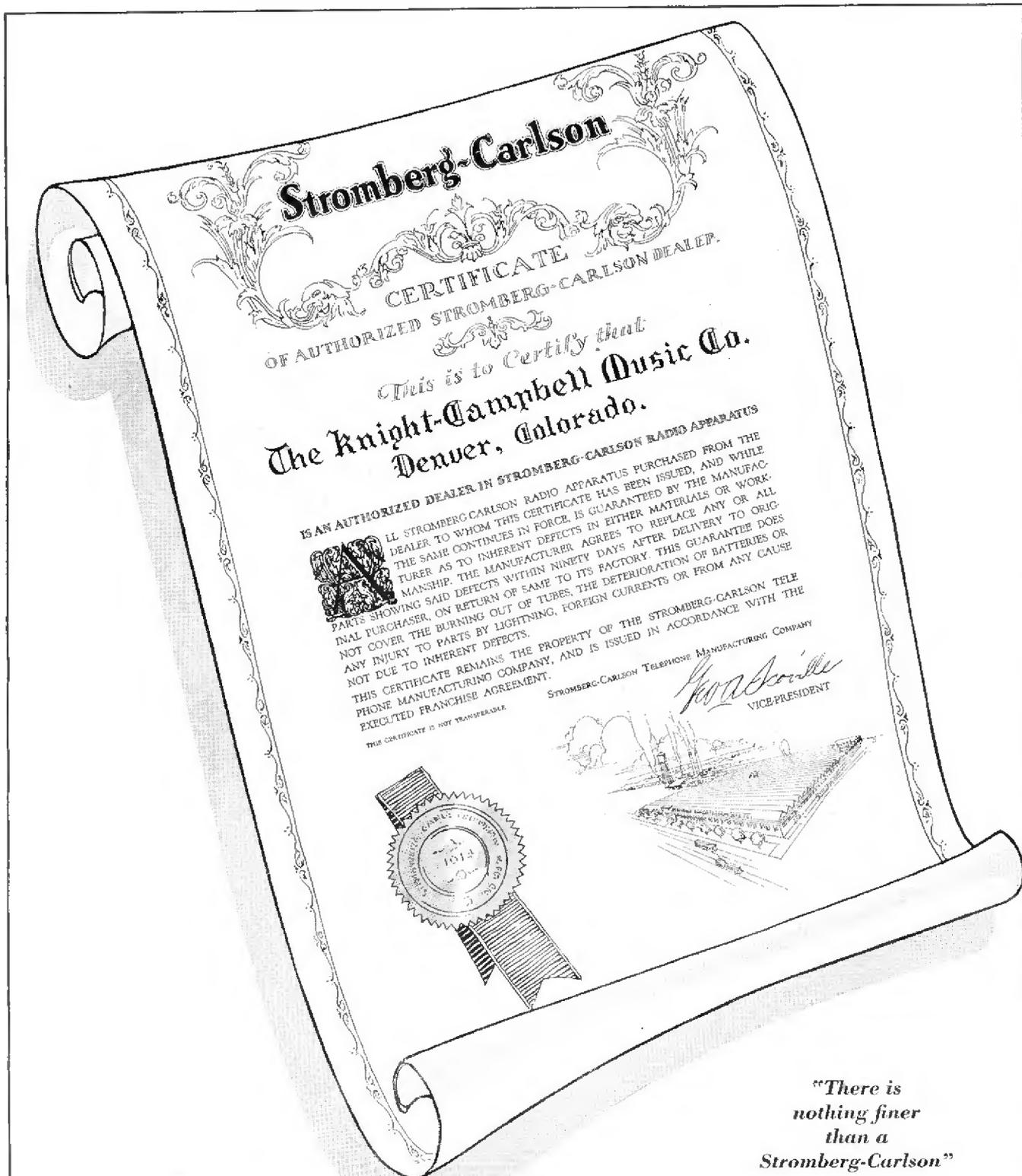
1894

# Stromberg-Carlson

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



1931

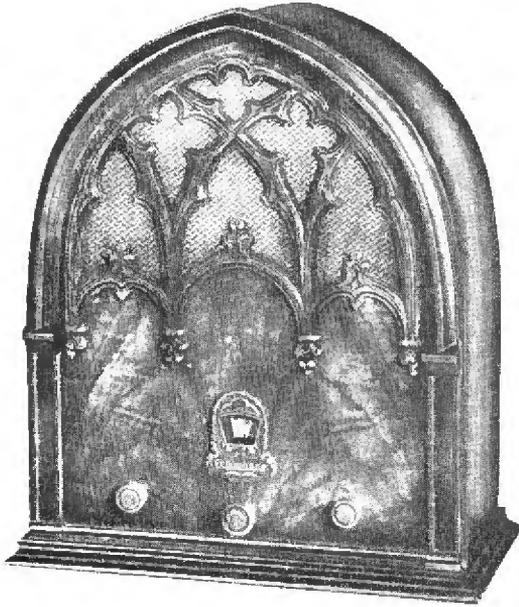


*"There is nothing finer than a Stromberg-Carlson"*

*The list of outstandingly good merchants who are Stromberg-Carlson dealers, includes:—*

- |   |   |  |  |
|---|---|--|--|
| <b>The Baldwin Piano Co.</b><br>Cincinnati        | <b>Davega, Inc.</b><br>New York City            | <b>J. L. Hudson Co.</b><br>Detroit           | <b>Noll Piano Co.</b><br>Milwaukee     |
| <b>Barker Brothers, Inc.</b><br>Los Angeles       | <b>Des Moines Music Co., Inc.</b><br>Des Moines | <b>Kunkel Piano Co.</b><br>Baltimore         | <b>Smerda Music House</b><br>Cleveland |
| <b>Bush &amp; Gerts Music Co., Inc.</b><br>Dallas | <b>Haynes-Griffin, Inc.</b><br>New York City    | <b>McCoy's, Inc.</b><br>Hartford             | <b>John M. Smyth Co.</b><br>Chicago    |
| <b>Cressey &amp; Allen</b><br>Portland, Ore.      | <b>O. K. Houck Piano Co.</b><br>Memphis         | <b>Metropolitan Music Co.</b><br>Minneapolis | <b>Volkwein Brothers</b><br>Pittsburgh |

*Watch for other outstandingly good merchants in subsequent issues.*



# Echophone

WILL MAINTAIN ITS  
LEADERSHIP

R.M.A. SHOW, STEVENS HOTEL,  
CHICAGO, WILL BE THE  
PROVING GROUNDS

DEPTH: SIX INCHES (INDIVIDUALLY DIFFERENT)

WEIGHT: 23 LBS. (COMPARE IT WITH OTHERS)

**\$69.50 SUPERHETERODYNE \$69.50**  
(complete with tubes)

# E C H O P H O N E

ECHOPHONE, long recognized in the radio industry as an instrument of the finest proven quality in every detail, now challenges the world for superlative performance superiority under all conditions.

Echophone is unique in the compact arrangement of unit construction. Amazingly sensitive, it penetrates to extreme distances. Highly developed selectivity permits you to USE its great power without restraint or fear of interference by close-in stations.

Complete Exhibit—Radio Manufacturers Exposition, Stevens Hotel,  
Week of June 8th—Booth No. 52, Exhibition Hall. Demonstration  
Rooms 556-557, Stevens Hotel

---

**ECHOPHONE RADIO MFG. CO., LTD.**

FACTORY: 104 LAKEVIEW AVE., WAUKEGAN, ILL.

EXPORT OFFICE: 44 WHITEHALL ST., NEW YORK CITY

# It's Easy To Identify 1931 Tubes

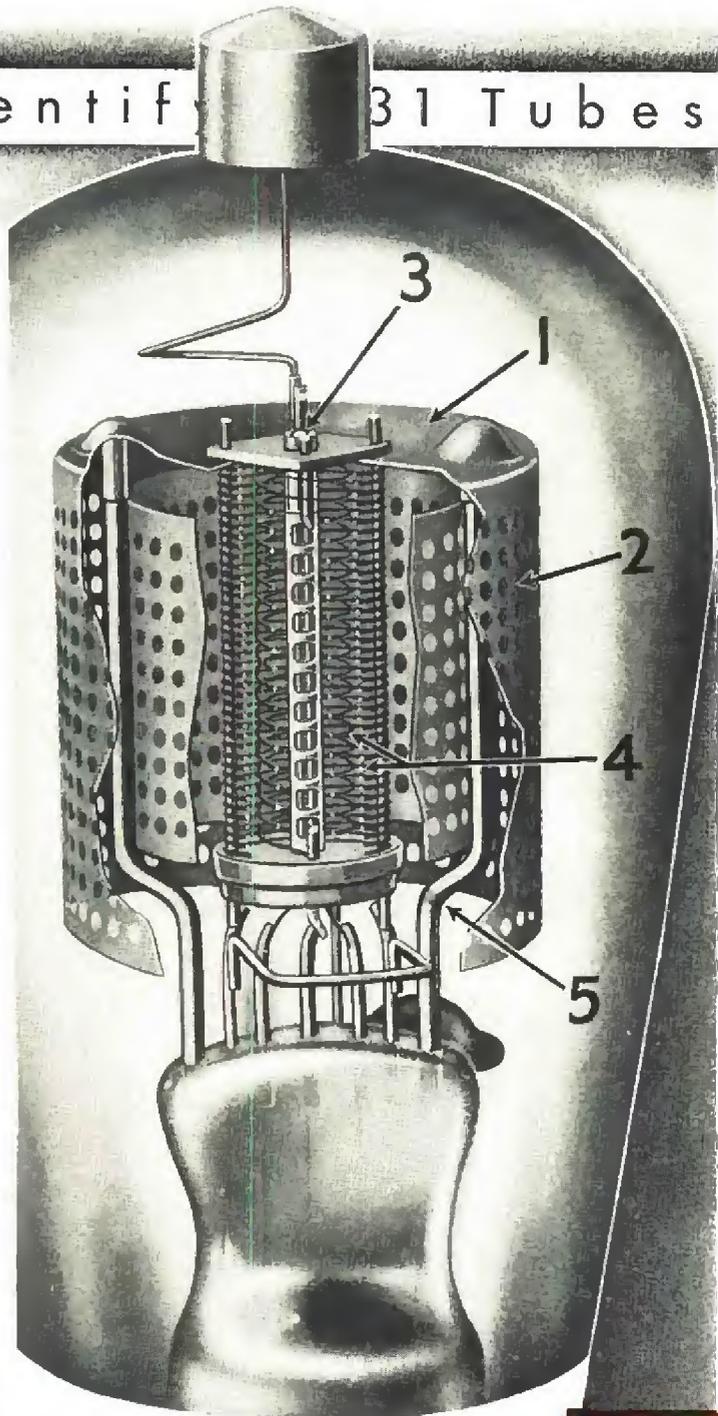
## Look for Clean-Cut Screen-Grids

Minimum metal for maximum electrical and mechanical strength—that is the true test of a screen-grid tube. De Forest engineers have attained those prerequisites by

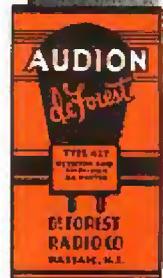
1. Plate instead of mesh for greater degassification, increased strength and closer tolerances.
2. Perforations to decrease possible secondary emission.
3. Patented De Forest notched cathode insulator for practical quick-heater performance.
4. Molybdenum wire for both grids, costing 20 times as much as nickel. Higher melting point permits greater degassification.
5. Continuous support for outside screen, insuring maximum rigidity.

These and many other advanced features found in every type of Fresh De Forest Audion, insure the 1931 performance of any radio set.

*This is the fifth of a series of debunking messages dealing with 1931 radio tube features. The entire story can be sent to you immediately, upon request.*



**de Forest**  
AUDIONS  
**RADIO TUBES**



DE FOREST RADIO CO., PASSAIC, N. J.

After all, there's no substitute for 25 years' experience





## SHADOWS OF COMING EVENTS

*that will concern every radio dealer*



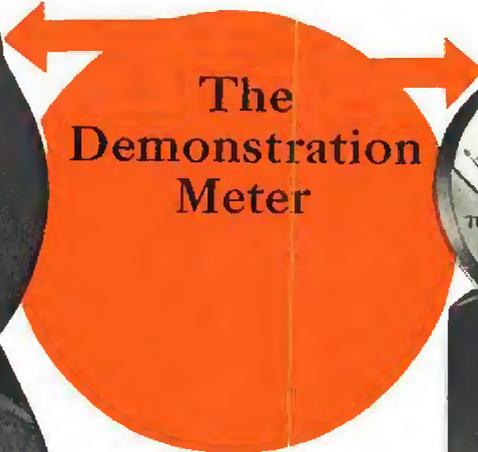
Naturally radio dealers everywhere are looking forward with great interest to the annual R. M. A. Convention at Chicago in June, when the future course of radio sales effort will be definitely indicated.

We at Dayton expect to offer significant contributions in line with our policy of "building for the future by building right." Several new developments of our laboratories will, we believe, attract wide attention when presented in June. The precise nature of these developments—technical and artistic—cannot be disclosed at present, but forward-looking dealers need only this assurance: Whatever is new in a General Motors Radio product will hold to that standard of quality which has firmly established this radio in public esteem.

# GENERAL MOTORS RADIO CORPORATION

DAYTON, OHIO

# Jewell "Tube-Sellers" Revolutionize Tube Merchandising!



**PUT** the Jewell Pattern 214 Tube-Seller on your counter and make some real tube profits.

Radio stores all over the country have proven that installation of impressive tube-test equipment never fails to double, and in many instances has been known to multiply by 5 or 6 the existing volume.

Let the Demonstration Meter show your customer the difference between the readings of his old tubes and the new tubes you are selling him.

For the convenience of the salesman a smaller meter on the test panel also gives the tube value. There are charts of tube test values conveniently placed so that both customer and salesman can simultaneously determine the condition of a tube.

The Pattern 214 Tube-Seller also provides:  
 A Short-Checker  
 Tube Pre-Heater  
 Tests for Pentode Tubes  
 and the most accurate tube test circuit available at a price within the means of the radio dealer.

There are extra large profits waiting for the dealer in each community who first features this revolutionary merchandising method. Write for a descriptive booklet today.



**Pattern 219 Tube-Seller**  
 For the dealer who wants the Demonstration Meter feature and a very compact counter type tube checker, the Pattern 209 Counter Type Checker is available with the Pattern 213 Demonstration Meter.  
 Owners of Pattern 209 Tube Checkers may purchase the 213 meter separately. Use coupon to write for complete details.

31 YEARS MAKING GOOD INSTRUMENTS  
**JEWELL**



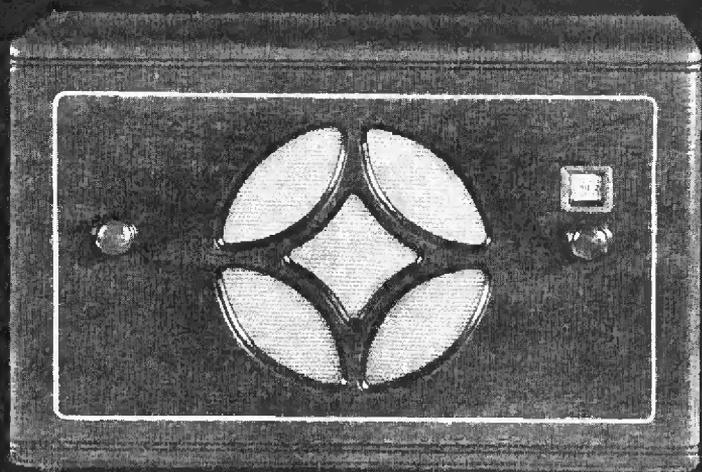
**JEWELL ELECTRICAL INSTRUMENT CO.**  
 1642-A Walnut St., Chicago, Ill.

Please send immediately a bulletin describing the new Jewell Tube-Sellers.

Name .....

Address .....

# AMERICAN BOSCH RADIO



\$43<sup>50</sup>

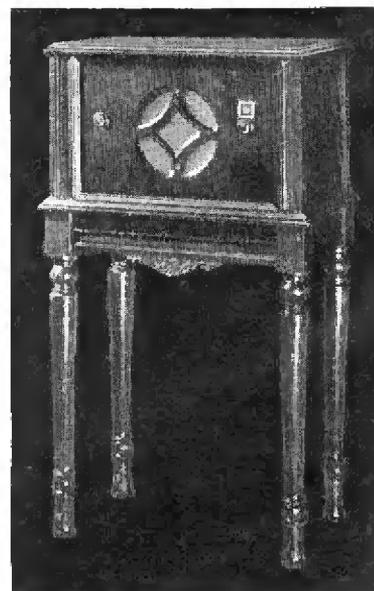
COMPLETE  
WITH TUBES

*Announcing the personal radio set*

**THE BEST IN RADIO**

American Bosch Radio, always known for its high quality, is now presented in two new Pentode tube models which instantly create a desire to own one or both. The Model 5 chassis is new in circuit and new in mechanical design. There are five tubes—one pentode, three screen-grid and one 280. Advanced engineering provides great amplification, undistorted volume with surprising sensitivity and selectivity. The tonal quality is amazing. The model 5A has a solid mahogany, no veneer, case 14 $\frac{1}{4}$ " long, 8 $\frac{3}{4}$ " high and 6 $\frac{3}{4}$ " deep. The model 5B—all walnut with patterned veneer front panel is 32 $\frac{1}{4}$ " high, 17 $\frac{3}{4}$ " wide and 10 $\frac{5}{8}$ " deep.

These new models are forerunners of a quick-stepping line of quality radio with such attractiveness that it sells on sight. To save time, get the full story of this most attractive program of one of the most stable manufacturers in the industry, from the American Bosch jobber in your territory or write us if you prefer.



Model 5B Consolette — walnut cabinet with patterned veneer front panel. Complete with tubes . . . \$53.50

**UNITED AMERICAN BOSCH CORPORATION**  
SPRINGFIELD, MASS. • Branches: NEW YORK • CHICAGO • DETROIT • SAN FRANCISCO

American Bosch Radio is licensed under patents and applications of R. C. A., R. F. L., and Lektophone. Prices slightly higher west of the Rockies.



**PZ PENTODE**

High mutual conductance and exceptional sensitivity are features of this new Arcturus Tube. Because it is approximately 5 times as sensitive as a '25 power output tube, it brings greater volume with less distortion, and insures smoother reception.

**551 VARIABLE-MU**

Double pre-selectors, dual volume controls, and "local-loss, distance" switches are eliminated by this new tube. Receiver hiss is reduced, crosstalk is divided by 200, and there is no distortion even when signal input voltages are increased 100 times. Circuits using this new tube are simpler as well as more efficient.

Visit our Booth at the R.M.A. Trade Show, Chicago, June 8-12

*These two tubes*  
blazed the way to

**1931 RADIO IMPROVEMENTS**

At the 1931 R. M. A. Trade Show many new radio receivers will use Pentode and Variable-Mu Tubes.

Arcturus has an unusual interest in these improved sets, for Arcturus Tubes played an important part in their design.

In 1928, long before Pentode circuits were considered commercially, Arcturus sent sample Pentode Tubes to several manufacturers. Today's Pentode receivers are based on the characteristics of these early Arcturus Tubes—the Arcturus Pentode of 1931 is fundamentally the same as the Arcturus Pentode of 1928.

Again, in 1930, Arcturus assisted in the development of the Variable-Mu Tube. Most Variable-Mu receivers follow the characteristics of these Variable-Mu Tubes, justifying Arcturus' endeavor to anticipate the trend of radio progress.

Arcturus is proud to have once again introduced two tubes that are approved by leading radio manufacturers, and have helped bring about fundamental radio improvements. This is typical of Arcturus' pioneering spirit. Arcturus will always offer the latest types of tubes, insuring Quick Action and Lifelike Tone for the most up-to-date radio receivers.



**ARCTURUS RADIO TUBE COMPANY, NEWARK, N. J.**

**ARCTURUS**

# NORGE in 15,000 Detroit

## Kitchens . . . and only One Service Man



### NORGE ELECTRIC REFRIGERATOR

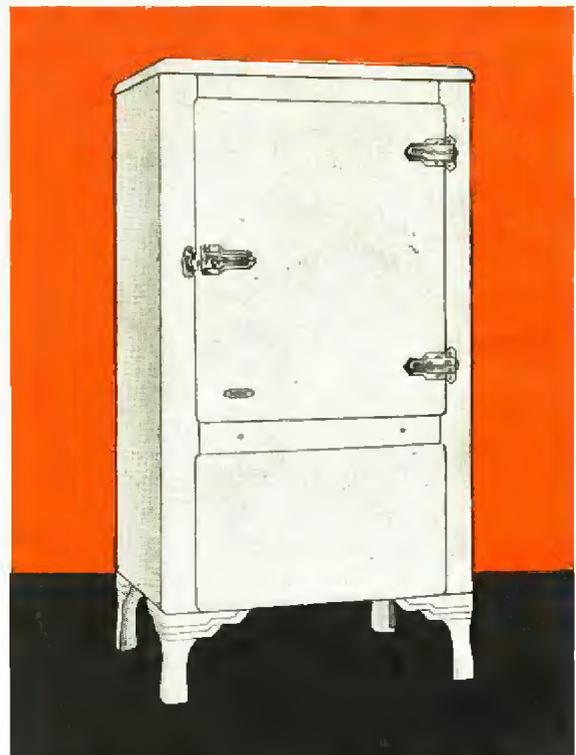
There are more than 15,000 Norge Electric Refrigerators in use in Detroit, but summer and winter they go on giving such unflinching performance that one service man is actually kept only normally busy taking care of them.

This phenomenal condition exists because of Norge mechanical superiority. The Rollator is a compact, powerful and simple refrigeration mechanism . . . it's just a roller revolving in a permanent bath of protective oil . . . it has but three moving parts.

Norge is a time tested refrigerator that has proved itself in world-wide use over a period of six years.

To users it offers complete refrigeration satisfaction and to dealers it offers package merchandise; a short line, service free; small investment and rapid turnover.

A potent advertising and merchandising campaign is now establishing wide-spread



Norge leadership. The Norge franchise is well worth investigating. For details use the coupon.

Manufactured by Norge Corporation, Detroit, a division of Borg-Warner, originators of free wheeling.

# NORGE WITH ROLLATOR

Norge Corporation, 654 East Woodbridge St., Detroit, Mich. I would like full information on Norge and the Merchandising Plan.

Name.....  
Address.....  
City..... State.....

EVERY AMERICAN CAR MADE TODAY CONTAINS PRODUCTS OF BORG-WARNER CORPORATION

“**C**an't get 'em fast enough!”  
*says a New York dealer*



“Sold 25 in the first half hour!” reports one dealer of the new General Electric Junior. And a distributor announces that he moved 250 in eight minutes' time.

That's the story wherever the Junior has been introduced. Why? Because here is a small set that is priced right down to the market—with quality clear up to General Electric's standard. It's the greatest value in a small radio that a dealer ever offered to his trade! Order from your distributor.

### The General Electric Junior

8-tube screen-grid superheterodyne. Full-sized dynamic speaker. Walnut cabinet in 18th century mantel clock design. Antique bronze handle for carrying. A red-hot number for quick sales!

Complete with Radiotrons, *List Price*

**\$7250**

THE JUNIOR WITH CLOCK  
 Complete with Radiotrons, *List Price* **\$8450**

THE JUNIOR CONSOLE  
 Complete with Radiotrons, *List Price* **\$8950**

GENERAL  ELECTRIC  
 FULL RANGE RADIO

Merchandise Department, General Electric Co., Bridgeport, Conn.

# HOME TALKING MOVIES AT AMAZINGLY LOW PRICES

RADIO'S NEW



OPPORTUNITY

Moving pictures—TALKING moving pictures, for the HOME! The Sprague Visivox furnishes this new opportunity for dealers in a compact, good-looking instrument which projects home movies, talking movies and plays any size record when you desire to use it as a phonograph. ¶Dealer franchises are being awarded now—but no dealer could possibly visualize the full possibilities of this machine without learning the great potential market that exists. ¶Backed by national advertising, boasting of a number of exclusive features, presented with a strong sales promotion campaign, the Sprague Visivox deserves the earnest consideration of every dealer who wants to increase his volume and his profits.

Write today for full information. Address Dept. 6

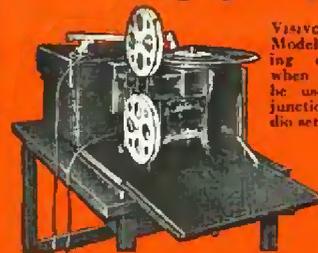
**SPRAGUE SPECIALTIES COMPANY**  
1215 Hancock St  
QUINCY, MASS.



Visivox, Model C. Complete Talking Moving Picture projector in handsome walnut cabinet. List \$189.



Visivox (Portable) Model A. Showing compactness when closed. To be used in conjunction with radio set.



Above—Model A open and ready for projection. List \$119.00

To left—Model B, used with Model A where no radio is available. List \$50  
A and B combined; entirely complete, portable machine. List \$169

# SPRAGUE VISIVOX

THE HOME TALKING MOVIES

**T**  
**HIS**  
*Exact*  
**MARKET IS PROFITABLE**  
**to**  
**KELLOGG**  
**TUBE DEALERS**



Every owner of every set listed below is a customer in the great Kellogg 401 A.C. tube market. This is the only tube that owners of these sets can use for replacements.

KELLOGG Sets—510, 511, 512, 514, 515, 516, 517, 518, 519, 520, 521. McMILLAN Sets—26, 26PT. MOHAWK Sets. SPARTON Sets—62, 63, A.C. 7. DAY FAN Sets—5143, 5144, 5145, 5148, 5158. MARTI Sets—TA2, TA10, DC2, DC10, CS2, CS10, 1928 Table, 1928 Console. CLEAR-TONE Sets—110. And the first A.C. models of the following: Bell, Walbert, Wurlitzer, Pathe, Shamrock, Bush & Lane, Minerva, Crusader, Liberty, Metro, Supervox, and Case.

Here is a market already established for you—an opportunity that you cannot afford to miss. Kellogg 401 tube sales bring \$2,500,000 to progressive dealers annually. Get your share of this profitable business by supplying the demand for Kellogg tubes in your locality. Stock and display them now. Write department 51 for the name of your nearest Kellogg tube jobber.



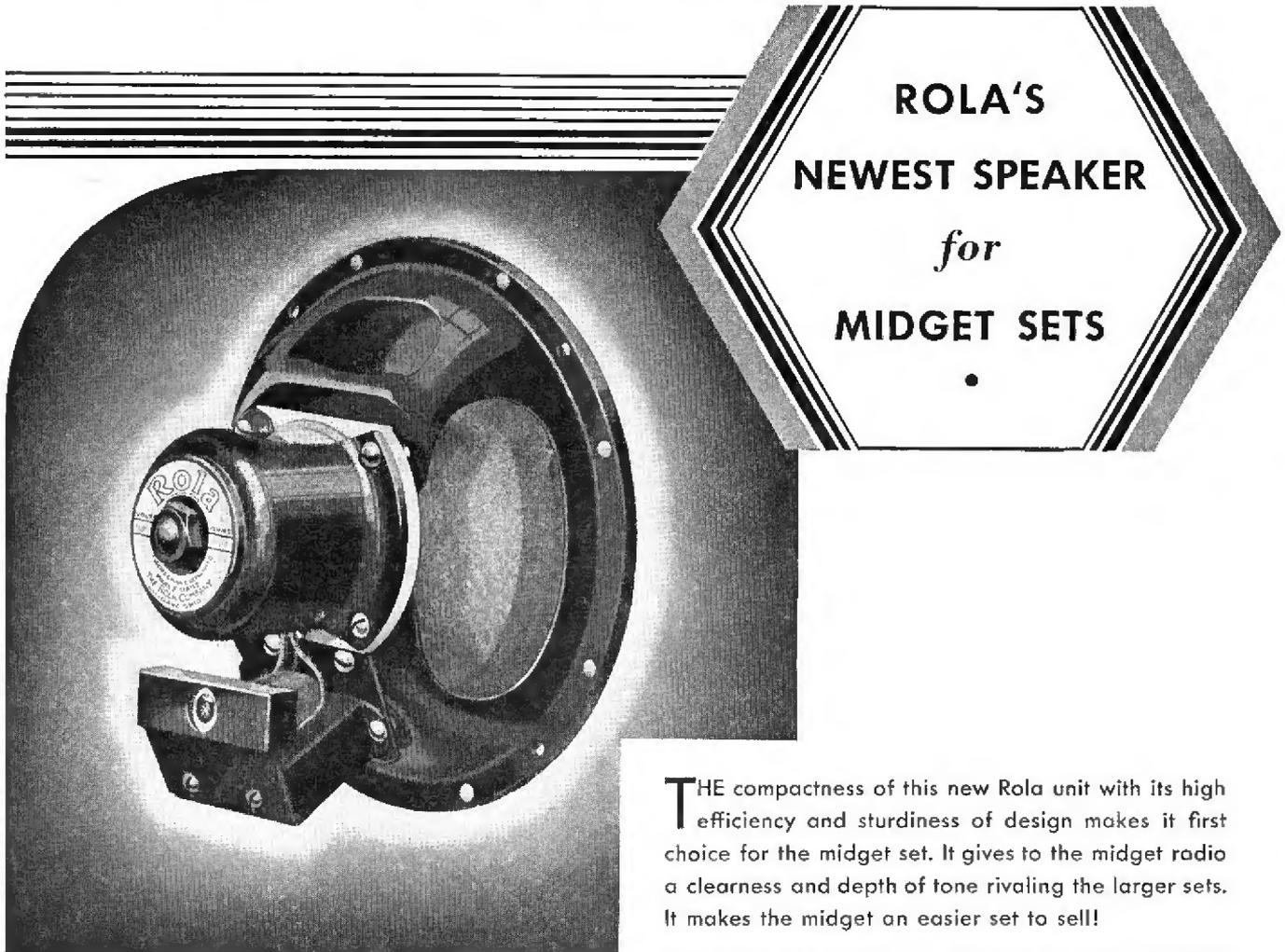
**KELLOGG**

**SWITCHBOARD AND SUPPLY COMPANY**

1066 W. ADAMS ST.

**CHICAGO**

• • *Now*  
**MODEL F**

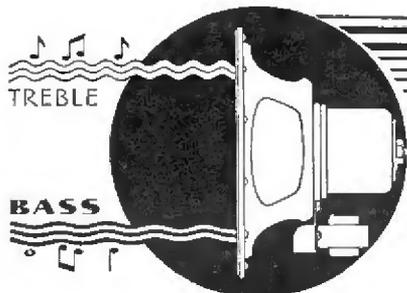


Visit the Rola exhibit at the R. M. A. Trade Show in Chicago, June 8-12. Booth B1-A in the Hotel Stevens Ballroom

**T**HE compactness of this new Rola unit with its high efficiency and sturdiness of design makes it first choice for the midget set. It gives to the midget radio a clearness and depth of tone rivaling the larger sets. It makes the midget an easier set to sell!

Make sure the sets you sell are equipped with Rola Speakers. You can readily identify Rola speakers by the Rola trade-mark or by Rola's distinctive design. If you find your sets are not Rola-equipped ask your manufacturers to demonstrate with Rola Speakers. You will then understand the reason for Rola's popularity among the better set manufacturers. A complete description of the Rola Speaker, together with the advantages in their use, awaits your request. Write today!

**ROLA**  
**SPEAKERS**  
*for better*  
*Radio Reception*

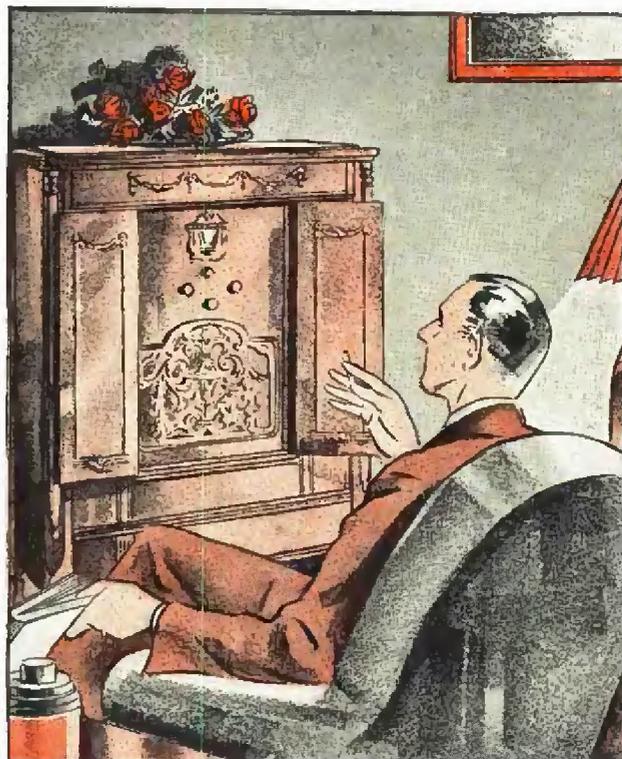


**THE ROLA COMPANY**  
 2568 Superior Ave. Cleveland, Ohio

Manufacturers of Loud Speaker Units for Midget . . . Automobile and Console Sets . . . Also high power Loud Speakers for Public Address Systems and Talking Pictures.

# "MY RADIO GAVE ME A NEW SLANT ON SELLING"

"I've noticed lately how manufacturers use their radio programs to supplement their printed publicity. And I've seen the successful dealers display the advertised products when the ads appear. The leading merchant in my town calls it *cashing in*... and says it pays."



You can obtain prompt delivery of everything electrical from a General Electric Supply Corporation wholesale warehouse near your store.

You gain the benefits of a complete merchandising program when you buy your electrical requirements from the General Electric Supply Corporation. National publicity, local advertising, display material, and resale plans... all coordinated to produce maximum returns. Greater sales always result from such team-work, such cooperative effort.

Your store will sell more of the electrical merchandise used in your territory... and you will make a greater *net* profit... when you concentrate your efforts on a well advertised line that wins instant acceptance.

GENERAL  ELECTRIC  
SUPPLY CORPORATION

# SET-TESTED

**means**  
**satisfaction to**  
**every tube buyer**



**T**hink what it means to make tube-sales quickly, easily—and often! That is what the Sylvania Set-Tested Chart does—and in the simplest possible way.

When a man asks for radio tubes he wants to know *what make* is right for his set. He knows you can give him tubes that fit the sockets . . . but he is not always sure you can give him the tubes that get the most out of the particular radio he owns.

Sylvania's Certified Test Chart answers this all-important question by telling him that Sylvania Tubes have passed strict tests for tone . . . distance . . . volume . . . sharp tuning . . . *in a set just like his*. It includes a signed statement from Sylvania's Chief Engineer—the man who directs the modern laboratory where skilled scientists work to create for your customers the utmost in tube quality. And at the same time the Sylvania Chart shows you what type of tube belongs with every make listed in this advertisement.

Clip the coupon below. It brings you a copy of this Sylvania Chart absolutely FREE. It lets you judge for yourself what Set-Tested Tubes can do for your sales.

**SYLVANIA PRODUCTS CO.**

EMPORIUM, PA.

Sylvania Radio Tubes

AUDIOLA	GENERAL MOTORS	SPARTON
APEX	GRAYBAR	STAR-RAIDER
ATWATER KENT	GREBE	STEINITE
BOSCH	GULBRANSEN	STERLING
BRUNSWICK	HOWARD	STEWART WARNER
CLARION	KENNEDY	STORY & CLARK
COLONIAL	KOLSTER	STROMBERG CARLSON
CROSLLEY	LYRIC	VICTOR
EDISON	MAJESTIC	VICTOREEN
ERWIN	PHILCO	WESTINGHOUSE
FADA	RADIOLA	ZANEY-GILL
GENERAL ELECTRIC	SILVER MARSHALL	ZENITH
	SIMPLEX	
	SONORA	

# Sylvania

**THE SET-TESTED TUBE**

Licensed under R C A Patents



SYLVANIA PRODUCTS CO.  
Emporium, Pa.

B-5-1

Gentlemen: Please send, without obligation, your new Sylvania Set-Tested Chart for easier tube sales.

Your Name .....

Your Address .....

Jobber's Name .....

# RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

O. H. CALDWELL,  
*Editor*

A MCGRAW-HILL PUBLICATION. ESTABLISHED 1925.

## “Home Entertainment—” *a Coming Major Industry*

FOR eighteen months dollar volume sales of radio has been going down. While the number of sets sold holds up fairly well yet the radio dealer is finding himself doing only about one-half the total business he did in 1929. He recognizes that, *without volume*, he cannot conduct a substantial operation which will return him a profit. The average radio dealer is thus faced with a problem and a dilemma right now—even after he has exhausted the maximum of sales of radio from his territory.

It is time to study the future, and to take a long look ahead.

HOME entertainment offers the radio trade and industry the cue for its next move. On the heels of radio, a whole group of home devices has been developed, selling to the same home prospects, utilizing the same vacuum tubes in operation, and requiring similar installation and servicing skill. The electric phonograph, the home talkie, amplifier outfits, the future “talking book,” and television when it comes—these are the logical fields into which the radio dealer, jobber and manufacturer must next expand.

Here are the “makings” of a new *major* industry.

Grouped together, there is the potentiality of a great expanding business which is founded on one of the most fundamental of human desires—the need for entertainment and instruction. For the “home entertainment” industry has, as well, a real job of cultural training in the family—instructing as it entertains and informing as it amuses.

### *A Five-Year Plan*

A GREAT vision unfolds to the radio man who will only take the trouble to look. It will of course be a matter of gradual development. Not this year, completed. But more fully ripened next year—and the year after.

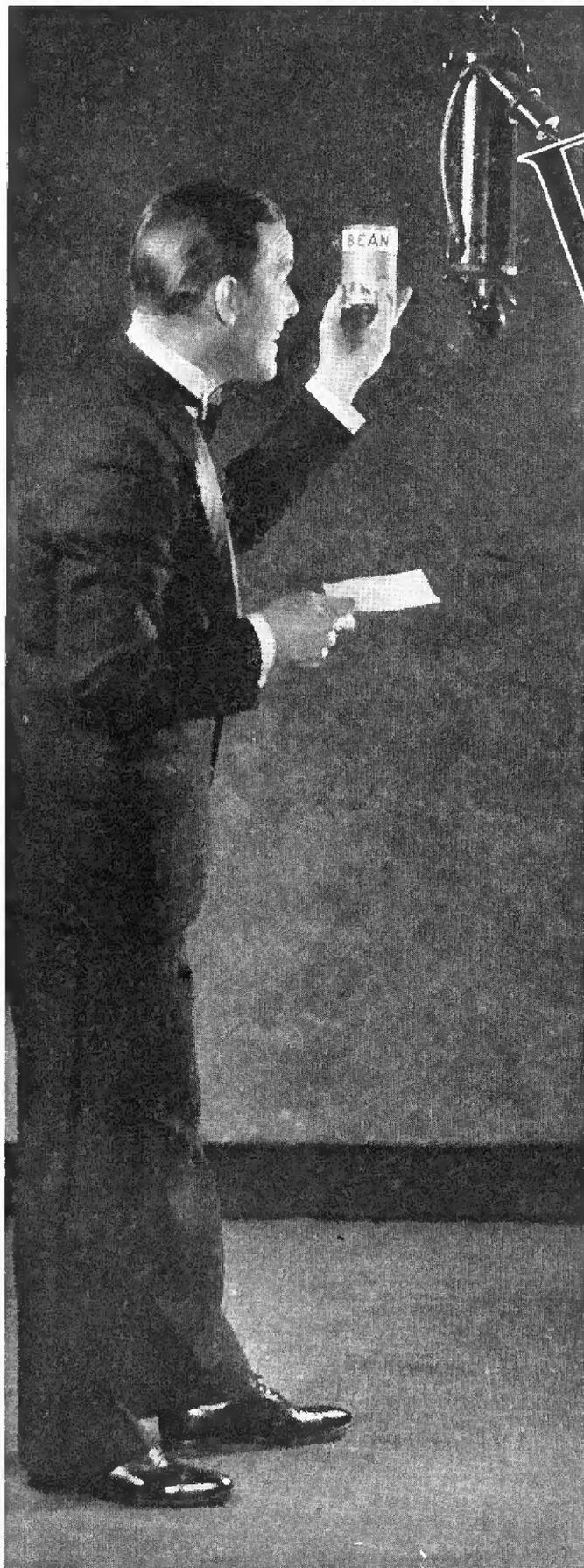
In short, home entertainment must be viewed in terms of “a five-year plan”—an outline of business and sales development following up the technical and inventive advances already made.

Manufacturers, distributors and dealers need now to get their long-pull planning faculties into operation and build a new prosperous and profitable industry of the future around a “Home-Entertainment Five-Year Plan.”

# Too Much

# BLAH

Perhaps  
*chain programs  
of advertising*



“**T**OO much advertising blah on the air these days,” they tell us. But is there? The correct answer to this contention vitally concerns every radio merchandiser because “listener interest” is so closely related to “buyer interest.”

So *Radio Retailing* has been investigating the facts. For one thing we put a stop watch on the sponsors; then we wrote to all the big “air time” advertisers, asking for their frank statements as to the picture from their viewpoint; another letter went to station managers. And from the wealth of data thus acquired we present the following authentic information for you to use to help you over this particular sales hurdle, and to fight destructive mis-statements now being made so freely.

It is reasonable to assume that the dominant programs are those put on by national advertisers over the chain systems. This class of advertising “copy” demands but 7.7 per cent of the listener’s time. And in return for this courtesy the program sponsor lays down, in the set owner’s home, musical, entertainment and educational creations that are the best the world has to offer. This at a cost of over \$40,000,000 per annum.

Our stop watch shows that the smaller, independent stations are much greater offenders in their impositions on the listener. Not only is the quality of the entertainment inferior to that of the chains, but the advertising elements are extremely tiresome and in most cases altogether too long. An average of test cases reveals a ratio of 15.8 per cent publicity to 84.2 per cent unadulterated program. In all cases theme songs and preliminary announcements were considered as advertising.

Is radio advertising unreasonably tedious? Does it offend good taste? Is it dampening listener enthusiasm and sales possibilities? Should it be curbed? Can it? How? Or are we unreasonable and thoughtless in requiring that the sponsor who foots the bill cannot play with his investment as he sees fit?

These are some of the questions involved. The controversy is highly two-sided. Much weight of argument can be mustered by the advertiser—who, in every letter received, insisted that his particular program and advertising message is without fault and quite acceptable.

# H ?

... Yet sponsored  
average only 7.7%  
time .....

Before *Radio Retailing* submits its recommendations in this matter it gives the following viewpoints as an aid in establishing an unbiased background:

#### LEGITIMATE ADVERTISING

"The public should realize that radio advertising is legitimate--another form of necessary publicity. If we accept this premise it will bring about a better understanding. Commercial broadcasting is a business. The radio salesman who shouts the loudest seems to be the most successful in eliciting response. The public really prefers honest, undisguised 'soap box oratory' to thinly veiled 'good will' stuff."

TWO NATIONAL ADVERTISING AGENCY EXECUTIVES

#### A MODEL PROGRAM

"A & P's advertising announcements, by Milton Cross, are of an exceptionally high standard--brief and interesting. In my opinion here is a model program."

PIERRE POUCHOT, *Former Radio Announcer*

#### TOO BLATANT

"Unquestionably, thinking people are increasingly of the opinion that advertising on the radio is becoming too blatant."

BEDELL RADIO SHOP, *Franklin Square, N. Y.*

#### THE LISTENERS ARE SATISFIED

"Is it really such a great sacrifice to have to listen for a few minutes to necessary advertising, which sometimes also is helpful? We listeners appreciate that it costs



**BUT—**

## Are They "KIND" To Your Ears

money to put these big bills on the air—and we are satisfied, providing they don't rub it in too deep."

ALBERT ARMSTRONG, *a listener of Lancaster, Pa.*

#### SHOW-DOWN STAGE REACHED

"The 'show-down' stage is being reached in radio. The public is now rebelling against over-commercialism of programs and monopoly of broadcasting facilities."

JUDGE IRA E. ROBINSON, *Federal Radio Commissioner*

#### KILLS MORE THAN IT CURES

"Blah drives away more listeners than it makes customers."

PROFESSOR PHILIP COX, *New York University*

#### OBJECTIONABLE

"It is just this sort of thing (the Cremo announcements) that will kill interest in broadcasting. I firmly believe in the advertising support policy of radio rather than the tax system of foreign countries. But radio

# CLOCKING THE SPONSORS

Typical Test Cases Show Wide Divergence in Advertising Announcement Practices

## Chain Programs

Firm Name or Program	Total Time (Min.)	Advertising Time* (Min. & Sec.)	Per Cent for Publicity
Sunkist Oranges.....	30	3'24"	11.3
Jeddo Highlanders.....	30	55"	3.0
Gold Medal Fast Freight....	30	3'50"	12.8
Three Bakers.....	30	3'2"	10.1
Fleischmann's Yeast (Rudy)	60	3'15"	8.7
Quaker Oats (Phil Cook)....	15	1'20"	8.8
La Palina Cigar.....	15	2'10"	14.4
Anheuser Busch.....	15	1'30"	10.0
Cremo Cigar (Pryor).....	15	1'15"	8.3
Barbasol Barbers.....	15	2'	13.3
Postal Telegraph.....	15	1'53"	12.5
Goodrich (Abe & David)....	15	2'05"	22.8
Pepsodent (Amos 'n Andy)...	15	2'32"	25.8
Premier Salad Dressers.....	15	1'	6.6
Maytag Washers.....	30	1'30"	5.0
Canadian Pacific.....	30	1'30"	5.0
Collier's Radio Hour.....	60	1'40"	2.8
General Electric.....	60	3'	5.0
Rex Cole Mountaineers.....	90	9'	10.0
Brownbilt Footlighters.....	15	2'30"	16.6
Davey Tree Hour.....	60	2'10"	3.3
Lowell Thomas (Digest)....	15	2'40"	17.7
Armstrong Quakers.....	30	4'30"	15.0
Salada Tea.....	30	2'10"	7.2
RCA Radiotron.....	15	1'20"	8.8
Mobiloil Concert.....	30	1'40"	5.5
Cook's Travelogue.....	30	1'20"	4.4
Blackstone Plantation.....	30	1'40"	5.6
Stromberg-Carlson.....	30	2'	6.6
Paramount on Parade.....	90	5'	5.5
General Motors (Auto).....	30	1'	3.3
Campbell's Soups.....	30	3'	9.9
Blue Malt Jester.....	15	2'	13.3
Speedy and Sapolin.....	30	4'	13.3
Graybar (Joe and Vi).....	15	2'10"	14.4
Florsheim (Coon-Sanders)...	30	2'25"	8.0
Happy Wonder Bakers.....	30	2'45"	9.1
Van Housen Collar.....	30	2'25"	8.0
A. & P. Gypsies.....	60	2'10"	3.6
Robt. Burns (Lombardo)...	30	1'5"	3.6
Nestle Chocolate.....	30	1'57"	6.5
Tastey Yeast.....	15	1'37"	10.8
Valspar.....	30	2'8"	7.1
Webster Cigars.....	15	2'7"	14.1
Totals.....	1,350	104'30"	7.7

Note that the average total time occupied by advertising matter of any type (including theme songs) is less than a thirteenth of the total listening time. These figures are for chain broadcasts by national concerns.

## Local Programs

Schlossman's Paraders.....	15	5'	33.3
Gloria Gay's Affairs.....	15	2'40"	17.7
Phono. Records (WIBX)....	69	7'12"	10.4
German Band (KDKA).....	30	8'	26.7
Toronto (CKGW).....	15	3'30"	23.3
Syracuse (WSYR).....	30	6'8"	20.4
Central Savings.....	15	4'	26.6
Winston-Salem (WSJS)....	15	1'40"	11.1
Grand Rapids (WASH)....	15	3'20"	22.2
Lafayette (WBAA).....	15	1'	6.6
Roanoke (WDBJ).....	45	7'30"	16.6
Macon, Ga. (WMAZ).....	45	5'	11.1
Totals.....	324	51'12"	15.8

Local programs and stations use twice as much time for advertising announcements as do the national hook-ups.

\*Includes theme songs

advertisers must be particularly careful of what they say and claim."

H. A. LAFOUNT, *Radio Commissioner*

## BEING DRIVEN FROM THEIR SETS

"Our entertainment-hungry human beings are being driven from their radio sets by this hullabaloo of excessive advertising."

SAMUEL CARACIO, *Radio Dealer, Bangor, Pa.*

## What the Stations and Advertisers Have to Say

"Verbosity is detrimental to the station and to its advertisers. We limit announcement interruptions to 75 words."

WASH, *Grand Rapids, Mich.*

"We have been successful in eliminating too much advertising continuity."

WDEL, *Wilmington, Del.*

GENERAL MOTORS: "This year we are not featuring our product at all but devoting any publicity time to remarks about the automobile industry as a whole."

COLLIERS: "Colliers is in radio to entertain people, not to sell them. We do not use or believe in high pressure methods."

GENERAL ELECTRIC: "Feel that our present balance is about right."

REX COLE MOUNTAINEERS: "Have reduced our announcements to a minimum. Audience reaction to this policy has justified it."

LITERARY DIGEST: "From the thousands of letters received we believe our present balance correct."

COOK'S TRAVELOGUES: "We are strongly opposed to the present tendency to force products down the throat—or ears—of the listener."

BATTEN, BARTON, DURSTINE AND OSBORN: "We limit Blackstone advertising to two minutes. We never have received a letter of protest. Mr. Sutcliffe, keep up the good work in pointing out that the public is getting a lot for nothing."

AN unbiased consideration of this subject from the angle of practical expediency, rather than from the viewpoint of righteous indignation, suggests the following summation and recommendations:

1. That the American system of commercially sponsored programs—but tax-free sets—is preferable to that in vogue in England and continental Europe.

2. That a reasonable amount of advertising on the air is necessary, under our policies, and is not objectionable provided it does not occupy more than 6 per cent of total program time and is free from objectionable statements.

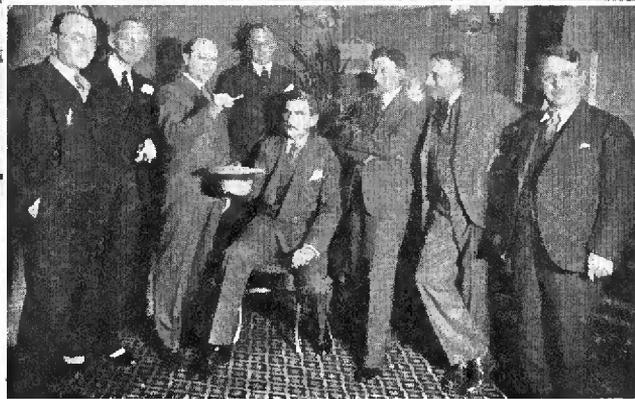
3. That the way to cure present abuses of purchased air time is through individual contact with the offender.

4. That this may, and should, be done in any of the following ways: By organized, local radio dealer protest to the offending local station, or chain and by direct protest to the president and advertising manager of the advertiser in question; by an authorized letter from the Radio Manufacturers Association directed to these same individuals; or by a specific statement to this magazine, outlining the nature of the breach of good taste, the program name and schedule, and the name and address of the advertiser. *Radio Retailing* has reason to believe that formal protests of this nature will not go unheeded and that, in most instances, they will prove effective.

# Just Ahead . . . . . The High Spot of the Radio Year



The "good ol' Stevens" . . . Scene of our past successful conventions . . . Again the center of activities.



Exhibition space was allotted last month at the Astor, New York. All booth space has been sold.

# The TRADE SHOW!

NEVER have better programs been planned; at no previous affair have more revolutionary receivers been shown than will be exhibited at Chicago this June. Variations of the small set, the radically new tubes, television, home talking movies, electrical appliances and many other products for dealer consideration—all will be there. And each of the 135 exhibitors is pledged to exhibit his latest, 1931-32 models.

June 8 to 12 are the dates, and the mammoth Hotel Stevens will again be exhibition headquarters. But that's not all. This year six national radio organizations have chosen June and the Windy City for their annual conclaves. They will meet either during Trade Show Week or just prior to it. Cast your eye over the following

six ring circus, and then ask yourself, "Can I afford not to be there?"

Special trains, a chance to hear Chicago's new mayor, a monster stag show (Wednesday evening at the Eighth Street Theatre), and the presence of all the leading radio engineers in the country are but a few of the "special added attractions."

*Radio Retailing* urges that every radio dealer and jobber—who intends to make of radio, and its allied lines, a business, rather than a "game"—attend the Seventh Annual RMA Convention and Trade Show at Chicago.

"Any radio man who is able to and fails to go to Chicago next month writes himself down as indifferent to his own best interests," says Morris Metcalf, president, RMA.

## At Chicago, June 4-12, "Six Rings, Count 'Em"

Institute of Radio Engineers Sixth Annual Convention	Music Industries Chamber of Commerce and N.A.M.M.	Radio Manufacturers' Association Seventh Annual Convention	Fifth Annual Trade Show	National Federation of Radio Associations	Radio Wholesalers Association
June 4-6 Hotel Sherman	June 9-11 Palmer House	June 8-12 Hotels Stevens, Blackstone and Congress	June 8-12 Registration and booth exhibits at Hotel Stevens	June 8-11 Headquarters at the Stevens	June 8-11 Headquarters, P.D.R. 8-9, Stevens Hotel
Twenty-two important technical papers will be presented. Eight inspection trips scheduled.	Annual convention and trade exhibits. Exchanging admission badges and courtesies with radio men.	Joint meeting, open to all tradesmen and allied industry representatives, Tuesday, 10:30 a.m.	Room demonstrations at all Michigan Avenue hotels. Stag party.	Open meeting with RMA, Tuesday. Open meeting for all retailers, Thursday, 10:00 a.m.	Closed membership meeting, June 10, 10:00 a.m., South Ball Room, at the Stevens.

# The AUTO-RADIO DEALER . . . . has “TWIN”

**A**UTO-RADIO can be sold by radio dealers, automotive equipment stores, car agencies, battery service stations and other retail outlets. But it can be installed efficiently only by those possessing the special knowledge and facilities necessary for this work. This means: a place in which a car may be housed for at least one day while the work is in progress, men who are thoroughly familiar not only with radio equipment but also with automobile ignition systems and car upholstery and at least \$100 worth of special tools.

Few retail organizations have such facilities or knowledge. This would appear to limit the combined sale and installation of auto-radio to a fortunate few. But what, asks Robert E. Lawhon of the Battery Sales & Equipment Company, Brooklyn, N. Y., is to prevent those who are set up for installation work from serving in this capacity for others equipped only to sell? What is to prevent retailers who have access to auto-radio prospects, but who cannot tackle installations, from selling, as sub-dealers, for other local outlets in a position to do the mechanical work? Such an arrangement, he claims, is mutually beneficial; stimulates the sale of this new equipment.

The “key” dealer of such a plan, Lawhon suggests, might well be a radio dealer desirous of entering the business on a large scale and with the space and knowledge to do the job. Or, as in his case, this key man might operate a battery service station. He has tried the plan with local car agencies and it works.

**L**AWHON’S “drive-in” battery service station is located in the heart of the city’s automobile service section at Atlantic & Classon Avenues. As many as 60 cars a day pass across his floor but despite this store traffic, which is particularly suited to the sale of auto-radios, only 8 sets have been sold since the first of this year directly to consumers. The remaining 28 were moved through local car dealers. To date, it seems, Lawhon has concentrated on agency business in order to quickly build up the volume necessary for the maintenance of his installation staff. He is only now beginning to go after the direct business.

The nature of the auto-radio business, in which labor plays an important part, permits him to offer car dealers an attractive proposition and yet net a satisfactory profit. (His average discount is 25 and 10). This is apparent upon examination of the price schedule maintained.

	Consumer	Car Dealer
Set and tubes	\$65.00	\$48.75
Four 45 volt B-Bat.	9.80	7.52
Installation	25.00	25.00
Installing aerial	10.00	10.00
	<hr/>	<hr/>
	\$109.80	\$91.27

The car dealer sells the set for \$109.80, installed, complete with aerial. \$10 is deducted if a built-in aerial is

already in the car. He is urged to pay his salesman 5 per cent, thus leaving the car dealer a clear \$13. The customer pays the car dealer in full and is sent to Lawhon’s shop, where the installation work is performed. The car dealer then remits \$91.27, or \$81.27 if an antenna installation is not required, directly to the installation shop.

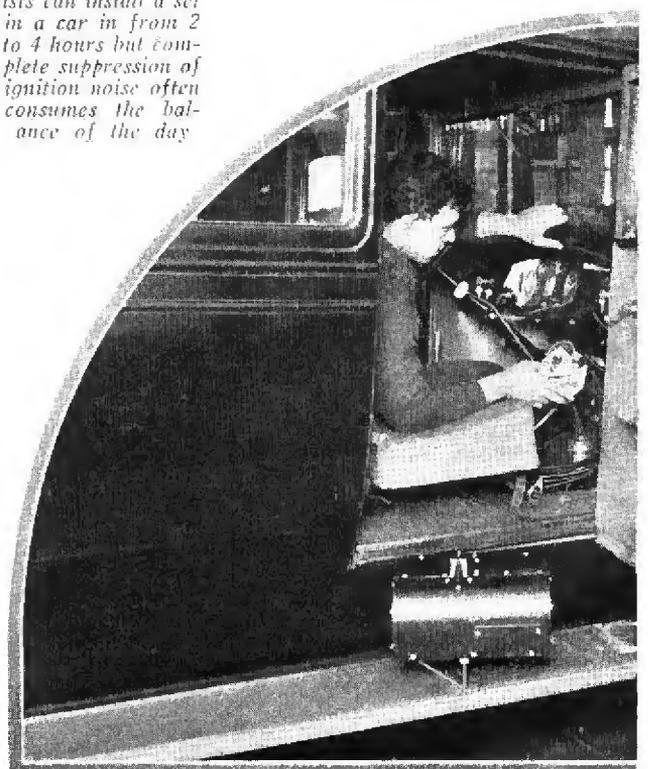
Lawhon makes approximately 10 per cent on the sale of the set and accessories and also has a \$25 installation charge to play with. He estimates that it costs him about \$17 to install a set, of which \$12 is labor, the balance suppressor, condenser and miscellaneous parts cost. An outside upholsterer, familiar with car aerial installations, is called in to do this work when it is necessary and is paid a fixed sum per job which leaves a safe margin of profit in the \$10 charge to car dealer and consumer.

The business so far has been strictly cash. Lawhon points out that it is unwise to install a set in a car purchased on time on anything but a cash basis as considerable difficulty may be encountered in collecting radio payments should the car be replevined by the car agency.

Little difficulty is experienced in selling the idea to the car agencies, particularly as Lawhon has had the battery business of many local companies for as long as 10 years and knows their managers intimately. A record of the

*(Please turn to page 54)*

*These two specialists can install a set in a car in from 2 to 4 hours but complete suppression of ignition noise often consumes the balance of the day*



# Prospects

1

## The Car Owner

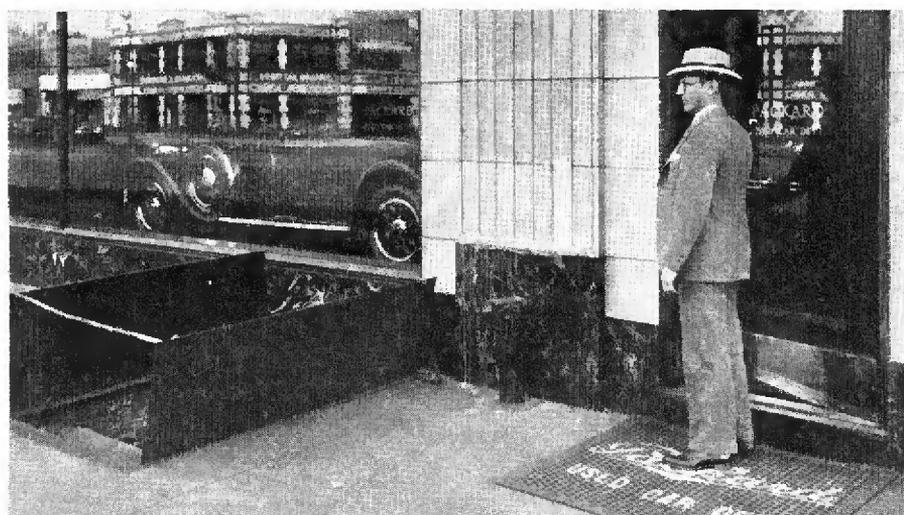
*Lawhon sold 8 sets by demonstrating while people waited for their cars in his battery service shop*



2

## The Car Agency

*28 sets were sold on a commission basis by car salesmen, and installed by Lawhon*



ROBERT E. LAWHON  
*and*  
IRVING GREENSPAN

*who have installation facilities*  
SOLD 36 SETS IN 4 MONTHS  
*by appointing local auto-dealers as sub-sales agents*





When explaining this plan to dealers, Hinsdill's attitude is kind but firm

circumstances into "Peter and Paul" practices which are taking not only themselves but their suppliers toward the rocks. Concisely, the jobber is up against these conditions: dealer stocks that are unpaid for and unredeemable; lax dealer selling and collection methods which seriously impair the dealer's financial responsibility.

Hinsdill's territory was no exception to this rule. In fact many of his dealers were, and still are, sub-risks. But the "Hinsdill" plan certainly is making life happier for all concerned—including the dealer's customer. Retailers who were just about "washed up" have been given new life and, during the past six months, credit losses of the Hinsdill Electric Company have been less than 1.5 per cent.

### The Initial Contract

There are two main divisions under which this Troy set-up functions: (1) the initial consignment and credit control contract (a consignment arrangement, oh, so different); (2) the direct, through local banks, time-payment plan (customer's monthly remittances go to the jobber).

In all, seven printed forms are required. They are reproduced on these pages. To institute a similar plan will require serious study. Jobbers must read these forms carefully. They should realize that modifications may have to be made to fit them to their requirements. On the other hand, any major amputation would, in the opinion of Mr. Hinsdill, seriously affect the plan's successful functioning.

When a dealer applies as a candidate for the line of sets distributed by Hinsdill Electric (SPARTON) his financial resources are thoroughly investigated, the "plan" is carefully explained and he is frankly, but firmly, told that he will be held *strictly* to its provisions. Point one, Hinsdill has definite policies and enforces them.

Before the "consignment" contract is signed the dealer must obtain responsible endorsers to a preliminary piece of paper—Form A. This is required as much for its moral effect, and as an evidence of good faith, as for its financial protection value.

Now read Form B. Reread clause 10. Note that the jobber does not consign stock in the customary manner. Note the 90-day proviso. In other words, this contract, while mutually fair and granting mutual concessions, enables the supplier to get back his stock in case of a jam.

To cite a case in point: A dealer went bankrupt.

### FORM D

(Right) The "Local" Deposit Slips

### LETTER E

(Below) The Customer Hears from Hinsdill

**Hinsdill Electric Co.**  
 MANUFACTURERS AND DISTRIBUTORS  
 RIVER AND FIRST STS  
 TROY, N. Y. Feb 21, 1931

REPRODUCTION OF SPARTON RADIO MANUFACTURING AND DISTRIBUTING ADJUSTABLE LIGHTING UNIT

Mrs. Mrs. De Long  
 122 1/2 Fourth Ave.,  
 Schenectady, N. Y.

Dear Mrs. De Long,—

We have purchased from Mr. George H. Stone of Albany, the contract and note which you signed covering 10 monthly payments of \$15.00 each, on a radio set.

In accordance with your contract, these payments are to be made at the New York State National Bank, 69 State Street, Albany, and we are enclosing deposit slips to be used in making these payments.

Very truly yours  
 HINSDILL ELECTRIC CO.  
 E. J. Hinsdill  
 President

CAP:000

P. S. If you wish to pay by check, make checks payable to the bank, attach to one of the inclosed slips properly filled out, and deliver or mail to the bank.

DATE	CONTRACT NO.	SALES PRICE	DATE	FOLIO	AMOUNT PAID	BALANCE	DATE	FOLIO	AMOUNT PAID	BALANCE
INVOICE NO.	TERMS: STARTING PER MONTH	CARRYING CHARGE	JAN 19 30				171 89			
APPLIANCE SERIAL NO. STYLE	OTHER CHARGES	TOTAL CHARGES	FEB 24				171 89			
EMPLOYER	TRADE IN ALLOWANCE OTHER ALLOWANCES	BALANCE	MAR 5 1930		15 00	156 89				
ADDRESS OF EMPLOYER	DOWN PAYMENT		MAR 12 1930		15 00	141 89				
REMARKS			JUN 13		15 00	126 89				
			AUG 12		15 00	111 89				
			AUG 13		15 00	96 89				
			SEPT 11		15 00	81 89				
					15 00	66 89				
					15 00	51 89				
					15 00	36 89				

**FINAL NOTICE**  
The payment totaling \$15.00 is overdue in this account.

**DEMAND FOR PAYMENT SECOND NOTICE**  
Due Date: \_\_\_\_\_ Amount Due: \_\_\_\_\_

**TREASURER'S PAST DUE NOTICE**  
We Have Not Received Payment as Follows:  
Amount Past Due: \_\_\_\_\_  
Use one of the slips we sent you and deposit amount in bank.  
**HINSDILL ELECTRIC COMPANY**  
RIVER AND FIRST STREETS TROY, N.Y.  
If your balance differs from our balance please advise us.

How Jobber Keeps Set Owner's Account Past Due Notice Cards (Left)

FORMS G

Hinsdill flashed his consignment contract on the referee and drove away with his merchandise within the hour.

**Local Banks Receive Payments—and Deposit to Credit of Jobber**

Now we come to the real nerve center of the Hinsdill system. Back of C. A.'s desk, on three shelves, are some thirty piles of bank deposit slips. Under each is the name of the bank and the towns it serves. Here's how the direct collection and remittance plan functions:

- a. The dealer sells a set on time—20 per cent down, the balance in ten monthly payments. (Examples C and C-1).
- b. Dealer tells customer that arrangements have been made whereby the balance of the latter's payments are to be made at the local bank and gives him or her the first deposit slip all filled out. (Form D).
- c. Dealer notifies Hinsdill Electric Company of the sale.
- d. Hinsdill mails letter E to dealer's customer accompanied by nine similar deposit slips.
- e. Jobber also opens a book account—loose leaf, filed under the dealer's name—with said customer. Note that the standing of all time-payment customers, by dealer classification, are on record at headquarters and the jobber knows, therefore, the status of all dealers' stock, credit and collection increments. Form F is a standard one, obtainable from most stationers.
- f. Once a month each bank mails its statement of the net amount on deposit to the credit of the Hinsdill Electric Company, to the office of Mr. Hinsdill. Furthermore, each bank sends duplicates of its deposit slips to Hinsdill daily.

At this point I questioned my friend concerning the attitude of the local banks on this unusual procedure.

"At first there was some resistance," he replied. "But after I had sold three or four on the worthwhileness of having many persons come to their institutions who might be prospects for new accounts the rest fell in line. I generally check out each month most of these balances

—this is my known source of money with which to meet my obligations to the manufacturer. Note also the moral effect of having the customer make his payments to the bank. All delinquencies are immediately caught when we review the deposit stubs for entry on our ledger. My bookkeeper sends the first three 'overdue' notices to the customer. If these fail I hold the dealer responsible for enforcing the collection." (See Forms G.)

"But where does he get off?" I asked.  
"He gets the down payment. Naturally each installment collected is credited to his account. As soon as my financial interest in any individual transaction has been cleared the dealer gets the balance. Thus, each month an active dealer receives a check according to the credit due him. We charge the set buyer standard interest rates for time-payment accommodation. This extra sum reverts to us—as we, of course, carry the financing burden. While this plan tied us up during its initiatory six months, it now is self-supporting—we know where the money is coming from and exactly how much we can count on to meet our monthly obligations."

So much for the bare mechanics of Hinsdill's collection and credit machine. As practically all aspects of a jobbing business and dealer relationship are involved, close range study, trial and alterations must become also a part of the activities of any brother wholesaler who intends to emulate it. In many cases it might not work. Certainly in the case of this "Spartan at Troy" it is ringing the bell 100 per cent.

Bear in mind, moreover, that there is involved a considerable "human" factor. Charlie Hinsdill knows his territory and his dealers. His attitude is that of a kindly, but firm, father advising his children. If a dealer balks, Hinsdill goes straight to the root of the matter. "How much money have you? Tell me, honestly now, can you succeed in the radio business on any other basis?" he says. "If you can't afford to have me finance your merchandise costs in this manner, and carry your running expenses out of gross margin, you will get into trouble, sooner or later, with any other jobber whom you get to extend to you more credit than you are entitled to."

And the proof of this particular pudding is found in the fact that most dealers, under this plan, are gradually getting on their feet, are self-respecting, do less worrying, and that Hinsdill made almost as much net profit during the past 12 months as in the halcyon days of '29.

# American V/S European BROADCASTING

*From a Radio Talk Delivered April 6, Over the Red Network*

By O. H. Caldwell

*Former Federal Radio Commissioner  
Editor, "Radio Retailing"*

FOR a good many years I have been mixed up with this thing called radio. I knew it when it was a weak but promising infant. I watched its astounding growth up through adolescence. Then, at Washington, for two years, I sat with it through its long illness (and there were times when I feared we might never pull the patient through). And now I see radio broadcasting blooming in its prime of usefulness.

Yet despite this long familiarity I never tune in a radio set without experiencing a new thrill at the miracles which radio produces, miracles not only of science and engineering, but miracles of program features, music, entertainment and inspiration. And I never cease to marvel that a network of transmitters like this one, actually connects, through invisible ether links, with fifteen million American homes. For, think of it, under our American broadcasting system we have built up a radio audience larger than that of all the rest of the world put together.

And just as American broadcasting leads the nations of all the world in its number of sets, so does it also lead all the world in the quality, the variety and the compass of its programs.

ON THESE invisible channels there come to your home, the world's greatest musicians, the greatest leaders, the popular entertainers, the makers of current history and current thought, the great teachers and orators and ministers, the events of the day and the hour—events within the very twinkling of their happening.

In fact, when you have a radio set, the whole panorama of modern existence is yours at the touch of a dial, and without a penny of expense.

In Europe you would be paying an annual charge for the privilege of listening on the radio. You would be taxed by the month or year for the programs—and not very good programs, either, lacking in interest, in variety, in enterprise. In England, for example, you would have the choice of usually one or at most two programs. There the expenditure for program talent is hardly a million dollars yearly as against thirty millions here. In Germany, France, Spain and in other countries of Europe, similar conditions prevail.

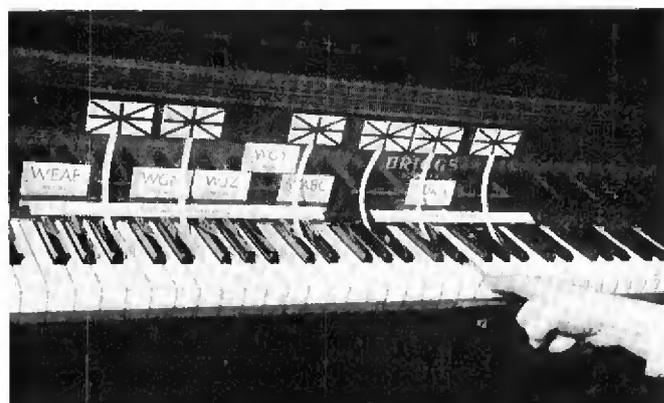
Europe leads America only in one thing—the greater power of some of the European broadcasting stations. Over there they have stations three to ten times as powerful as any licensed for regular service here. But this deficiency cannot be blamed on American broadcasters. They stand ready with stations of far greater power and greater usefulness, but the restraining hand of my former associates of the Federal Radio Commission holds back the expansion of this great service from the

American public and keeps millions of American farmers from enjoying the good radio which might be theirs with the higher broadcasting powers already found necessary all over Europe.

America's remarkable program expansion seems to me the master miracle of radio. It is the development of this big new idea, during the past five years, that has made the rest of radio miracles possible. True, "Free Radio, on the American Plan" does involve the condition that you and I shall listen to some advertising during the programs. But I am sure the average reasonable listener feels no objection to a brief announcement and gladly gives his attention to such an advertising message in return for the entertainment he is enjoying. In the great network programs, hardly three per cent of the total time on the air, is devoted to advertising announcements. Certainly this is keeping the advertiser within bounds, and cannot be objected to by any reasonable listener.

And along with developing the high quality of musical offerings and entertainment, American broadcasters have also accomplished wonders technically in transmitting true tone values. At the cost of millions of dollars for new equipment, the great stations of the country are now putting into the air, radio waves that are indeed perfect reproductions of the sounds in the studio.

Wonderful music is dancing as radio vibrations there in the ether, above your home roof every night. But whether you hear modern American broadcasting in all its original beauty, or get only a tinny rasping shadow of its real self will depend upon whether you have an adequate modern, well-engineered radio receiver.



*The ninety-odd broadcasting frequencies can be compared to the ninety keys of a piano—the low radio frequencies corresponding to the low notes, and the high frequency, 1,500 kc stations, corresponding to the treble notes. Using such an analogy Mr. Caldwell demonstrated the positions of familiar stations, clear channels, Canadian channels and the theory of synchronization*

# Electrical Appliances

**T**WO years ago W. I. Cook, owner of Cook's Music Shop, Fresno, California, was confronted with the necessity of adding a third line to his radio and piano business in order to hold his sales force intact throughout the summer. Electrical appliances seemed to offer the best possibility of profit and after a thorough study of available merchandise he took on refrigerators, washers, cleaners and several table appliances.

He knew little about the suitability of such equipment as a sideline for his type of store. None of his business friends had handled it, hence could not give him any helpful advice. So it was necessary for Cook to "take a chance."

Now, after two years of practical experience with three major appliances, he has worked out some of his own answers to the question: "Are electrical appliances good complementary lines for the radio store?" These answers he passes along for the benefit of other dealers who may be considering a similar course.

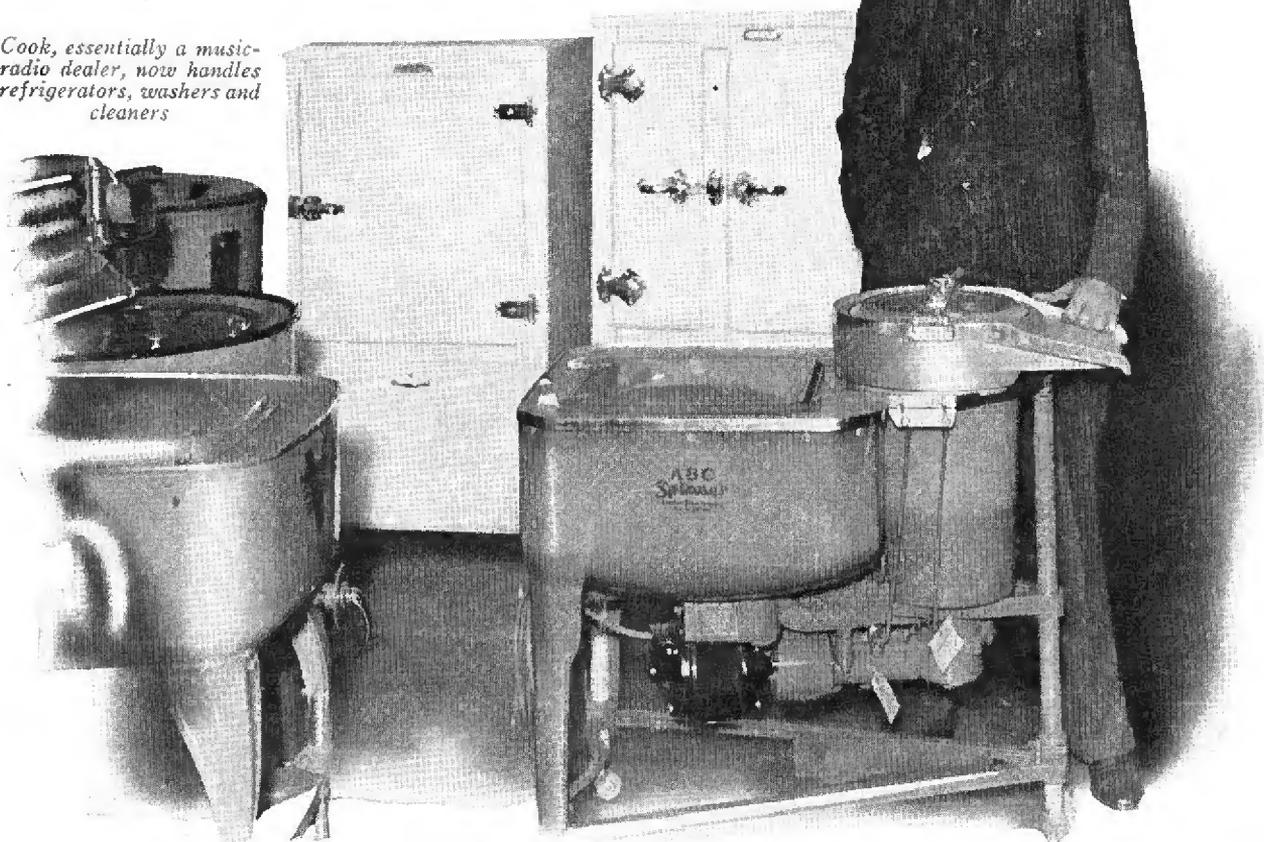
**Salesmen** Cook's primary object in taking on additional lines was to make it possible for his salesmen to build up their incomes. This has been successfully accomplished. One salesman experienced in the refrigerator and washing machine game was hired

and it became his duty to instruct the remainder of the crew in the technique of this field. Regular sales meetings were held each evening for the first two weeks under his direction, and the men soon learned all they really needed to know about these two appliances and cleaners as well in order to sell them.

The men started right out to sell the new equipment and then discussed problems encountered in the field each evening for possible ironing out of common difficulties. The radio and piano salesmen soon learned how to include the new lines in their approach and electrical sales are now distributed fairly evenly throughout the entire crew. Average earnings per man have increased materially.

**Service** The head of the radio department was sent to a refrigerator factory for a two weeks' course in the servicing of the unit and he in turn has instructed his assistants so successfully that it has not been necessary to increase the service department personnel. Cook

*Cook, essentially a music-radio dealer, now handles refrigerators, washers and cleaners*



By C. Grunsky

# -are They the ANSWER?

W. I. COOK, a Fresno, Calif., radio dealer,  
who has been through the mill, answers these questions:

- ▶ Can radio salesmen sell refrigerators, washers, cleaners?.....see "SALESMEN"
- ▶ Is it necessary to expand the service department?.....see "SERVICE"
- ▶ Must additional provision be made for delivery?.....see "DELIVERY"
- ▶ Is it necessary to alter the bookkeeping system?.....see "BOOKKEEPING"
- ▶ Is time-payment business more, or less difficult?.....see "TIME-PAYMENT"
- ▶ How much extra capital is required?.....see "CAPITAL"
- ▶ Can appliances be displayed to advantage in a music store?.....see "DISPLAY"
- ▶ How should these new lines be introduced to the public?.....see "ADVERTISING"
- ▶ How much new business can reasonably be expected?.....see "SALES"

believes that any ordinarily intelligent radio service man can be taught how to service appliances in short order.

**Delivery** Delivery is still handled in identically the same manner, without expense for additional equipment. Refrigerators are delivered on the same truck that formerly handled pianos alone, washers go out in this truck or in the radio delivery wagon. Small appliances offer no special problem as the customer usually carries these home and does not ask for delivery. Asking customers "may I carry this to your car" has saved much expense in the small appliance field.

**Bookkeeping** Cook claims that any bookkeeping system which adequately covers the various departments of a music and radio business can be extended without difficulty to others. He believes in keeping separate operating records for each department, pro-rating the expense involved to each one in order to determine just what each line is doing for him.

**Time-Payment** Less time-payment difficulty is experienced with the three major appliances stocked than with radio. While Cook has always adhered strictly to a large down-payment on radio and terms running not more than ten months he finds it possible to allow a longer time on such appliances as washers and refrigerators as there are fewer reverts and less trouble with collections in these fields.

**Capital** About \$2,000 is required, free and clear of encumbrances, Cook believes in order to permit a radio and music dealer to take on appliances as a sideline without undue risk. One of each of the larger appliances is always carried on his floor and three of the table appliances. These are used as samples only. He orders others from a nearby wholesaler as he needs them and thus keeps down his investment.

**Display** It has been found that the major electrical appliances are sold chiefly through the contact of outside salesmen with customers and for this reason these fit in admirably with radio and pianos, both of which in Cook's case are sold chiefly by such outside work. The smaller appliances, which rely almost entirely upon store traffic for volume sales, do not move so readily but the store is rapidly building up a name for itself with this table equipment and it easily pays its way. As the store becomes better known as a source of supply its small appliances sales will no doubt increase.

Cook believes that it is best not to group his musical instruments with the electrical equipment. The arrangement of the store interior as a Spanish hacienda, with offices and demonstration rooms inside the adobe structure and the main sales floor in the patio, offers a solution to this problem. One wing of the "home" is devoted to appliances, just as the kitchen would contain such appliances in real life, and musical instruments alone appear in the patio.

**Advertising** When the electrical lines were added a grand opening was held, just as if the store had just entered business. Considerable newspaper space announced the opening, carrying out this idea, and Cook followed this up with direct-mail circulars to all his radio and piano customers. The new equipment offered an excuse for approaching all the people who bought sets and pianos in the past. The result was a substantial number of sales to old customers as well as an equally substantial number to new accounts.

**Sales** The electrical department of this store now accounts for 20 per cent of its total sales. This has been accomplished without materially altering the method of doing business or adding greatly to the overhead and selling expenses. The addition of appliances as a sideline has meant increased profit both for Cook and for his salesmen.

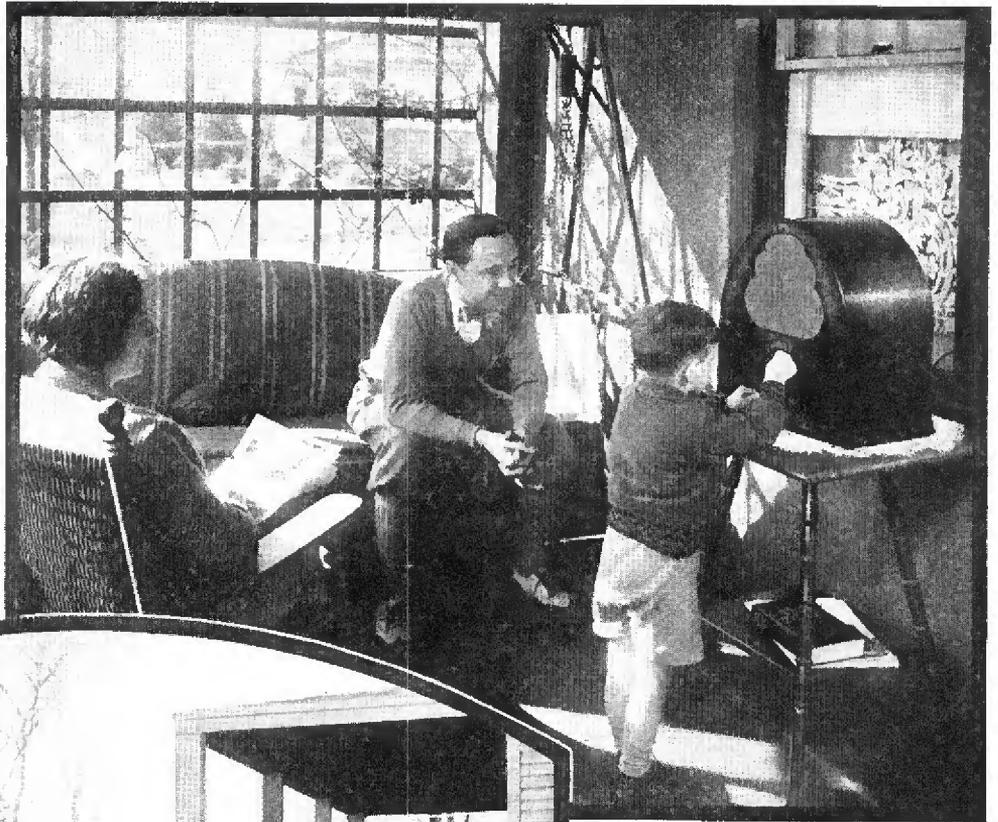
If you sell them  
a MIDGET in MAY,  
they can use it . . . .



A MIDGET

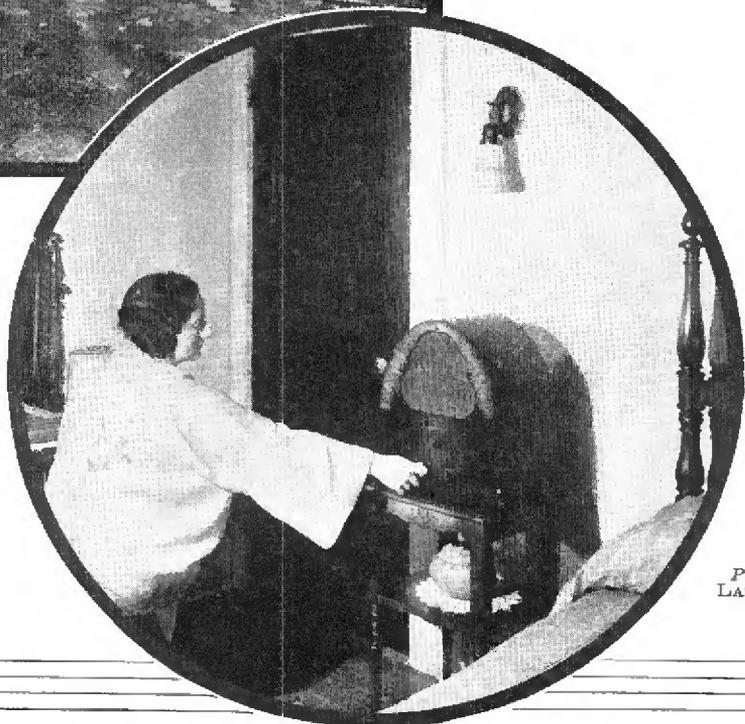
*for Mr. and Mrs.*

..... *In the*  
**SPRING**  
*on the porch*



*In the*  
**SUMMER**  
*at the bungalow*

*In the*  
**FALL**  
*as a "second set"*



*Photos by*  
LAZARNICK

# Rubber Tired

# Selling

## EXPENSE AND INCOME

September, 1930 to April, 1931

### COST

Truck (repossessed from original owner)...	\$ 300
Amplifying equipment (rotary converter, batteries, microphones, loud speakers, mixer, etc.).....	1,200
Painting and lettering .....	30
Installing equipment, mounting loud speakers, etc. ....	400
Operation .....	80
<b>Total cost.....</b>	<b>\$2,010</b>

### REVENUE

Syracuse University (describing plays and players during course of Syracuse University's home football games).....	\$ 800
Loew's State Theatre (advertising "Hell's Angels").....	150
RKO Keith's Theatre (advertising "Check 'n' Double Check").....	100
Syracuse Automobile Show .....	150
City of Syracuse (Winter Carnival, Christmas Carol Service, and similar civic events)....	300
Miscellaneous .....	100
Approx. net profit, 8 radio sets .....	90
Estimated advertising value, to date.....	1,800
<b>Total revenue .....</b>	<b>\$3,490</b>

Future earning power is estimated at \$6,000 annually.

WITH but few exceptions radio dealers who have fitted up a delivery wagon with loud speaker apparatus report in glowing terms the results of such a venture. The accompanying photographs are typical of the appearance of such installations. In addition to delivering broadcast programs to large gatherings, and playing records, such trucks serve the dual dollar-making function of advertising the dealer and selling public address service.

Let's take a specific instance:

The outstanding radio advertising job of the year, in Syracuse, N. Y., was performed by Chapin-Quick Radio, Inc. Its "talking truck" was the result of necessity—a situation calling for swift and major results.

Arnold Chapin and Harold Quick "bought something" when they acquired, in the summer of 1930, an exclusive franchise, a fancy show room, a stiff monthly quota and an expensive sales force. City-wide publicity! Immediate sales! These objectives must be met immediately if the budget was to be balanced.

At first newspaper advertising of a conservative nature was used. This built good will, but it was not helping sales rapidly enough. What Chapin-Quick needed were traceable results from money spent in advertising.

Something that would tell a story; that would attract attention and be readily understood; a moving, talking billboard—in other words a *sound truck*.

Such a truck was purchased, outfitted and in operation within 30 days from the inception of the idea. Its complete cost was \$1,930. Expensive, you say. But first take a look at the "earning power" figures in the box at the left.

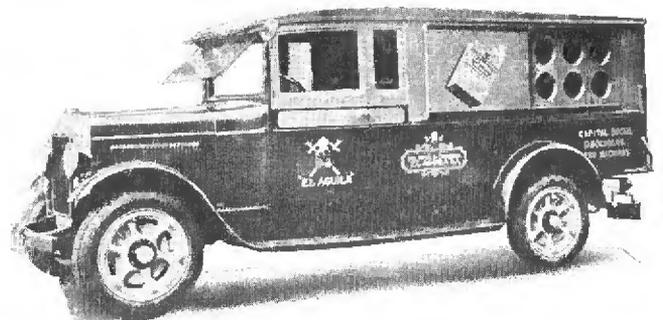
Power for the truck's receiving and amplifying equipment is supplied by six, 6-volt, storage batteries in series. These operate a Delco lighting plant which generates 110 volt, 60 cycle alternating current. The receiver pulls in almost any station. The truck can demonstrate electrical appliances as well as radio sets.

The painted advertisements on the curb side of the Chapin-Quick talking truck are illuminated at night by four powerful lamps. Even when the truck is silent, the passing of an electrically illuminated "billboard" is attention compelling.

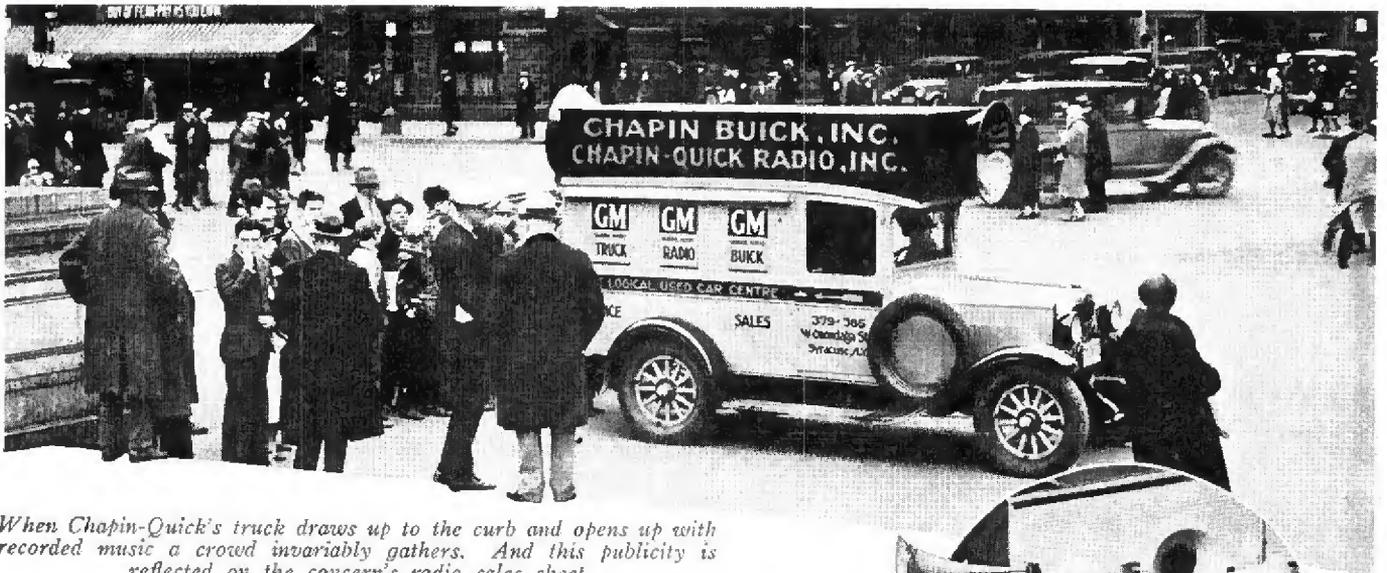
The undistorted output of the power amplifier used is 30 watts; the voltage amplification is 98,000 and the gain, 75 decibels. An actual test proved that a man speaking from this truck could be clearly and easily understood one-half mile away!

In ordinary usage, this truck is driven to a point where people are congregated, or about to congregate—such as at a parade, at an athletic meet, an auditorium or theatre entrance, before a bulletin board, or even *at a fire*.

Factories at the noon-hour have been an especially fertile field for "leads" and will probably become an even more valuable source of prospects as the warmer weather comes. Driving up and down the main arteries of traffic, with music playing, or with a voice talking, cautioning people to be careful at crossings and motorists to obey traffic ordinances has commanded attention. Parking anywhere and playing an Amos 'n Andy record will always draw a crowd. In fact Mr. Quick has found this



Dodge truck equipped by RCA Victor with sound amplification for foreign service. Panel slides over speakers.



When Chapin-Quick's truck draws up to the curb and opens up with recorded music a crowd invariably gathers. And this publicity is reflected on the concern's radio sales sheet

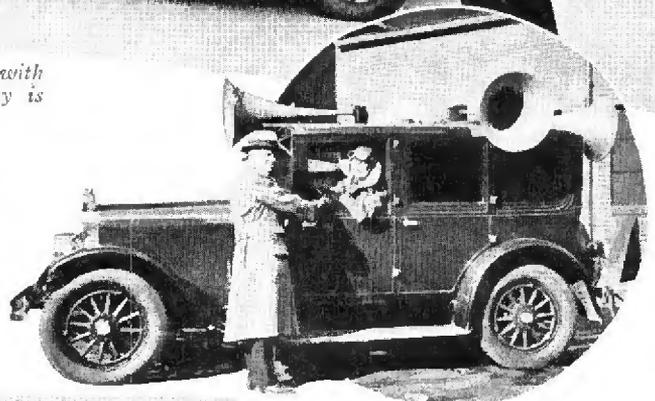
the easiest and quickest way of getting people around their truck.

It should be explained that the Chapin-Quick truck will reproduce radio, voice and record with equal ease. The microphone is portable and can, if only one man is available for duty on the talking truck, be strapped to the chest of the driver who talks as he drives along.

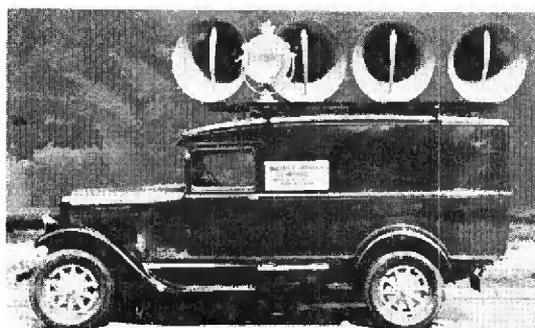
The outspoken advertising message is clear and brief. The name of the product and a brief résumé of its outstanding features. Price is never mentioned—the store location is, frequently.

Chapin-Quick have been able to trace numerous sales of General Motors radios directly to their talking truck. In their opinion it has paid for itself in less than six months' time. In addition it has built for this concern an inestimable amount of goodwill, as well as the friendship and cooperation of city officials.

Shortly after this truck became a reality, it became engulfed in a traffic jam resulting from a fire in



A simpler and less costly type. Well adapted to smaller cities



the downtown section. Climbing to the top of the truck, where he could view the entire street, Mr. Chapin, with microphone in hand, assisted traffic officers in getting commands to motorists, in warning oncoming cars to turn into the next block, and in keeping pedestrians out of the street and inside the fire lines.

On another occasion an auction of second-hand automobiles was being held on the steps of the Syracuse City Hall for the benefit of the unemployed. The Mayor of Syracuse was the auctioneer. The crowd was large and noisy. The Mayor had difficulty in making himself understood. Chapin-Quick's talking truck came to his assistance. Extending the microphone from the truck to the platform in front of the Mayor, and amplifying his voice from the truck, the problem was easily solved—again friends were made for Chapin-Quick and for the products it handles.

Radio Laboratories, Kansas City, built this compact model. Note 110-volt generator driven by fan belt

This powerful job by Riga-Graulin serves an audience of 80,000



This truck has a 5-mile "voice." Used for theatrical events

# A Tube Kit Directory

## ALL-WAVE

(Calitron Mfg. Co.)  
Super 49... 5-24, 27, 2-45, 80

## ANGELUS

(Davison-Haynes Co.)  
72... 3-24, 27, 2-45, 80  
90... 4-24, 2-27, 2-45, 80  
69... 3-24, 27, 45

## APEX

(U. S. Radio & Tel. Corp.)  
11... 3-24, 2-27, 2-45, 80  
14... 3-24, 26, 27, 2-45, 80  
30... 2-24, 26, 01A, 71A  
54... 2-24, 26, 01A, 71A  
55... 2-24, 27, 01A, 71A  
28A... 3-24, 2-27, 2-45, 80  
31B... 3-24, 2-27, 2-45, 80  
Phono. 31C... 3-24, 2-27, 2-45, 80  
Remote 31D... 3-24, 2-27, 2-45, 80  
32-A... 3-24, 27, 2-45, 80  
32-B... 3-24, 27, 2-45, 80  
DC33... 3-NY64, 3-71A

## ATCHISON

Midnet... 3-27, 24, 45, 80

## ATWATER-KENT

55... 2-24, 2-27, 2-45, 80  
60... 3-24, 2-27, 2-45, 80  
61... 3-22, 2-12A, 2-71A  
66... 3-24, 2-27, 2-50, 2-81  
67... 3-22, 2-12A, 2-71A  
84... 3-24, 27, Pent., 80

## AUDIOLA

8430... 5-27, 2-45, 80  
7330... 2-24, 2-27, 2-45, 80  
30B... 2-24, 2-27, 2-45, 80  
31 TRF... 3-24, 27, 2-45, 80  
31 Super... 4-24, 2-27, 2-45, 80  
ST Jr... 3-24, 45, 80  
6T Jr... 3-24, 27, 45, 80  
9T Super... 3-24, 2-35, 2-27, Pent., 80  
10T Super... 3-24, 2-35, 2-27, 2-Pent., 80

## AUSTIN

Super-het... 3-24, 2-27, 2-45, 80  
B... 4-24, 45, 80  
Jr... 3-24, 45, 80

## AUTOMATIC

Senior... 3-24, 27, 2-12A  
Junior... 2-24, 2-27, 2-12A

## BALDER

30AC... 3-24, 2-27, 2-45, 80  
31DC... 3-24, 3-27, 2-45  
48AC... 3-24, 2-27, 2-45, 80  
33DC... 3-24, 2-27, 2-45  
37DC... 3-24, 2-27, 2-45  
159DC... 3-24, 27, 2-45  
158AC... 3-24, 27, 45, 80

## BALDWIN

70... 2-24, 2-27, 2-45, 80  
50... 3-24, 45, 80  
40... 2-24, 6-27  
25... 3-24, 27, 2-45, 80  
51... 3-24, 45, 80  
71... 3-24, 27, 2-45, 80

## BALKEIT

G... 6-27, 2-45, 80  
F... 4-27, 24, 2-45, 80  
K... 2-24, 27, 45, 80  
E... 3-24, 45, 80  
K-P... 3-24, Pent., 80

## BOSCH

(United American Bosch Corp.)  
48... 3-24, 27, 2-45, 80  
54DC... 3-24, 2-27, 2-71A  
Auto 80... 4-24, 12A  
Boat 84... 4-24, 12A  
58... 4-24, 27, 2-45, 80  
60... 5-24, 27, 2-45, 80  
62DC... 4-24, 27, 2-45  
63DC... 5-24, 27, 2-45  
73... 3-24, 27, 2-45, 80  
75DC... 3-24, 2-27, 2-45  
133... 3-24, 27, 2-45, 80  
135DC... 3-24, 2-27, 2-45

## BROWNING-DRAKE

60-69... 3-24, 3-27, 2-45, 80  
70-71... 4-24, 2-27, 2-45, 80  
20-21... 24, 45, 80

## BRUNSWICK

S-14... 4-24, 27, 2-45, 80  
S-21... 4-24, 27, 2-45, 80  
S-31... 4-24, 27, 2-45, 80  
15... 4-24, 2-45, 80  
22... 4-24, 2-45, 80  
42... 4-24, 2-45, 80  
DG15... 4-24, 27, 4-71A  
DC22... 4-24, 27, 4-71A  
DC32... 4-24, 27, 4-71A  
Bat15... 4-32, 30, 2-31

## CAPEHART

15... 3-24, 2-45, 27, 80  
158... 3-24, 2-45, 2-27, 80  
20... 3-24, 2-45, 27, 80  
20S... 3-24, 2-45, 2-27, 80

## CARDINAL

70... 3-24, 27, 45, 80  
80... 3-24, 27, 45, 80  
60... 3-24, 3-27, 2-45, 80  
91... 4-24, 27, 2-45, 80

## CARTERET

AG Midget... 3-24, 45, 80  
AC-6... 3-24, 27, 45, 80  
DC Midget... 3-32, 30, 2-31  
MotoRadio... 2-24, 27, 12A, 71A

## CLARION

(Transformer Corp. of Amer.)  
51... 3-24, 2-27, 2-45, 80  
53... 3-24, 2-27, 2-45, 80  
55... 3-24, 2-27, 2-45, 80  
Bat... 3-22, 2-01A, 2-71A or 12A  
Jr... 3-24, 2-45, 80  
80... 3-51, 2-27, Pent., 80  
81... 3-51, 2-27, Pent., 80  
90... 3-51, 3-27, Pent., 80  
91... 3-51, 3-27, Pent., 80

## CLEARTONE

112 Series... 4-26, 2-27, 2-81

## COLONIAL

31AC... 2-26, 2-27, 2-71A, 80  
31DC... 5-26, 2-71A  
32AC... 4-24, 27, 2-45, 80  
32DC... 4-24, 27, 2-45  
33AC... 3-24, 27, 2-45, 80  
33DC... 3-24, 27, 2-45  
34AC... 3-24, 27, 2-45, 80  
34DC... 3-24, 27, 2-45  
36AC... 3-24, 2-45, 80  
36DC... 3-24, 2-45  
38AC... 3-24, 2-45, 80  
38DC... 3-24, 2-45  
39AC... 3-24, 45, 80

## COLUMBIA

(Columbia Phono. Co.)  
C20... 4-24, 27, 2-45, 80  
C21... 4-24, 27, 2-45, 80  
Auto. Phono... 27, 2-45, 80  
Comb. 991... 4-24, 27, 2-45, 80  
Comb. 939... 4-24, 27, 2-45, 80

## COLUMBIA

(Columbia Radio Corp.)  
SG-8AC... 3-24, 2-27, 2-45, 80  
SG-9AC... 4-24, 2-27, 2-45, 80  
SG-5AC... 3-24, 45, 80  
SG-7AC... 3-24, 27, 2-45, 80

## CRESCENTYNE

(Crescent Radio Mfg. Co.)  
4-24, 27, 71A, 80

## CROSLEY

Super-Sondo... 4-24, 27, 2-45, 80  
Super-Rondeau... 4-24, 27, 2-45, 80  
Super-Admin... 4-24, 27, 2-45, 80  
Buddy Boy... 3-24, 45, 80  
Classmate... 3-24, 45, 80  
Mate... 3-24, 45, 80  
Pal... 3-24, 45, 80  
Wiggit... 3-24, 45, 80  
Johnny Smoker... 3-24, 45, 80

## Director

3-24, 27, 2-45, 80  
Arbiter... 3-24, 27, 2-45, 80  
40S... 3-24, 2-27, 2-45, 80  
41S... 3-24, 2-27, 2-45, 80  
42S... 3-24, 2-27, 2-45, 80  
82S... 3-24, 2-27, 2-45, 80  
43S... 3-24, 2-27, 2-45, 80  
30S... 2-24, 2-27, 2-45, 80  
31S... 2-24, 2-27, 2-45, 80  
33S... 2-24, 2-27, 2-45, 80  
35S... 2-24, 2-27, 2-45, 80  
Director DC... 3-24, 3-71A  
Buddy Boy DC... 3-32, 12A, 71A  
Classmate DC... 3-32, 12A, 71A

## DAYFAN

(Gen. Motors Radio Corp.)  
5091... 4-26, 27, 2-45, 80  
115003... 4-26, 27, 2-45, 80  
115004... 4-26, 27, 2-45, 80  
115005... 3-24, 27, 2-45, 80  
115010... 4-26, 27, 2-45, 80  
115020... 3-24, 27, 2-45, 80

## DE FOREST

CS-5... 2Z, 2-12A, 01A

## DUCK

62... 5-24, 27, 2-45, 80

## ECHOPHONE

S-5... 4-24, 2-45, 27, 800  
S-3... 3-24, 45, 80  
S-4... 3-24, 27, 45, 80  
C... 3-01A, 27, 71A, 80  
D... 3-01A, 27, 71A, 80  
S-5-S... 5-24, 2-45, 80  
R... 3-24, 2-45, 80  
B... 3-24, 45, 80  
C-DC... 4-01A, 71A

## EDISON

R-4... 5-27, 2-45, 80  
R-5... 5-27, 2-45, 80  
R-8... 5-27, 2-45, 80  
C-4... 5-27, 2-45, 80  
R-6... 3-24, 3-27, 2-45, 80  
R-7... 3-24, 3-27, 2-45, 80

## EDON

(Baw. Holt Co.)  
B... 3-24, 27, 45, 80

## ERLA

(Elect. Research Labs.)  
R2A2... 3-26, 2-27, 2-71A, 80  
AR3... 5-27, 2-45, 80  
224... 3-24, 2-27, 2-45, 80  
225... 3-24, 2-27, 2-45, 80  
230... 3-24, 3-27, 2-45, 80  
271... 3-24, 2-27, 45, 80  
245... 3-24, 2-27, 2-45, 80

## FADA

(F.A.D. Andrea)  
42... 3-24, 3-27, 2-45, 80  
41... 3-24, 3-27, 2-45, 80  
44... 3-24, 3-27, 2-45, 80  
46... 3-24, 3-27, 2-45, 80  
47... 3-24, 3-27, 2-45, 80  
43... 3-24, 27, 2-45, 80  
122 Batt... 3-32, 2-30, 2-31

## FIRST NATIONAL

32... 3-24, 2-27, 2-45, 80

## FRENCH

Junior... 3-24, 45, 80  
Tudor... 3-24, 45, 80  
Florentine... 4-24, 27, 2-45, 80  
Louis XVI... 4-24, 27, 2-45, 80  
Heppelwhite... 4-24, 27, 2-45, 80  
Elizabethan... 4-24, 27, 2-45, 80  
Tudette... 3-24, 45, 80

## FROST-MINTON

FM4... 2-24, 45, 80  
FM5... 3-24, 45, 80

## GENERAL ELECTRIC

11-31... 4-24, 2-27, 2-45, 80  
11-51... 4-24, 2-27, 2-45, 80  
11-71... 4-24, 2-27, 2-45, 80  
H-22... 2-35, 24, 2-27, 2-45, 80  
S-42... 2-35, 24, 2-27, 2-45, 80

## GENERAL MOTORS

A... 3-24, 2-27, 2-45, 80  
B... 3-24, 2-27, 2-45, 80  
MA Little Gen... 4-24, 45, 80  
MB Little Gen... 4-24, 45, 80  
Pioneer E... 4-32, 30, 2-31

## GENEVA

(Cordonic Mfg. Co.)  
36... 4-24, 27, 45, 80  
38... 4-24, 27, 45, 80

## GILFILLAN

95... 4-26, 27, 10, 80  
100... 6-27, 45, 80  
105 Late... 4-24, 2-45, 80  
106 Late... 4-24, 2-45, 80  
107 Late... 4-24, 2-45, 80  
108 Late... 4-24, 2-45, 80

## GLORITONE

(U. S. Radio & Tel. Corp.)  
27... 2-24, 27, 45, 80  
27P... 2-24, 27, 45, 80  
26... 3-24, 45, 80

## GRAYBAR

8... 2-35, 2-27, 24, 2-45, 80

## GREBE

SK-4... 3-24, 27, 2-45, 80  
AH-1... 3-24, 27, 2-45, 80  
HS-4... 3-24, 2-27, 2-45, 80

## GREEN DIAMOND

(How rd Radio Co.)  
5-26, 27, 2-45, 80

## GULBRANSEN

Champion 161... 3-24, 2-27, 2-45, 80  
Junior 73... 3-24, 27, 2-45, 80  
Minnet 173... 3-24, 27, 2-45, 80  
263... 4-24, 45, 80  
163... 4-24, 45, 80  
63... 4-24, 45, 80

## HOWARD

SG-A... 3-24, 27, 2-45, 80  
SG-C... 3-24, 27, 2-45, 80  
SG-B... 3-24, 27, 45, 80  
SG-F... 3-24, 27, 2-45, 80  
H... 3-51, 2-27, 2-45, 80  
X... 4-51, 2-27, 2-45, 80

## HYATT

AC7... 2-24, 2-27, 2-45, 80  
M5... 2-24, 27, 2-01A, 12A  
D... 5-99  
A6... 2-22, 2-99, 20

## I. C. A.

(Insuline Corp. of America)  
Conqueror SW-AC... 2-27, 24, 45, 80  
Conqueror SW-DC... 2-12A, 22, 01A, 71A  
Companion AC... 2-27  
Companion DC... 12A  
Midnet AC... 2-51, 24, Pent., 80

## JACKSON

NJ30... 3-24, 27, 45, 80

## JACKSON-BELL

62... 4-24, 45, 80  
68... 4-24, 27, 2-45, 80  
50... 3-24, 45, 80  
69... 3-32, 2-30, 2-31  
79... 3-24, 2-27, 2-45, 80  
89... 2-51, 2-27, 24, 2-PZ, 80

## JEWEL

120... 3-24, 45, 80  
200... 3-24, 45, 80

## KELLOGG

523... 3-24, 3-27, 2-45, 80  
526... 3-24, 3-27, 2-45, 80  
524... 3-24, 3-27, 2-50, 2-81  
525... 3-24, 3-27, 2-50, 2-81  
527... 3-24, 3-27, 2-50, 2-81  
528... 3-24, 3-27, 2-50, 2-81  
533... 3-24, 2-27, 2-45, 80

- 534.....3-24, 2-27, 2-45, 80
- 535.....3-24, 2-27, 2-45, 80
- 536.....3-24, 2-27, 2-45, 80

**KEMPER**

- SG7.....2-24, 2-27, 2-71A, 80
- SG71.....2-24, 2-27, 2-71A, 80

**KENNEDY**

- 10.....5-27, 2-45, 80
- 20.....3-24, 2-27, 2-45, 80
- 20B.....3-24, 2-27, 2-45, 80
- 1030.....3-24, 2-27, 2-45, 80
- 632.....3-24, 2-27, 2-45, 80
- 26.....3-24, 2-27, 2-45, 80
- Coronet 42.....3-24, 27, 45, 80
- 22DC.....3-22, 2-12A, 2-71A
- 36DC.....3-22, 2-12A, 2-71A
- 38DC.....3-22, 2-12A, 2-71A
- 40.....3-22, 2-12A, 2-71A
- SW Chassis.....3-24
- 426.....3-24, 2-27, 2-45, 80
- 526.....3-24, 2-27, 2-45, 80
- 726.....3-24, 2-45, 2-27, 80
- 726A.....3-24, 2-27, 2-45, 80
- 726B.....3-24, 2-27, 2-45, 80
- 826.....3-24, 2-27, 2-45, 80
- 826B.....3-24, 2-27, 2-45, 80

**KENOLA**

- 2-51, 24, Pent., 80

**KIEL**

- K-100.....3-24, 2-27, 2-45, 80

**KOLSTER**

- K-21.....5-26, 27, 71A, 80
- K22.....4-26, 27, 71A, 80
- K27.....4-26, 27, 71A, 80
- K23.....5-26, 27, 71A, 2-81
- K28.....5-26, 27, 71A, 2-81
- K30.....5-01A, 71A
- K24.....5-26, 27, 10, 2-81
- K42.....4-26, 27, 71A, 80
- K43.....3-24, 2-27, 2-45, 80
- K44.....3-24, 2-27, 2-45, 80
- K45.....3-24, 4-27, 2-50, 2-81

**LEUTZ**

- Seven Seas.....4-24, 27, 2-50, 2-81
- Silver Ghost.....5-24, 3-27, 2-50, 2-81
- Cub.....3-24, 45, 80

**LYRIC**

(All American Mohawk)

- J.....3-24, 45, 80
- K.....4-24, 2-27, 2-45, 80
- H.....3-24, 2-27, 2-45, 80
- DC-7.....3-22, 2-12A, 4-71A
- C-6.....3-24, 2-45, 80
- D.....3-24, 27, 2-45, 80
- B.....3-32, 30, 2-31
- 93-95.....7-27, 2-45, 80
- 96.....3-24, 2-27, 2-45, 80
- 80.....4-26, 2-27, 2-71A, 80
- 60.....3-26, 2-27, 71A, 80
- P.....3-24, Pent., 80
- 606.....5-01A, 71A
- P-4.....4-24, Pent., 80
- P-9.....4-24, Pent., 80

**MAJESTIC**

(Grigsby-Grunow Co.)

- 90.....5-27, 2-45, 80
- 90-B.....5-27, 2-45, 80
- 150.....4-24, 2-45, 80
- 50.....3-24, 2-27, 2-45, 80
- 30.....3-24, 2-45, 80
- 20.....3-51, 2-27, 2-45, 80
- 60.....3-51, 2-24, 27, 2-45, 80
- 31.....3-24, 2-45, 80

**MASTER**

- 70.....3-26, 24, 45, 80
- 901.....3-51, 2-27, 24, 2 Pent., 80
- 424.....4-24, 45, 80
- 700.....3-24, 2-27, 45, 80
- 800.....3-24, 2-27, 2-45, 80
- 900.....3-51, 2-27, 24, 2-45, 80

**McMILLAN**

- 10.....3-24, 3-27, 2-45, 80
- 11.....3-24, 3-27, 2-45, 80
- Midg. Cons.....2-24, 2-71A, 2-27, 80

**MIDGETTE**

(Calitron Mfg. Co.)

- 35.....3-24, 45, 80

**MINUET**

(Western Ind., Inc.)

- M160.....2-26, 27, 24, 45, 80
- M51.....3-24, 45, 80

**MIRACO**

(Mid West Radio Corp.)

- AC-9.....4-24, 2-27, 2-45, 80

**NATIONAL**

(Baikell Radio Co.)

- K.....2-24, 27, 45, 80
- L.....3-24, 45, 80
- K-P.....3-24, Pent., 80
- SG-8.....3-24, 2-27, 2-45, 80

**NORDEN-HAUCK**

- Super 10.....6-24, 2-27, 2-50, 2-81
- Super 12.....5-24, 4-27, 2-50, 2-81
- Super DX-5.....24, 2-27, 2-45, 80

**OTTAWA**

- All Models.....4-24, 2-27, 45, 80

**OZARKA**

- 91.....4-24, 27, 2-45, 80

**PACIFIC**

(Calitron Mfg. Co.)

- 39.....4-24, 2-45, 80
- 38.....4-24, 45, 80

**PATTERSON**

- 79.....4-24, 27, 2-45, 80
- 69.....4-24, 27, 2-45, 80
- 89.....4-24, 27, 2-45, 80
- 90.....4-24, 2-27, 2-45, 80
- 91.....4-24, 2-27, 2-45, 80
- 99.....4-24, 3-27, 2-45, 80
- 99A.....4-51, 3-27, 2 Pent., 80
- 92.....4-51, 2-27, Pent., 80
- 93.....4-51, 2-27, Pent., 80

DC Consolette.....4-01A, 2-71A

- Bat. Midget.....2-32, 2-30, 2-31
- Bat. Consolette.....2-32, 2-30, 2-31
- Universal.....2-24, 27, 2-45, 80

**PREMIER**

- 724.....4-24, 27, 2-45, 80
- 824.....4-24, 27, 2-45, 80
- Home-Pal.....3-24, 27, 45, 80
- Auto-Pal.....3-24, 12A

**RADIETTE**

(Keller-Fuller Mfg. Co.)

- M1.....3-01A, 27, 71A, 80
- F.....2-27, 24, 45, 80
- F-12.....2-27, 24, 45, 80
- 14.....4-24, 45, 80
- 50.....3-24, 45, 80
- 60.....4-24, 45, 80
- 90.....3-24, 3-27, 2-45, 80

**RADIOLA**

(RCA-Victor Co.)

- 18DC.....5-12A, 71A
- 51DC.....5-12A, 71A
- 21.....2-22, 3-12A
- 17.....4-26, 27, 71A, 80
- 18.....4-26, 27, 71A, 80
- 33.....4-26, 27, 71A, 80
- 50.....4-26, 27, 71A, 80
- 51.....4-26, 27, 71A, 80
- 33DC.....5-12A, 2-71A
- 41.....4-26, 27, 10, 80
- 41DC.....6-12A, 4-71A
- 48.....4-24, 2-45, 80
- 44.....3-24, 45, 80
- 42.....4-24, 2-45, 80
- 60.....6-27, 71A, 80
- 62.....6-27, 71A, 80
- 64.....8-27, 50, 2-81
- 67.....7-27, 50, 2-81

*To help you sell replacements this listing has been compiled. It shows the number and types of tubes used in sets made since 1929*

**PETER PAN**

(Western Ind., Inc.)

- P51.....3-24, 45, 80

**PHILCO**

(Phila. Storage Battery Co.)

- 77.....3-24, 27, 2-45, 80
- 96.....3-24, 3-27, 2-45, 80
- 20.....3-24, 27, 2-71A, 80
- 30.....3-32, 3-30, 2-31
- 41.....3-24, 27, 2-71A
- 111.....4-24, 4-27, 2-45, 80
- 211.....4-24, 4-27, 2-45, 80
- 220.....3-24, 27, 2-71A, 80
- 46.....3-14, 17, 2-71A
- 296.....3-24, 3-27, 2-45, 80
- 3 Transitone.....3-24, 2-01A, 2-71A

**PHOENIX**

(Ross Corp.)

- 31.....3-24, 27, 45, 80
- 32.....3-24, 27, 45, 80

**PIERCE-AIRO**

- 171.....4-26, 27, 2-71A, 80
- 245.....3-26, 2-27, 2-45, 80
- 145.....3-26, 2-27, 45, 80
- 14-45.....24, 4-27, 45, 80
- 24-45.....24, 4-27, 2-45, 80
- 173.....5-12A, 2-71A
- 273.....5-12A, 2-71A
- 724.....3-24, 27, 2-45, 80
- 727.....3-24, 2-27, 2-45
- 523.....3-24, 45, 80
- 632.....3-32, 30, 2-31

**PIONEER**

- 200.....3-24, 45, 80
- 100.....3-24, 2-27, 2-45, 80

**PILOT**

- Midget.....3-24, 27, 45, 80
- Consolette.....3-24, 27, 45, 80
- DC Midget.....4-01A, 2-71A

- 80.....4-24, 2-27, 2-45, 80
- 82.....4-24, 2-27, 2-45, 80
- 86.....4-24, 2-27, 2-45, 80
- Superette.....2-35, 24, 2-27, 2-45, 80

**REMLER**

- 11.....3-24, Pent., 80
- 15.....4-24, 27, Pent., 80
- 17.....4-24, 2-27, 45, 80
- 19.....3-24, 3-27, 2-45, 80

**ROAMER**

(Brown & Manhart)

- 44, 45, 48.....3-24, 27, 45, 80
- 60, 62, 80.....3-24, 27, 45, 80
- 88.....4-24, 27, 2-45, 80

**ROYALETTE**

(First National Radio Corp.)

- 21.....3-24, 2-27, 2-45, 80

**SCOTT**

- All-Wave.....5-24, 4-27, 2-45, 80
- AC10.....4-24, 3-27, 2-45, 80
- SG9.....3-01A, 3-22, 40, 12A, 50, 2-81

**SENTINEL**

(United Air Cleaner Corp.)

- 11.....3-24, 27, 2-45, 80
- 12.....3-24, 27, 2-45, 80
- 15.....3-24, 27, 2-45, 80
- 16.....3-24, 27, 2-45, 80
- 89.....3-24, 2-27, 2-45, 80
- 108.....4-24, 27, 45, 80
- 108A.....2-24, 27, 2-35, Pent., 80
- 8.....4-24, 27, 2-45, 80

**SHELDON**

- 9-27, 2-45, 80

**SILVER-MARSHALL**

- 30A.....4-24, 27, 2-45, 80
- 30B.....3-24, 27, 2-45, 80
- 34A.....3-24, 27, 2-45, 80

- 35A.....4-24, 2-27, 2-45, 80
- 36.....5-24, 27, 2-45, 80
- 782 Midg.....3-24, 2-27, 2-45, 80
- 40.....4-24, 2-27, 2-45, 80
- 714 Tuner.....4-24, 27
- 724A.....5-24, 27, 2-45, 80
- 724DC.....4-32, 2-50, 2-31
- 738 SW Conv.....24, 27, 26
- 1040 Superette.....3-24, 2-27, 2-45, 80
- 750.....3-26, 2-27, 2-45, 80
- 752.....3-22, 4-12A
- 760.....3-26, 2-27, 45, 80
- 735AC.....24, 2-27, 2-45, 80
- 735DC.....22, 4-12A
- 737SW.....2-24, 27, 45, 80
- 770 Auto.....3-24, 12A, 71A
- 40DC.....4-32, 2-30, 2-31
- 37.....3-24, 2-27, 2-45, 80
- 38 Cadet.....3-24, 2-27, 2-45, 80

**SIMPLEX**

- D.....4-26, 27, 2-10, 80
- B.....4-26, 27, 71A, Rayth.
- F.....3-24, 27, 45, 80
- G.....3-24, 27, 2-45, 80
- II-AC.....3-24, 45, 80
- II-Bat.....3-32, 30, 31
- H-DC.....3-32, 30, 2-31

**SPARTON**

(Sparks-Wilmington Co.)

- 410DC.....2-24, 27, 2-C183, 80
- AR-19 Auto.....4-24, 12A
- 31.....4-32, 30, 31
- 49.....6-C686, 01A or 01B, 71A
- AR-50 Auto.....3-24, 27, 12A
- AC-55.....3-24, 27, C-183, 80
- 101.....6-C484 or C485, 2-C585 or C586, 2-26, 27, 2-81
- 103.....7-C484 or C485, 2-C585 or C586, 2-C485, 2-81
- 110.....6-C484 or C485, 2-C585 or C586, 2-26, 2-81
- 111.....6-C484 or C485, 2-C585 or C586, 2-26, 2-81
- 111A.....7-C484 or C485, 2-C585 or C586, 2-26, 2-81
- 235.....7-C484 or C485, 2-C183, 80
- 235DC.....7-C484A, 2-C182A
- 301.....6-C484 or C485, 2-C585 or C586, 2-81
- 301DC.....6-C484A, 2-C182A
- 410.....2-24, 27, 2-C183, 80
- 420.....2-24, 27, 2-C183, 80
- 564.....7-C484 or C485, 2-C585 or C586, 2-81
- 570.....7-C484 or C485, 2-C585 or C586, 2-81
- 574.....7-C484 or C485, 2-C585 or C586, 2-26, 2-81
- 589.....7-C484 or C485, 2-C182 or C183, 80
- 591.....6-C484 or C485, 2-C182B or C183, 80
- 593.....6-C484 or C485, 2-C182B or C-183, 80
- 600.....7-C484 or C485, 2-C183, 80
- 610.....7-C484 or C485, 2-C183, 80
- 620.....7-C484 or C485, 2-C183, 80
- 600 DC.....7-C484A, 2-C182A
- 610DC.....7-C484A, 2-C182A
- 620DC.....7-C484A, 2-C182A
- 737.....7-C484 or C485, 2-C183, 80
- 740.....7-C484 or C485, 2-C585 or C586, 2-81
- 750.....7-C484 or C485, 2-C585 or C586, 2-81
- 740DC.....7-C484A, 2-C182A
- 750DC.....7-C484A, 2-C182A
- 870.....7-C484 or C485, 2-C585 or C586, 2-26, 2-81
- 930.....6-C484 or C485, 2-C182, C182B or C183, 80
- 931.....6-C484 or C485, 2-C182B or C183, 80
- 931DC.....6-C484A, 2-C182A

**STAR RAIDER**

(Continental Radio)

- All.....7-484, 2-50, 2-81

**STEINITE**

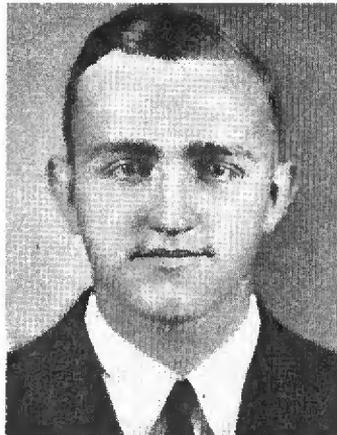
- 40.....5-27, 2-71A, 80
- 45.....5-27, 2-71A, 80
- 50.....5-27, 2-50, 2-81
- 261.....4-26, 27, 71A, 80
- 420.....3-24, 27, 2-45, 80
- 450.....3-24, 27, 2-45, 80
- 990.....5-99, 12A, 80
- 605.....3-24, 2-27, 2-45, 80

**STERLING**

- Troubadour.....3-24, 2-27, 2-45, 80
- Serenader.....3-24, 2-27, 2-45, 80
- Imperial.....3-24, 2-27, 2-45, 80
- Chorister.....4-24, 27, 2-45, 80
- Minstrel.....4-24, 27, 2-45, 80
- Little Symph.....3-24, 45, 80
- Little Symph. Midg.....4-24, 45, 80

(Please turn to page 51)

# How



By  
J. P. Kennedy

# IS SELL

**WHAT'S WRONG  
With Your Radio?**  
*Call an Expert*  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

**\$10.00 FREE!**  
**If We Can't Repair  
Your Radio Set.**  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

**ONE MAN TOLD  
ANOTHER  
ABOUT**  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

**When You Want a  
Real Engineer--  
CALL**  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

**Don't Fool Around  
With a Good Radio  
Gone Bad.**  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

**BELIEVE IT OR NOT**  
*We Never Fail to  
Fix it*  
J. P. Kennedy's Radio Service  
Ph. 3-6297. 418 W. LaSalle.

## THE "ADS"

*Four days a week—Sunday, Tuesday, Wednesday and Friday—these one-inch advertisements are tied in with my column. They cost little but pull big*

**N**EARLY a year out of the business, your old customers in the hands of others, how would you win them back?

That was my problem in the spring of 1930 when I decided to get back into service work for myself after working one season for a local dealer. Its solution will help other one- or two-man independent radio service shops that are willing to go after business.

My capital was so small, I had to pay the bank a monthly fee to retain a checking account, but my instruments were in good condition. A 1928 car was also included among my few assets.

My first thought was direct mail advertising. So I went through old service records and then through the phone book and checked every familiar name, including the members of the Kiwanis Club, of which I have been a member for some time. There was 456 names and I added another 44 at random.

Under the mistaken belief that low prices would bring results, I had five hundred government postcards printed offering one dollar off on a regular \$1.50 service call if the card was presented within thirty days. This idea was almost a failure. Only eleven replies were received. The expected sale of accessories did not materialize because those who did call were bargain hunters and people too poor to have a regular service call. I broke even and charged my time up to experience.

Why not get some free advertising? What would the newspapers publish under my name, free? I decided to write a radio question box, making up questions from practical problems I had encountered, and to submit this to the papers.

It took six hours of typewriting to prepare fourteen pages, 250 words to the page, of radio questions and answers. That would be sufficient for two weeks. I submitted the copy to a leading newspaper. They were not willing to pay for such material but would be glad to run it if I was satisfied with the publicity my name at the top of the column would bring. Would I be satisfied with five dollars a day of free advertising? Well that's just what that column would cost if I had to pay for it!

**A**T THIS time I also put in my application to the local school board to teach practical radio service work in the vocational night school classes, two evenings a week. I knew nothing about teaching—but they knew nothing about radio—so I got the job. Forty-four pupils ranging from 17 to 39 years old reported for the class.

I prepared a logical presentation of elementary radio principles and found, as I had expected, that the 44 pupils constituted a powerful publicity group, talking up my lessons to their friends. They also provided a good market for many of the parts, sets, meters and similar radio equipment I had laying around.

Things began to happen. With the newspaper column and the radio class, came business; two, three and four calls a day from an excellent class of trade

*“Nearly a Year Out of the Business. Old Customers In the Hands of Others. How Would You Get Them Back? I Did It With Publicity, a Few Ads And Personal Letters”*

# Service

that wanted an expert on whom they could depend. These people were willing to pay fair prices. Accessories that I recommended sold easily.

Still there wasn't enough business. I felt by this time that I could afford some real newspaper advertising. I picked the four best days of the week, Sunday, Tuesday, Wednesday and Friday and started out with a one inch ad carrying a brief message to tie in with my daily column. I prepared ten of these ads. This brought in a little more business. But still there wasn't enough to keep me busy. I wanted more and decided to try personal letters. I started making up a letter.

The text of the letters presented quite a problem. I'd have to have an opening that would get attention. I must use plain paper without a printed head else they would suspect at first glance it was advertising matter and discard it, yet I must get my name and address over and inject sufficient personal appeal that they couldn't forget who wrote to them or why. A radio announcer coming in on a set in the next room seemed to read my thoughts and answered, "We deeply appreciate your comments on our programs as the members of the staff feel a *personal interest* in every listener." That was it, personal interest, padded out with flattery, so that they'd continue to the end of the letter looking for more of "the old oil," as the late Jack Donahue called it.

As a trial I sent out twenty of these personal letters. Only one netted an immediate call. "Mighty glad to have you back on the job, Kennedy. That letter certainly was a bell-ringer." (The man was J. M. Cleary, adver-

**What's Wrong With Your Radio?**  
BY J. P. KENNEDY,  
Instructor of Radio and Service Engineer.

Ever since a storm this summer our radio will not work on the usual aerial and ground. By using the ground alone on the aerial post we get stations but also considerable noise. The aerial looks all right and is not broken or touching anything. Mrs. L. C.

The fact that the set works proves nothing is wrong with it. Your aerial must be short-circuited to the ground somewhere. If you have a lightning arrester, disconnect it from the aerial the set with its lightning arrester, to substitute for evidently worn

**What's Wrong With Your Radio?**  
BY J. P. KENNEDY,  
Instructor of Radio and Service Engineer.

My set is fairly old with an excellent large Western Electric speaker. I would like to buy a new set but all have dynamic speakers and I want to use my present one. Is there any way I can adapt it to a modern set?

Your magnetic speaker can be used in a modern set with a suitable coupling transformer that would cost \$10 or \$15 but modern sets use the '45 or '50 tubes and the power is great that it would probably rattle or magnetic speaker. The type of speaker you mention is exceptionally good on tones above middle C on the scale, while the speakers on modern sets will reproduce well the two octaves below middle C.

Have a battery set with a charger "B" eliminator that will work for a few minutes and then die down. If the set rest a short time and it on again it repeats the dying process.

V. K. Variably that means battery life. There are many like yours with batteries two or three years old which are beginning to give out. If you turn your set off the battery will recover slightly and give a few minutes more service, but you will observe the tubes you will at they grow dim as the sounds If the battery is more than two years old it will not pay to re-

set about three Is there enough new sets to justify one? J. McC

Dear Mr. Hollister:

Have you ever had a person who sold you merchandise or service take a genuine personal interest in your complete satisfaction after the sale?

Two years ago, I had the pleasure of serving you by repairing your Studebaker radio. The genuine manner in which I was treated by both yourself and your charming wife left a lasting impression. The environment of your store was so pleasant that I could not help doing my work in the best possible manner.

I presume the set has been working satisfactorily as I have not heard from you since, but you should have it checked over at least once a year. Tubes don't last forever. You have had your money's worth out of those in your set if they have not been cheap since I saw them.

Several improvements can be made in your radio at this time that will be worth while. The tone can be softened and softened just as in the latest models, new quick-heating tubes will give you entertainment within seven seconds after you switch on the set, the volume control can be cleaned and made to operate more quietly.

The object of this letter, I will admit, is business but it is also evidence of the interest I have in your entertainment. I want your friendship and the good will of your friends. This can only be obtained by serving your interests to the best of my ability. In other words, I want your radio service work. May I have 112

Very truly yours,  
J. P. Kennedy  
J.P. Kennedy's Radio Service.

Phone 3-6239

## THE LETTER—

*Personal letters take time to write and I must rack my mind to remember incidents which occurred on my last call to make them really effective but they are the best means of booming my service business that I have yet tried. It apparently does no harm to flatter customers*

## THE PUBLICITY—

*The largest newspaper in South Bend publishes a Question & Answer column that I write daily. It has attracted so much fan mail that other dealers are now running their ads on the same page.*

tising manager of the Studebaker Automotive Corporation, South Bend.) The job netted four dollars and two other calls on friends of this well-satisfied customer. I sent out more letters and as the weeks passed the calls continued to increase.

I've got all the work I can handle right now, but if things slack up a bit there is still an ace or two in the old coat sleeve. Under each name on my mailing list is a telephone number. I can make a direct appeal via phone for business if it becomes necessary. The public always falls for the "something for nothing" racket. I can advertise a free consultation via phone and at the same time give a little high pressure sales talk on the value of having the set fixed right with the aid of good testing instruments.

# Calibrating Service Oscillators

By  
H. L. Olesen,  
Jewell Electrical Instrument Co.



*By following the instructions given in Mr. Olesen's article a serviceman may check the calibration of either home made or factory built oscillators in both the broadcast and intermediate frequency bands. The method described may also be used in the calibration of newly built instruments with sufficient accuracy for most practical uses*

**S**ERVICE test oscillators designed and built for radio servicing are all subject to changes in frequency calibration due to the changing of tubes, variations in A, B, or C voltages, or misalignment of parts due to rough handling. Accurate servicing requires that the calibration be checked from time to time and corrected when necessary. This check is rather easy to make and requires no other equipment than a radio set in good working order.

The first check should be made on the broadcast band. Since a good radio service oscillator covers this band in its entirety from 550 to 1500 kc, best results will be obtained if the check is made over the entire band.

A complete calibration curve for the oscillator can be made by comparing it with the signals from the known constant frequency broadcasting stations. Select eight or ten broadcasting stations, located approximately 100 kc apart throughout the broadcast band, picking out those known to be crystal controlled or otherwise adjusted to maintain a fixed frequency.

Adjust the radio set to one of these broadcasting stations, being careful to

see that the set is in exact resonance with the signal and that the signal in the speaker is less than average intensity. Best results will be gotten with relatively weak signals in the speaker of the radio set. After the set is properly adjusted to the signal, disconnect the antenna and replace it with the normal connections to the oscillator. Care must be used so as not to change any of the adjustments of the set while changing from antenna to oscillator.

Turn on the oscillator and adjust it until it is in resonance with the radio set without changing any of the controls on the set. Adjust the signal strength of the oscillator until it is approximately the same as that of the broadcasting signal.

Best results will be obtained if an output indicator of some type is used in the output circuit of the radio set to more accurately indicate resonance. Good output indicators have several ranges. The most sensitive range should be used and the signals adjusted for volume so as to obtain deflections of about two-thirds full scale on the indicator.

When the oscillator has been properly adjusted to resonance with the radio set, note the position of its tuning control. This is the position of the oscillator tuning control corresponding to the frequency of the broadcasting station originally tuned in. Record the position of the oscillator tuning control and the frequency of the broadcasting station as published in any good radio log.

Repeat this process for each of the eight or ten stations selected throughout the broadcast band, recording in each case the tuning control setting and the frequency. From this data, plot the calibration curve for the broadcast band of the oscillator on ordinary graph paper.

## Intermediate Band

While the most common intermediate frequency for superheterodyne use has been in the neighborhood of 175 kc,

there are sets available using 130 and 140 kc. Hence a good service oscillator should cover the entire intermediate band from about 125 to 185 kc. The check on the intermediate band is made by locating the harmonics of the frequencies in this band that fall in the broadcast band.

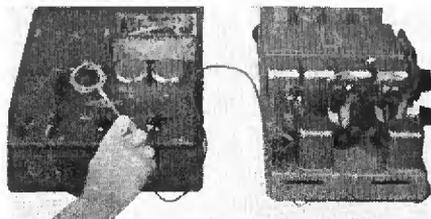
The following table shows three frequencies in the intermediate band and their harmonics, some of which fall in the broadcast band:

HARMONIC	FREQUENCY IN KC		
1	130	150	175
2	260	300	350
3	390	450	525
4	520	600	700
5	650	750	875
6	780	900	1050
7	910	1050	1225
8	1040	1200	1400
9	1170	1350	1575
10	1300	1500	1750
11	1430	1650	1925
12	1560	1800	2100

From this table it is apparent that the harmonics of these three intermediate frequencies appear at least four times each in the broadcast band; twice on even and twice on odd harmonics. It is also apparent from this table that, although both the 150 and 175 kc fundamentals have harmonics appearing at 1050 kc that these fundamentals can readily be distinguished by the fact that one also appears at 600 kc while the other appears at 700 kc. An aid in distinguishing the harmonics of a given fundamental is found in their relative strength; the evens are generally stronger than the odds.

With the oscillator connected to the radio set adjust the latter to exactly 1050 kc, as determined by the broadcast band calibration just completed. (Ed. Note: Find this frequency on the receiver with the aid of the oscillator. Receiver dials are rarely calibrated accurately enough for this purpose), and tune the oscillator in its intermediate band until a signal is heard. The frequency of this signal must be a multiple of 25 to have a harmonic at 1050 kc and a fundamental in the band 125 to 185 kc.

In other words, the signal in the intermediate band could be 125, 150, or 175 kc. To determine which frequency is correct it is only necessary to determine



Radiation by a test oscillator, except through the output circuit, prevents its use for the accurate adjustment of a receiver. The passing of a loop connected to the antenna circuit of a high-gain receiver near the oscillator controls should not deflect the needle of the output meter if the instrument is properly shielded

whether the fourth harmonic is present at 500, 600 or 700 kc. To do this, tune the radio set to these frequencies without changing the adjustments on the oscillator. Should another harmonic be found at 700 kc, the fundamental between 125 and 185 kc is 175 kc, one of the cardinal calibration points of the intermediate band due to its common use. A further check on this fundamental is to locate other harmonics at 875, 1225 and 1400 kc.

Having located 175 kc in the intermediate band, the same procedure is followed for other frequencies until sufficient points are obtained to plot a calibration curve for this range. Due to the harmonics being in general, weaker than the fundamental, the attenuator of the oscillator will probably have to be operated in a more advanced position than in the check made on the broadcast band.

A good service oscillator covering the entire intermediate band should be equipped with means for spotting the intermediate frequency most commonly used at some cardinal point on the tuning dial. This means is likely to be in the form of a trimmer condenser in parallel to the main tuning condenser.

To spot 175 kc at some main division on the oscillator tuning dial proceed as follows: With the oscillator connected to the radio set in the normal way, set its tuning control to the desired main division and the station selector of the radio

set to exactly 1050 kc. Adjust the trimmer condenser in the intermediate circuit of the oscillator until the output indicator shows resonance on its most sensitive range. The oscillator is then calibrated to supply 175 kc at the point chosen on the tuning dial.

Where the oscillator does not cover the intermediate band in its entirety but simply supplies one or more fixed intermediate frequencies, these points are checked in a manner similar to the spotting of the 175 kc point on the tuning dial. Set the oscillator to each of its fixed intermediate points in turn and the radio set to a harmonic of the point—1050 kc in the case of the 175 kc point, or 780 kc for 130 kc, and adjust the oscillator circuit until resonance is indicated by the output meter. This adjustment in most cases will be in the form of a trimmer condenser mounted within the instrument.

### Graphs

It is interesting to note the accuracy with which these checks and recalibrations can be made. In the broadcast band an accuracy of a few per cent can easily be obtained if a calibration curve is drawn, using eight or ten good broadcasting stations evenly distributed over the band. The accuracy obtained depends on the care taken in tuning the radio set to each station and the oscil-

lator to the radio set. If a good output meter is used on relatively weak signals, the greatest source of error will be in reading the position of the oscillator tuning control dial.

The calibration curve for a good oscillator for the broadcast band should be smooth and free from sharp bends or breaks. Bearing this in mind, recheck carefully any points which do not fall on a smooth curve. Take the published values of frequency for the various stations used rather than readings of frequency from the radio set tuning dial. The former are far more accurate. If there are slight bends in the calibration curve for the broadcast band, the shape of such bends can be determined by taking readings on additional points along the bend.

In the intermediate band the accuracy obtained can be greater than that obtained for the broadcast band because of the sharpness of tuning required on the harmonics as compared to the fundamentals. The only drawback, however, is that the calibration of the intermediate band depends on the accuracy of the calibration of the broadcast band to start with.

There is nothing very complicated or very difficult in this calibration, and accurate results should be easily obtained if reasonable care is taken in adjusting the controls of the oscillator and the radio set when readings are taken.

## How to Build

By Charles Felstead,  
Universal Pictures Corp.

# A Simple Ohmmeter

A SIMPLE ohmmeter can be built easily out of parts found around the average workshop. The parts needed for its construction are a low-reading direct-current voltmeter, a rheostat, two binding posts, and a dry battery. These are connected together as shown in Fig. A.

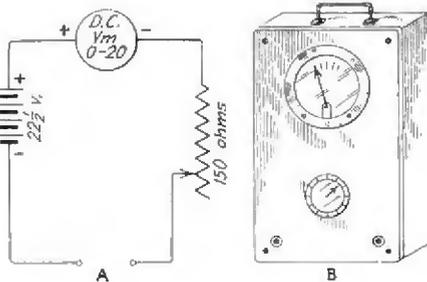
Ordinarily the circuit is open; but when the two binding posts are shorted, the circuit is closed and the voltmeter, battery, and rheostat are connected in series.

The battery must have a voltage that is slightly higher than the voltmeter range. For example, if a voltmeter with a range of 0-20 volts is selected, a 22½ volt B-battery should be used with it. The resistance of the rheostat must be a little more than enough to reduce the battery voltage to the value that will give exact full-scale reading on the meter when the binding posts are shorted.

If the resistance of the voltmeter is known, the rheostat resistance can be easily calculated by Ohm's Law. The resistance of voltmeters can best be learned by writing to the manufacturers. If, for example, a 0-20 voltmeter is known to have a resistance of 1,000 ohms, or fifty ohms per volt, the series resistor for full scale reading would be exactly 125 ohms. A variable 150 ohm rheostat would be used in order to allow for variation in battery voltage.

A simple formula for calculating the value of the series resistor is given below:

$$R = \frac{(E - E_m) R_m}{E_m}$$



Where,  $E$  = the battery voltage,  $E_m$  = the full-scale reading of the voltmeter,  $R_m$  = the rated resistance of the meter; and  $R$  = the resistance of the required series resistor.

The ohmmeter can be built into a case with a panel arrangement something like that of Fig. B. A small battery can be included inside the case and can be held in place with metal straps. A handle for carrying should be fastened to the top of the case.

### Operation

To operate the instrument, the binding posts should be shorted with a piece of wire and the rheostat adjusted to give a full-scale deflection on the voltmeter. This adjustment must be made each time the ohmmeter is used. Now, if the wire strap

is removed from the binding posts and a resistance unit substituted for it, a lower reading of the voltmeter will be obtained, the exact reading depending upon the ratio of the unknown resistance to the resistance of the ohmmeter circuit, which in this case is 1,125 ohms.

It is evident that when the external resistance being measured is exactly equal to the internal resistance of the ohmmeter circuit, or 1,125 ohms, the voltage drop will be divided equally and the reading of the voltmeter will be reduced to exactly one-half its former value. If the external resistance was equal in value to three times the ohmmeter resistance, or 3,375 ohms, the voltmeter would read only one-quarter of the original amount, or five volts. And so on.

The ohmmeter can be calibrated by using a half dozen or so resistors of known values, and marking the resistance reading obtained directly on the voltmeter scale. For this purpose, it is best to remove the voltage scale from the meter and substitute a new one marked only in equal divisions. If the known resistance settings are marked on this scale, other readings between these values can be estimated.

The range of the particular ohmmeter described is roughly from zero to 10,000 ohms. As the readings increase above 10,000 ohms, they come so close together on the scale that they are difficult to distinguish exactly. If the internal resistance of the ohmmeter circuit is greater, higher resistance values may be measured.

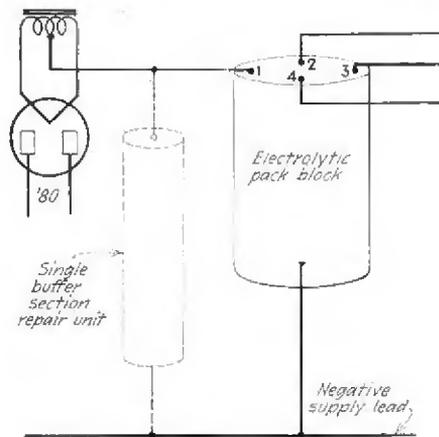
# SERVICE SHORTCUTS



## Repairing Electrolytic Buffer Sections

By Frank L. Bowers

In servicing many a.c. sets I find that the electrolytic condenser in the pack has failed and that, more often than not, the failure is in the buffer section. This ca-



capacity may usually be replaced with a single section, 8 mfd. electrolytic unit, thus avoiding removal and scrapping of the entire condenser block.

Use a "Z" type mounting bracket on such jobs and swing the new buffer unit to any convenient position which permits vertical mounting. Disconnect the lead from the rectifier filaments to the old block (the positive B lead) and carry it to the 8 mfd. section instead.

This kink cuts repair costs considerably.

## Test B's Under Load

By J. E. Fox

There are still a large number of battery receivers in operation in our section and many people bring their B batteries into the shop to be tested. Quite a few of

these test OK with an ordinary meter but when placed under load, back in the set, drop in voltage or reverse polarity.

To test B's accurately I have a switch on my test panel for shunting a UX877 protective lamp across the cell. The lamp pulls approximately the same current as an average receiver and as a result I get a true picture of the condition of the battery.

## Variable-Mu "Kink"

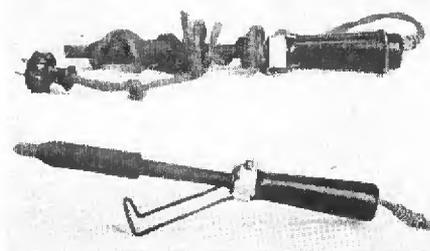
If locals can still be heard when the volume control is fully retarded on a set using the new variable-mu tubes one or more of the 255's or 551's is defective.

## Self-Supporting Iron

By Stephen J. Ripich

A soldering iron can be made to stand on its own feet without a lot of trouble or expense. Take a piece of thin sheet iron or heavy tin about one inch wide and long enough to wrap around the handle close to the shaft with about an inch overlap and drill holes at both ends where they lap to permit a screw to be inserted through them both into the wood handle. Drill two small holes on opposite sides of the iron through the metal band thus formed and insert a piece of heavy wire bent to the shape illustrated in the picture in these holes.

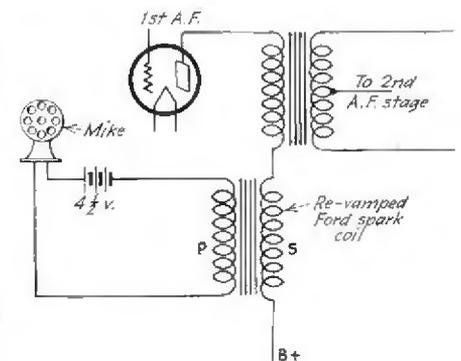
The wire stand may be held in place and prevented from jumping out of the swivel holes by cutting small flanges in the sheet iron band at these points and bending these flaps back over the wire. When not in use the stand folds up around the iron handle.



## Equipping a Set With a "Mike"

By Charles Andros

Often times the serviceman is called upon to install a microphone in a circuit of a new receiver. Usually considerable howls, squeals and similar noises are experienced when the average technician tries to do the



job. Several methods for correction of this condition have been offered by manufacturers but these usually involve considerable expense. Then there is usually the necessity of a changeover switch to be thrown when radio alone is desired.

After much experimenting we have found the following method to be satisfactory and it does not require the removal of the mike from the circuit when the radio alone is used. An old Ford spark-coil is pressed into service as a modulation transformer. Removal of the vibrator and moving parts reduces this device to primary and secondary (primary is the low resistance winding). Connections are shown in the accompanying diagram.

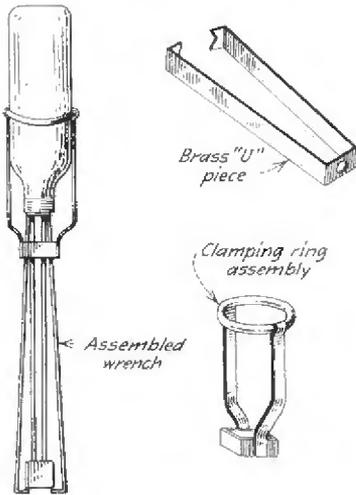
The primary circuit of the coil includes the microphone and an energizing battery, which may be two dry-cells or a four-volt C battery if a simple single button mike is used. The secondary of the spark coil is placed in series with the primary of the audio stage push-pull transformer.

If the microphone used does not incorporate a cutout switch it will be necessary to include one in the microphone-battery circuit in order to avoid drain on the "C" battery when the circuit is not in use.

# The Socket Wrench Improved

By Raymond T. Peschek

A socket wrench does nicely in the removal of nuts but it is not always so efficient in replacing them again. For sometime a stiff piece of wire was used in our shop, the nut sliding down the wire to the bolt. After careful manipulation the nut was started on the first thread, the wire removed and the wrench applied. Even this



scheme involved tedious work.

So a nut holder was attached to an ordinary socket wrench consisting of a brass "U" piece which slid over the shaft near

the handle with its ends filed "V" shaped to clear the nut when the wrench was in use. Another clamping ring assembly was designed to fit over the "U" piece, the ring around the handle being made of heavy galvanized wire and the remainder of brass.

When the completed tool is used the proper socket wrench is fastened on the shaft. The nut which is to be fastened down is placed in the socket wrench which has been inverted. By sliding the clamping ring assembly upward the "U" piece pulls together on the nut at the end and prevents it from falling. After the nut has been started the clamping ring is raised, opening the "U" spring and releasing the nut.

# Light for Soldering

By Walter Hoffman

It is often necessary to solder connections in out of the way corners of a chassis, where there is insufficient light. Sometimes it is difficult and slow work to rig up a light from the pilot socket for this purpose.

A small fountain-pen flashlight such as most service men carry solves the problem. Wind a length of rosin-core solder around the business end of the flashlight, and let about two inches of it project in the direction of the light beam. Direct the light on the joint and the solder is right where you want it.

# How Do YOU Do It?

Radio Retailing will pay \$3 or more for acceptable letters from experienced servicemen describing original methods, or equipment of interest to other shops.

Schematic diagrams and drawings need not be artistic, merely clear—we redraw them anyway.

Mail "kinks" to W. MacDonald, Technical Editor, Radio Retailing, 10th Ave. at 36th St., New York City.

# "Oil"

By Guy Newell

A small can of light machine oil is an indispensable item in my repair kit. I am not enough of a chemist to tell what happens chemically, but I do know what happens physically when this oil is applied to certain parts of a radio receiver. As a saver of tempers, elbow-grease and sandpaper it is without an equal.

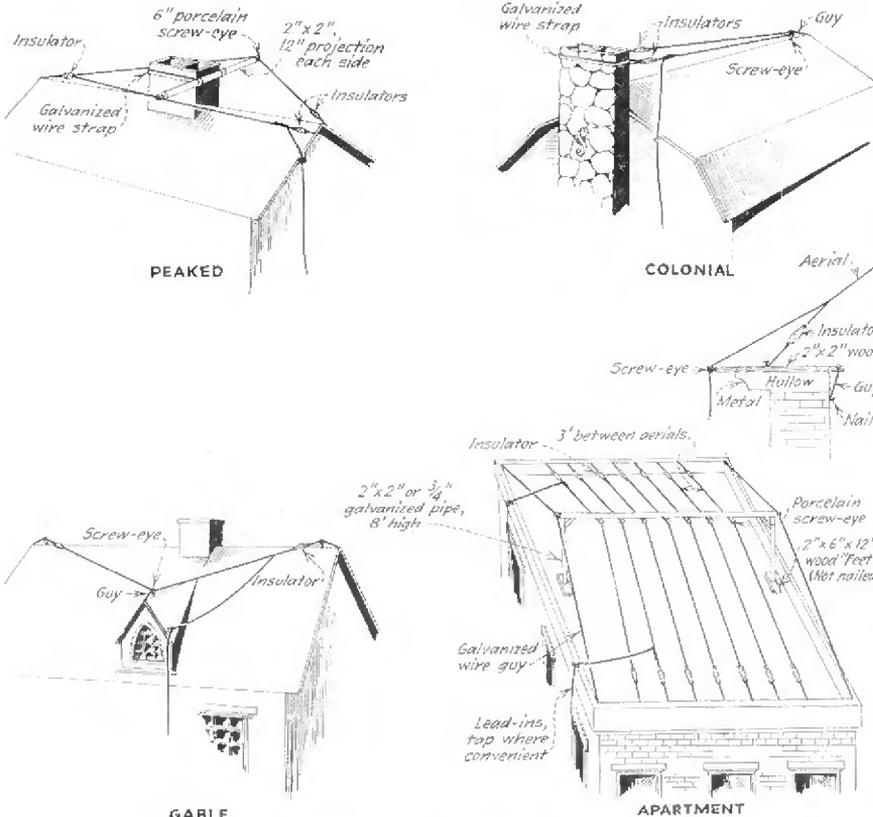
In the case of a noisy volume control, either of the wire-wound type or the impregnated fiber with roller contact, a drop of oil not only kills the noise but invariably makes the control operate more easily and smoother. If the job happens to be on a battery set the same thing holds good for rheostats.

When the gang switch in any of the combination B-eliminator, storage battery and trickle charger outfits, particularly the Philco, delivers a fluctuating current and is sticky and slow in action, a drop of oil on each contact does as much good as an hour of cleaning with a file and sandpaper.

If you find signals cutting in and out sharply whenever a light switch is turned on or off try a touch of oil on all variable condenser contacts and on unsoldered connections in the antenna circuit, moving them to work the oil in. Any place where oxidation or corrosion occurs between two surfaces is a good place for the application of a little light oil—battery connections, switches, condensers, jacks, plugs, etc.—for it softens the deposit which may already be there and prevents further trouble.

For a long time I have been reading and hearing of sandpapering tube prongs and contacts, but have gone right ahead oiling them, with better and more lasting results. Which brings us to the old saw, "An ounce of prevention is worth a pound of cure." Oil, properly applied to new sets, practically wipes out the service calls formerly caused by poor connections or bad tube contacts.

# Five "Sky-Wire" Helps



Al Hesslund of Lowry Radio Service, Minneapolis, recommends the illustrated methods of erecting efficient antennas without unsightly poles

# A Good Lubricant

By C. A. Schreurs

"Nujol," obtainable at most drug stores, makes an excellent lubricant for condenser shafts and other moving parts in a radio. It is highly conductive, hence does not introduce objectionable resistance between moving parts and does not collect dirt as readily as most other oils. Clean the moving parts with alcohol before applying.

# Free Wheeling—No Brakes . . .

WHEN Charles Freshman announced, in 1925, his battery set, "in a cabinet," for \$115, the wisecracker said he was headed for the house over the hill. And this same sentiment has prevailed ever since, whenever some hardy soul established a lower price level. Ten short months ago, from out of the West, came the "midget." We gasped at its \$60 tag but managed to survive—because margin ratios, while short on dollars, still provided for a distributor and dealer "cut."

And now, dear reader, from *all* points of the compass are appearing 4 and 5 tube jobs which "out-midget the midget," in price and in diminutiveness.

In many shapes, and designed also to fit into all sorts of furniture (from end tables to unabridged dictionaries), and priced to the consumer, with tubes, from \$25 to \$50, these little fellows soon will be advertised throughout the land. They will be available on countless counters of many types of stores and will be very popular with the compilers of mail order catalogs. Make no mistake about it the \$25-\$50, two-by-four receiver will account for at least 15 per cent—maybe more—of total unit sales during 1932.

## What to Do?

What then, will be the effect of this latest comer on the fortunes of the independent radio merchant? And how may he best meet the situation which will be created?

Because there necessarily must be a marked divergence in reception performance and appearance between this extreme example of the set-builder's art and that of the average console, we hold that out of this *reductio ad absurdum* good will spring. Bold indeed will be the dealer who attempts to sell these little sets with "just as good" arguments. And few, we believe, will be the prospects who will expect to obtain the best in radio for three spread eagles. As a matter of fact the manufacturers of these new creations, so far, have had the wisdom to advertise them for what they are—second purpose, novelty or utilitarian sets.

In other words, the industry itself, by its extreme action, has now definitely established the fact that there *is* such a thing as comparative standards of value—that price *does* make a difference—that you get, in the long run, just about what you pay for. And wise dealers will give this sub-midget development a constructive turn by selling each price-range type according to its true merits, and according to the specific requirements, taste, and buying ability of each customer.

## Too Many Tubes to Stock

TWENTY-FIVE different types of tubes comprise a standard and necessary retail stock for the average dealer doing a general business. New types should be added to the retail shelves only after the most careful study by all factors.

Two different new tubes of the variable-mu type are now being produced—both to accomplish the same pur-

pose. Yet the different characteristics of these tubes will prevent them from being interchangeable, except at a sacrifice of the advantages to be gained.

Receivers will have to be designed around one or the other. Tube manufacturers will have to make duplicate lines, involving excess production. Distributors and dealers will have to stock additional types. And the public will suffer additional confusion in tube designations.

Certainly any new tube brought out this year should be standardized, and standardized at the very outset, instead of entering upon a program of duplication. Enlightened trade opinion should act vigorously and at once to bring about co-operation between receiving-set and tube manufacturers to eliminate this unnecessary burden during the difficult year ahead of us.

## Radio Needs the Press, the Press Needs Radio

AT THE Hotel Pennsylvania, New York, on April 23, the American Newspaper Publishers Association gave concrete expression to its sentiment that broadcasting is now a serious competitor of the printed advertising page. The newspaper men are planning retaliatory measures, which will hobble the development of broadcasting. Among other things ANPA recommends that program listings be further subordinated or entirely eliminated.

These gentlemen of the Fourth Estate should remember that radio editorial material was originally run in newspapers as a circulation building measure, and that program listings still rank high in reader-interest rating. Newspaper publishers also should recall that radio manufacturers, jobbers and dealers have spent millions for newspaper advertising space. Yes, the radio industry has more than paid its way with the newspapers. Radio has benefited them, large and small.

Radio needs the newspapers, and the press needs radio's support. Working together these two should continue to supplement and help each other. It will be extremely unfortunate for both if they come to any parting of the ways or open battle.

## Back of the Trade Show

BIGGER than the immediate advantages of seeing all the sets and making personal contacts conveniently is the Trade Show Idea. Our annual demonstration of business strength, enthusiasm and unity of purpose has become a fixture. Back of the convention and exhibit movement lies much of our hope for a coherent, progressive, self-governing and self-curing industry.

Only through close and regular contacts can radio men survive on a long-time, profit-making basis. And it is only through the medium of an annual, national, get-together that such an objective can be attained.

# ...other EDITORIAL Observations

## No Ace Up the Sleeve

TELEVISION has received so much publicity of late that one would assume it had made some great stride in the past few months. Because of this spring outbreak of newspaper "hives," we have again carefully investigated the present *actual* status of the *commercial* development of this art. And again we find that the optimism of certain writers and of certain manufacturers is not based on the actual facts.

Development of transmitting and receiving equipment has gone forward slowly, methodically, along fundamental lines without any revolutionary refinement coming to light. Furthermore, we doubt that anyone has an ace "up his sleeve" which will revolutionize the art overnight.

Television is in about the same state as was radio in 1921. Some 19 stations are broadcasting simple programs and half a dozen companies are building equipment with which consumers of an experimental turn of mind may receive these pictures with more or less degree of experimental success.

Despite the fact that engineers and merchandisers, remembering the radio boom, are leaning over backward toward this second wireless marvel in order not to be caught napping, consumer acceptance of television will probably develop more slowly than radio. When KDKA first went on the air the price of initiation to broadcasting was as low as \$10, via a crystal set. No such introduction to televised entertainment is yet possible. At least \$100 must be invested before the curious may receive a single, solitary flicker.

*Radio Retailing* regrets sincerely that—in justice to truth and in keeping with its duty to its readers—it must publish the preceding analysis. It is in close touch with the situation and will be the first to report all *merchandising* possibilities of television just as soon as they materialize.

## There's a Difference

MANY set manufacturers, through national advertising, are assuring the public that dealers everywhere are eager to make free trial installations. While a properly conducted home *demonstration* is part and parcel of modern "in-the-home" sales technique, free trials, promiscuously offered and granted, frequently prove over-costly. A slack salesman will sell the free trial idea in the store and rely upon the performance of the set itself, in the home, to complete a job which obviously is his.

Retailers are therefore watching "free trial" costs, due to this mounting ratio of overhead to gross margin on the average unit sale. So we now have the paradoxical picture of the manufacturer encouraging the free trial idea while the dealer strives to eliminate the practice or hold it to that of a limited demonstration to genuinely interested prospects only.

## Where the Midget Fits In

A HOUSE-TO-HOUSE canvass just completed in the Boston Metropolitan area, discloses an interesting situation in respect to radio sets in use. The homes visited were classified by price, and revealed radio saturation percentages as follows:

	PER CENT
\$10,000 and up . . . . .	72
\$5,000 to \$10,000 . . . . .	95
\$2,000 to \$5,000 . . . . .	62
\$2,000 and below . . . . .	40

It can be assumed that in the top class, when families have no radios, there is a definite prejudice against owning a set. But the lower two groups show the opportunity for selling cheaper sets in a large and expanding market of low-priced new homes. And that's where the midget fits in.

## Radio Makes of America One Vast Auditorium

*Excerpt from a radio address by O. H. Caldwell*

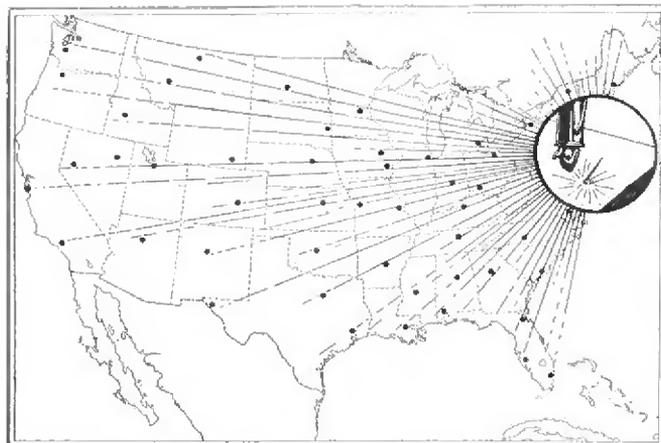
"RADIO broadcasting has worked wonders in transforming our lives, our ideas and our habits in these past few years. For example, radio has converted the whole North American continent into one vast auditorium, an auditorium with acoustics so perfect that a pin dropped at one edge of the continent can be heard the length and breadth of the land.

"A pin drop heard from the Atlantic to the Pacific; from the Gulf of Mexico to Hudson's Bay. Would you like to hear such a pin drop? Shall we try it? Fine!

"My engineer friends here have a common house pin all ready to drop for us. Let's see if you out there in Los Angeles can hear it? And you in Seattle, and Toronto and Atlanta and Boston, listen carefully.

*(Pause—CRASH—Reverberations)*

"That, my friends was the crash of an ordinary house pin dropped from a height of a few inches. It will illustrate to you how delicate and sensitive are the devices which control broadcasting, yet how powerful and far reaching are the instrumentalities they affect."



*The Pin Drop Heard 'Round the Country*

## SUPREME COURT REFUSES RCA PATENT REQUEST

*Ruling of Appeals Court Still Stands—Lowell and Dunmore, also De Forest, Get Decisions*

The Supreme Court, April 28, refused to grant the petition of the Radio Corporation of America for a writ of certiorari to the Circuit Court of Appeals decision in its De Forest suit. This decision was with reference to a request by RCA that the high court review the celebrated radio tube case brought by the De Forest Radio Company against the Radio Corporation, originally in the Federal District Court at Wilmington. It sought an injunction, under the Clayton Act, to enjoin RCA from enforcing the Clause Nine provision of its patent license contracts made with some 25 set manufacturers.

In petitioning the high court for right of review, lawyer John R. Davis, for the Corporation, declared that the decision had been seized upon by seventeen manufacturers for treble damage suits against RCA which would aggregate \$48,350,000.

### RCA Issues a Rebuttal

April 28, John W. Davis, chief counsel for RCA issued, in part, the following statement:

"The denial by the Supreme Court of the writ of certiorari sought by the Radio Corporation concerning the so-called 'Clause 9' provisions of our licensing agreements, in no way affects the agreements now in force between the Radio Corporation and its licensees. The provisions contained in 'Clause 9' as a matter of fact have not been in force since July, 1928.

"The specific issues involved in the adjudication of 'Clause 9' were initiated by the De Forest Radio Company which is not licensed under the patents of RCA. The parties plaintiff in the so-called 'Clause 9' damage cases have yet to establish their rights to do the kind of business referred to in their claims, or that they suffered any damage whatever by reason of the "Clause 9" item."

### Govt. Loses to Dubilier

Another suit of major importance was decided on this same day, April 27, when Judge Nields, in the Federal District Court, dismissed the government's suit against the Dubilier Condenser and Radio Corporation for title to three radio patents perfected by F. W. Dunmore and Percival D. Lowell. These two gentlemen were, at the time their inventions were in process and registered, government employees. Subsequently they sold their patents to Dubilier.

Judge Nields ruled that the invention of a government employee becomes the property of that individual, and not of the government—a wide-sweeping and fundamentally important decision.



### Introducing—

R. C. Sprague, president of Sprague Specialties Co., as he was in the "good old days." R. C. spent eleven years in the Navy, rating a couple of stripes and title.

The Lowell and Dunmore patents relate, primarily, to the energizing of vacuum tubes by alternating current. As such they are considered basic. They were acquired by Dubilier who, thereupon, instituted infringement proceedings against the Radio Corporation of America. Judge Morris already has upheld the validity of the patents. This decision was appealed. In view of Judge Nield's decision, RCA may now proceed with its appeal.

### Radio Week Set for Middle of September

The executive committee of the National Federation of Radio Associations and the Radio Wholesaler's Association have authorized procedure with plans for the second annual National Radio Week which will be held in the middle of September, the exact dates to be selected later. The committee in charge of arrangements for the country-wide celebration are: Harold J. Wrape, Benwood-Linze Co., chairman; Peter Sampson, Sampson Elec. Co.; Michael Ert, Michael Ert, Inc.; Harry Alter, Harry Alter Co., and J. Newcomb Blackman of the Blackman Distributing Company, New York.

### Landon Now With Majestic

V. D. Landon, who was directly responsible for the development work on the radio frequency and intermediate frequency end of Majestic models 20 and 60 while with the Radio Frequency Laboratories of Boonton, N. J., has gone with Grigsby-Grunow to head up development work now progressing in their laboratories.

### Morford Sales Mgr. for S-W

Stewart-Warner Corporation, Chicago, announces that E. F. Morford has been placed in charge of its radio sales department.

Mr. Morford has been associated with the Stewart-Warner Corporation for a period of twenty years, acting the last three as its distributor in Cleveland.

### Naylor to Raise Arcturus Banner on West Coast

L. P. Naylor, former sales manager of Arcturus Radio Tube Company, Newark, N. J., has resigned in order to direct Arcturus activities on the Pacific Coast. He will establish Arcturus headquarters at Los Angeles, from which Pacific Coast sales will be handled.

### Sparton Makes Two Changes

Changes in its distributing organization in two territories have been announced by The Sparks-Withington Company, builders of Sparton radio.

The Risley-Leete Company of New Haven takes over the distribution of Sparton in the Hartford-New Haven territory.

The H. E. Sorenson Company succeeds the Herring-Wissler Company as distributor in the Des Moines territory.

### Sylvania's \$22,170 Plan

Various names have been proposed for Sylvania's plan to help dealers sell tubes. The most popular of these is the title "The \$22,170 Plan," because this is the way it figures out in gross business.

Material presenting this plan to the trade is now being prepared and full information will be available to dealers in the near future.

### Clarionites Convene in Chicago and New York

April noted two outstanding dealer conventions of Transformer Corporation of America, the one in Chicago and the other in New York. Waken and Whipple, Clarion distributors for Michigan and Illinois territory, and J. Newcomb Blackman, Manhattan jobber, did the honors. Both affairs were distinguished by a high degree of enthusiasm and by the showing of a new set which promptly was designated, the "Auburn" of radios.

### Oden F. Jester

New general sales manager of TCA, manufacturers of Clarion sets; formerly director of radio sales for Stewart-Warner; replaces E. J. Dykstra, resigned.



# the Month

for the Busy Reader

New York, N. Y.

## Major Personnel Changes in RCA Ranks

*E. A. Nicholas, General Sales Manager, RCA Victor  
Elmer T. Cunningham, President, RCA Radiotron  
George K. Throckmorton, President, E. T. Cunningham*

WITHIN the past 30 days many major changes have been made within the ranks of the affiliates of the Radio Corporation of America. That the interjection of this new blood in this corporate body will result in interesting policy announcements is a fair assumption. Here's the set-up:

E. A. NICHOLAS, formerly head of the Chicago distributing concern for RCA-Victor bearing his name, has been appointed general sales manager for RCA-Victor. He succeeds H. C. Grubbs, resigned. Formerly assistant to David Sarnoff and then promoted to lead the Radiola Division of RCA, Mr. Nicholas is well qualified for his present task.



ELMER T. CUNNINGHAM, is now president of the RCA Radiotron Company, Inc., a tube manufacturing subsidiary of the Radio Corporation of America. This appointment was announced by David Sarnoff, chairman of the board of the Radiotron Company.

Mr. Cunningham's election as president of Radiotron brings to this position an outstanding figure in the development of the radio tube business in this country. He has been identified with the manufacture and merchandising of radio tubes on a national scale for more than fifteen years.



GEORGE K. THROCKMORTON succeeds E. T. Cunningham as president of E. T. Cunningham, Inc. Mr. Throckmorton was previously general manager of this same tube concern. He continues his headquarters at 370 Seventh Ave., New York.

Born in Indiana, Cunningham's new president received his college education at Purdue and Cornell. His first connection with the radio industry was 15 years ago.



ERNEST A. VOGEL, formerly manager of Radiola sales, has been promoted to manager of domestic sales. Since the early part of 1930 Mr. Vogel has progressed from assistant advertising manager through three other important positions to his present post. He brings to this task an experience of 20 years in merchandising.



PIERRE BOUCHERON, with his appointment as advertising and sales promotion manager of the RCA-Victor Company, again takes up the reins which he relinquished three years ago to organize a new RCA sales branch in Atlanta, as southern sales manager. Following his success in developing the sales possibilities of the southern territory, he was placed in charge of the entire eastern sales territory. Boucheron has been in the radio field since the early pioneering days, beginning as a ship radio operator for the Marconi Wireless Company in 1912.

The above appointments mark the completion of a reorganization consolidating the Victor and Radiola divisions of the RCA-Victor Company. It also is stated that re-alignment of the wholesale distribution system of the two divi-

sions has been practically completed, and shipments of the first product bearing the combined RCA-Victor trademarks, an 8-tube superheterodyne radio receiver known as the Superette, have already begun to the trade.

## WURLITZER NOW MAKING ELECTRIC REFRIGERATORS

*"The Mohawk," in Five, "Twin Unit," Models is Announced*

Of unusual interest to the radio industry is the announcement from North Tonawanda, N. Y., by All-American Mohawk Corporation, that it has entered the field of electric refrigeration. "The Mohawk" will be distinguished, in addition to its clean cut external appearance, by the fact that each box will have two units—one for freezing and one for cooling. For detailed specifications see the New Merchandise department of this issue.

Wurlitzer manufactures the "Lyric" line of radio receivers. Its large and modern factory, on the Niagara River, is well adapted to the processing of refrigerator boxes and thermal units.

Distribution, it is understood, will be through its present radio distributor and dealer set up. Whether this somewhat radical action, on the part of Wurlitzer, is but the forerunner of similar announcements from the ranks of the independent set manufacturers remains to be seen.

## Sarnoff and McDonough Take on Added Duties— Radiotron Reduces Tube Prices

Other signs of RCA reorganizational activity are seen in the extension of the duties of David Sarnoff to cover the jobs of chairman of the boards of RCA-Victor and of RCA Radiotron.

J. R. McDonough will take a major part in directing the destinies of RCA-Victor, according to its president, E. C. Shumaker, as he now will function as its executive vice-president. Mr. McDonough will continue his former duties as assistant to Mr. Sarnoff.

And last, but not least, we note tangible evidence of direct action in the public announcement, April 15, of major reductions in the list prices of Radiotrons. The 224, for example, now sells for \$2, as against its former list of \$3.30; the 227, is now \$1.25 and the 245 is now \$1.40. The grand total reduction averages 33.6 per cent.

## Leon Brin Heads Pilot Sales

Leon Brin has been appointed general sales manager of the Pilot Radio & Tube Corporation, and will make his headquarters at the company's plant at Lawrence, Mass. Mr. Brin was formerly connected with RCA-Victor at Camden, N. J.



### Testimonial

E. A. Bowman of Detroit claims that he has found a profitable sideline activity for radio distributors. Ed drives down to Miami when business goes slow and booms the Jantzen swim-suit business by just standing around where folks can see him.

## BOSTON SHOW TO OPEN JUNE 29

### "Whoopie" Frowned Upon by New Association Officers

New England's annual radio trade show, sponsored by the Radio Wholesaler's Club of Boston, opening at the Hotel Statler on June 29 and officially marking the beginning of the 1931 radio season, will be "strictly business," according to the organization's trade show committee consisting of David E. Rockman, A. W. Stone, John V. Wilson, Edward E. Roewen, Alan Steinert and John Stewart.

The entire fourth floor has been reserved for the exhibit of new equipment, which will be seen only by members of the trade. Through an arrangement with the hotel management no other room displays of equipment will be tolerated elsewhere in the building. Exhibitors have pledged themselves against special dealer meetings and dealer entertainments in order to increase the actual business value of the show, which will run three days.

This policy has been vigorously checked by the newly elected officers of the club: President, Frank D. Pitts, F. D. Pitts Co., Vice-President, Thomas E. Burke, J. H. Burke & Co., Secretary, Frank C. Gorman, and Treasurer, Arthur C. Marquardt, Stewart-Warner Sales Co.



**A. M. Stone**

Sales manager of the Milhender Radio Company, Boston; recently elected to the Board, Radio Wholesalers Assoc.; a prime mover in the forthcoming Boston Trade Show.

# DETECTOR LISTENS IN on JOBBER Doings . . . .



Fada distributors have broken out like a rash. We have it hot off the wire that Benton Bailey, Richmond, Va., Manhattan Electric Supply, Chicago, Ignition Supply & Service, Albany, and King & Dexter, Portland, Me., have all come into the fold.

Pacific Wholesale, like many another radio jobber, has just gone refrigeration, selling Holbrook units to most of the Spartan dealers in southern California.

Breaking into the radio business we have the Cleveland Ignition Company, Stewart-Warner distributors, R. H. Bechtol, sales manager, has distributed automotive equipment in the Cleveland territory for about two years.

Twelve men traveling the District of Columbia, parts of Virginia and West Virginia with hardware, automotive equipment and electrical appliances for the F. P. May Hardware Company of Washington will now take along Steinite t.r.f. and super-heterodyne samples.

Down in the palm tree state, Southern Radio Distributors, Miami and Tampa, have undertaken distribution of Sampson products.

Diagonally across the continent the Philadelphia Storage Battery Co.'s branch has metamorphosed into a distributing organization now sailing under the name Philco Radio Distributors, with R. W. Neighbors at the controls. Neighbors is aided and abetted by H. D. Hansen, v.p. and sales director. Portland, Ore., is the city.

As a result of Brunswick's recent decision to distribute through its own branches Griffith P. Ellis, successively with Chicago Talking Machine, Sherman Clay and Grigsby-Grunow, has been placed in charge of the Los Angeles office. This cuts out Western Radio, Inc., which company has taken on Silver-Marshall.

Harten-Knodel, Cincinnati Zenith distributor, has hung out an "at home" shingle over its new quarters at 8th and Sycamore Streets.

N. C. Goldman, president of the Commercial Electric Company, is all hopped up

about his appointment as Zenith and Zevette distributor for northwestern Ohio and southern Michigan and is setting up a separate radio division under the direction of W. T. (Wild Bill) Hayes to plaster these two lines all over 26 counties.

A telegram from Vern Collamore tells us that the Majestic distributing family was graced by the addition of another member late in April. Harrison Smith of seven-eleven (where have we heard that before) Broadway, Oklahoma City, signed up.

Stepped up into the radio sales manager's boots at Waterhouse-Lester-Scovel, San Francisco Bosch booster, A. J. Carlson is expected to do a job.

Distributors of automotive equipment in San Antonio, since the flood, the Guarantee Motor Car Company has stepped out of character for a whirl with Crosley. Guarantee will automatically fall heir to 130 dealers in southwest Texas. O. J. Gayton, assisted by three salesmen, will spend a rainy Sunday clearing a portion of the company's display floor at 702 San Pedro Avenue of gas-buggy bric-a-brac to make room for his new charges.

RCA-VICTOR NEWS (a la Floyd Gibbons) . . . Otto L. May, High Priest, Pacific Radio Trades Ass'n., new district sales manager, seven western states . . . Leo J. Meyberg Co. has the exclusive in California and Nevada on Radiola and Victor, taking over work of California Victor Distributing, formerly headed by Mr. May. . . . Bruno, New York, Inc., a brand new company with the field all to itself in the metropolitan area, Charles Sonfield, pres., Irving Sarnoff, v.p. and Jerome Harris, treasurer . . . Harper-Meggee, swallowing Northwestern Victor Distributing, carries the banner in the vicinity of Portland, Seattle, Spokane . . . Ollendorf-Hirsch, formerly National Light and Electric, similarly tied up in Baltimore-Washington district, traveling Maryland, D. C., twenty-four counties of northern Virginia, eight in West Virginia and two in Delaware.

### And the Last Shall Be First



Kruse Radio, Inc., Indianapolis, isn't the first distributor to use the trailer idea but you'll have to admit that this job is pretty well done. "It's been the talk of Indiana, saves us a lot of money and gets action," says C. J. Kruse, president of this outfit.

# Herr Hidding Comes to America

—is entertained by *Radio Retailing* . . . . we obtain two exclusive articles . . . . from Germany's biggest radio merchant

## Berlin Has No Cortlandt Street

TO the readers of *Radio Retailing*, and especially to American radio manufacturers: Before sailing on the *Bremen* I would like to give my impression of the differences between the American and the German radio industries.

The manufacturing processes are quite similar. We have machines of the latest construction and the assembly belt system. But I do feel that our concerns are much more successful in holding output right down to actual demand—and in maintaining a profitable standard of values right down the line.

We have the same call for the small, low-priced set as you have. In fact, have been making "midgets" for a much longer period because of our economic conditions. In Germany, last year, the average price of a receiver was approximately 150 marks—about \$40, with tubes. Our sets contain not more than four tubes.

While German buying power is low the public wants good but low priced combinations. Because of fewer stations it needs phonograph records to supplement the lack of a wide selection of broadcasting programs. Berlin has only three stations, all controlled by the government.

But the biggest difference I noticed was in the selling price situation. In America, the manufacturer, apparently, expects the dealer to establish his own prices without restrictions. The manufacturer, therefore, has no possible way to control the sales price. The result is that almost every day prices change, sometimes resulting in selling below cost.

The result of this movement, if the crisis should continue, is pretty clear to me. It was particularly interesting to me to study this situation when visiting the New York radio stores,

(Please turn to page 54)



J. W. HIDDING

*President, Radio Web, operating 15 retail radio stores and 40 agencies in the provinces—Also president Radio Dealers Association of Germany—Was noted aviator during the World War*

## Fifteen Stores On A Credit Control Plan

DISCUSSING the matter of his own success in retailing radio equipment in Germany, J. W. Hidding revealed a novel credit control plan of customer payments which may have workable possibilities here.

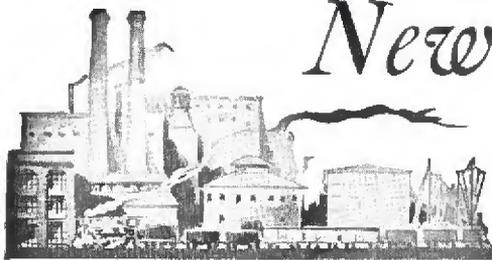
The total of Radio Web's outstanding credit sales—of its 15 stores—is not permitted to exceed the total volume of its cash business. As unfavorable economic conditions have brought an increase in the number of installment buyers, the length of payment periods allowed such buyers has been reduced from 12 months to six months—in order to hold its established even balance policy between its cash and its credit business.

Radio Web's own purchases are handled with the same strictness. To insure almost automatic provision for funds with which to pay its own bills, commitments are so placed that they shall never exceed the total amount of customers' time payments maturing somewhat prior to the due date of obligations to manufacturers.

Radio Web's plan of safe credit control is a direct product of Germany's financial depression. Formerly, insurance companies provided the funds for financing time payment sales. Their losses during the early months of the depression forced most of them out of this field. Hidding's provision for dependable income, insuring payments within four months, and an effective system of preventing credit losses, has induced suppliers to finance his installment operations.

Under this plan sales have increased, and at a satisfactory profit while, during the last two years, 60 per cent of the Reich's radio dealers have been going bankrupt.

His several retail radio stores in Berlin and 40 agencies in the provinces made sales of over 3 million marks in 1930.



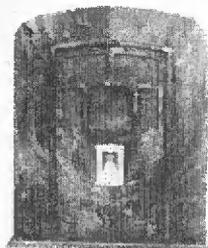
# New Products for

This editorial section is prepared purely as a news service, to keep readers of "Radio Retailing" informed of new products.



## French Superhet with New Tubes

THE new "Devon" superheterodyne midget being made by Jesse French & Sons Piano Co., Radio Division, New Castle, Ind., is a 7-tube set with a pentode in the audio and two variable- $\mu$ 's in the r.f. stages. It is equipped with a tone-shade and lists at \$69.50 complete. French also offers the "Tudette" midget at \$54.50 complete.—*Radio Retailing*, May, 1931.



## Ohmite Products

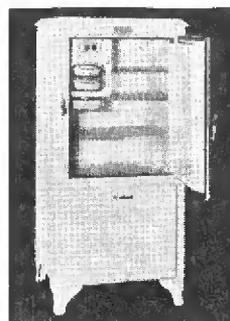
USE of a circular porcelain core on which the resistance wire is wound, the core forming a solid non-shrinking backing for the wire, is featured in the new rheostat announced by the Ohmite Mfg. Co., 636 N. Albany Ave., Chicago, Ill. These rheostats are arranged for 1-hole mounting. Maximum rating, 50 watts.

To bridge the gap between fixed resistance units and the new rheostats, a series of semi-variable units is also ready.—*Radio Retailing*, May, 1931.

## Jackson-Bell 69 Superhet

THE fourth and latest model in the current Jackson-Bell midget line has just been announced by the Jackson-Bell Co., 1602 W. Washington Blvd., Los Angeles, Calif. The eight tubes called for in the superheterodyne circuit are three 224's, two 227's, two 245's and a 280. The speaker is a Magnavox electrodynamic, and the set has a tone control.

The matched walnut cabinet is embellished with a recessed panel of burl walnut. It lists at \$69.50, complete.—*Radio Retailing*, May, 1931.

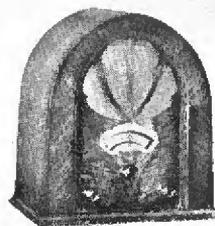


## Mohawk Electric Refrigerators

THE manufacturers of Lyric radios are now making electric refrigerators under the trade name "Mohawk." There are five models and they may be obtained from the All American Mohawk Corp., N. Tomawanda, N. Y. The illustrated, popular size Model 5 has a capacity of 5 cu.ft.

The latest principals of design have been incorporated in these refrigerators. One of the features is the twin unit, one for freezing and one for cooling food off and eliminating dehydration. They have eight speeds for fast freezing, automatic control of temperature, chromium plated hardware, broom high legs, and the interior is made of white porcelain on steel, with an exterior of white lacquer on steel.

The line comprises five models—three standard (models, 5, 10 and 15), and two de luxe (models, 20 and 25).—*Radio Retailing*, May, 1931.



## Cardinal Models 60 and 91

A SUPERHETERODYNE circuit has been developed by the Cardinal Mfg. Co., 2812 S. Main St., Los Angeles, Calif., for its Model 60 mantel type receiver which takes three 224's, three 227's, two 245's, and a 280.

The cabinet is walnut with butt walnut front and stands 17 inches high. The price, complete, is \$74.50.

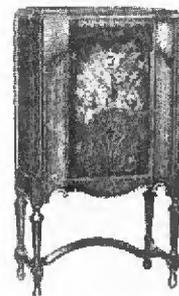
Model 91, in the same cabinet, is equipped with four 224's, one 227, two 245's, and a 280. \$69.50 complete. Both have full vision dial.—*Radio Retailing*, May, 1931.

## Steinitz Sets

TWO new models of Steinitz radio are now ready. They are the "Marvel" midget, a 5 tube r.f. receiver priced at \$49.50 complete, and the "Monarch" console, an 8 tube superhet, \$89.50 complete.

The midget has impedance-coupled screen grid detector circuit. It is housed in a walnut veneer cabinet.

The console comes in a 40-in. cabinet and has 12 $\frac{1}{2}$ -in. super-power dynamic speaker, tone control and local distance switch.—*Radio Retailing*, May, 1931.



## Magnavox Speaker

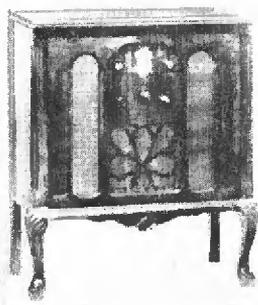
MANY revolutionary improvements in dynamic speaker construction are incorporated in the new Model 140 Symphonic speaker developed by the Magnavox Co., Ltd., Chicago, Ill. It is a compact model, easy to mount.—*Radio Retailing*, May, 1931.

## Sprague "Visivox" Home Talkie Machine

PROMISE of delivery by May 20 is made on the two types of "Visivox" home talking movie equipment of the Sprague Specialties Co., Quincy, Mass., both of which will retail under \$200.

The portable model, for homes with radio receivers, is priced at \$119. It includes the phonograph synchronizing apparatus, pick-up, projector and screen. Where no radio is available, another small portable device (list \$50) can be attached to Model A to provide the audio and loud-speaker.

Model C, illustrated, is a complete machine with projector, phonograph apparatus, audio, loud speaker and screen, in a walnut cabinet priced at \$189.—*Radio Retailing*, May, 1931.



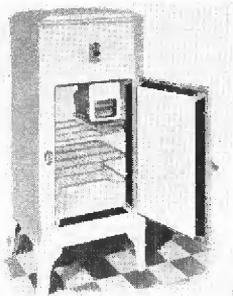
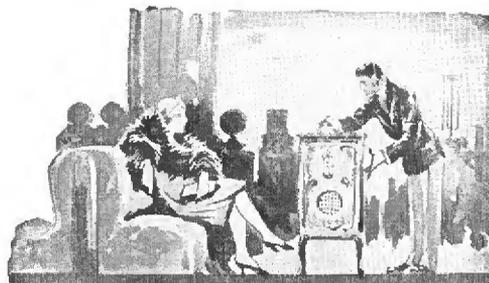
## Sparton Battery Set

DEALERS serving communities where commercial current is not available, will be interested in the Model 32 battery receiver of the Sparks-Withington Company, Jackson, Mich.

The current consumption of this set is low, and six dry cells are sufficient for two months of ordinary usage, or if a storage battery is used, only one cell need be connected, the announcement states. This set is housed in an attractive console cabinet, and lists at \$85.—*Radio Retailing*, May, 1931.

# Dealers to SELL

All announcements appearing on these pages are published without advertising considerations of any kind whatsoever.



## GE End Table Phonograph

JUST introduced by the General Electric Co., Bridgeport, Conn., is the end table phonograph which provides a handy means of converting a straight radio into a combination instrument.

The cabinet follows the Early American Duncan Phyfe motif, and while it is especially designed to harmonize with GE sets, it will harmonize with GE sets, it will harmonize with any home interior. In height it reaches the level of an easy chair arm, from which it may be operated handily. The unique sliding top allows access to the phonograph without disturbing ornaments on the top.—*Radio Retailing*, May, 1931.

## Majestic Model 140 Refrigerator

PRACTICALLY 2 ft. square at the base, the new model 140 electric refrigerator of the Majestic Household Utilities, Inc., 5801 Dickens Ave., Chicago, Ill., can be had with either short or high legs to fit various conditions.

The food storage space is 41 cu.ft. and it has shelf area of 7½ sq.ft. The hermetically sealed mechanism is practically identical with the larger models 150 and 170.—*Radio Retailing*, May, 1931.

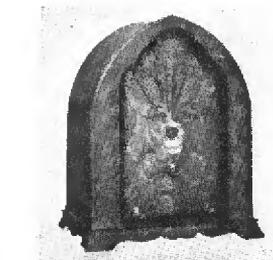


## RCA-Victor End Table Phonograph

SIMILAR in design and construction to the GE instrument, illustrated on this page, is the end-table type of record playing instrument which the RCA Victor Co., Camden, N. J., is making. One point of difference is in the top. The RCA Victor instrument has a top which lifts up whereas the GE table has sliding top. A control knob for regulating volume is built in.—*Radio Retailing*, May, 1931.

## Crescentyne Portable Radio

A NEW model of the "car-electric" portable radio has been brought out by the Crescent Radio Mfg. Co., Minneapolis, Minn. This set, which carries the trade name of "Crescentyne," uses four 224's, a 171-A, and a 280. It can be used in an auto through the use of a connector cable furnished to run to the storage battery, or can be used in the home by plugging in another cable furnished for such operation. No other change is necessary. The cabinet is the same as used with the previous model, measuring 14 in. high by 12 in. wide by 5 in. deep. It is finished in antique-bronze wrinkle lacquer with grille shaded to gold.—*Radio Retailing*, May, 1931.



## "Radiette" Superhet

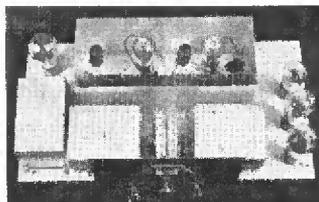
A NINE-TUBE superheterodyne "Radiette" has been added to the line of the Keller-Fuller Mfg. Co., Ltd., 1573 W. Jefferson Blvd., Los Angeles, Calif. It has two 245's in push-pull, antenna pre-selector, tandem detector, "Litz" wire coils, local-distance switch, tone control and phonograph connection.

This set in the illustrated mantel style cabinet is \$79.50. In a console cabinet, \$89.50.—*Radio Retailing*, May, 1931.

## Pilot Short and Long Wave Set

A NEW combination-wave set, the "Universal Super-Wasp" has been brought out by the Pilot Radio & Tube Corp., Lawrence, Mass. It covers a wavelength range of 15 to 650 meters without the use of plug-in coils, the shifting from one wave to another being done from the front panel by turning a knob. It also takes in the calling waves used for ship-to-shore radio telegraphic traffic.

Supplied in a walnut cabinet, the laboratory look heretofore

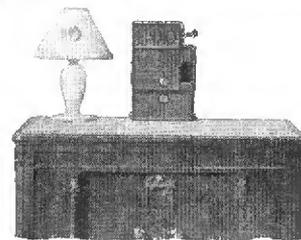


associated with shortwave apparatus is shaken off. It is made in both the cabinet model and in kit form, for a.c. or battery operation.

The heart of this receiver is a pair of molded Bakelite cam switches, each carrying 15 thin cams which make contact, in predetermined sequence, with fifteen little plungers sticking out of the housing. As the switches are turned, they change the electrical connection between four pairs of fixed tuning coils, and two double-section variable condensers. The a.c. power pack is built onto the chassis. This 6-tube set, factory-built, retails for \$99.50. The kit is \$85.—*Radio Retailing*, May, 1931.

## Coin Attachment

FRANK E. PIERMAN, Ottawa, Ohio, is now making a new model of the Slusser coin radio attachment, which will take either nickels or quarters, operating six, ten, thirty or sixty minutes for each coin deposited. This new type comes in a Bakelite case and can be easily attached to any radio or combination instrument. It is electrically operated, and automatic in action. One or more coins may be deposited at once, giving continuous operation. The price is \$16.50.—*Radio Retailing*, May, 1931.



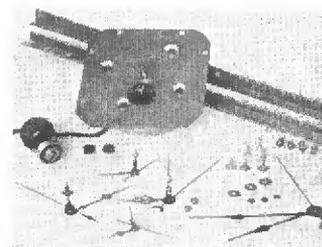
## "Element Lock" Tube

"ELEMENT LOCK" is the name given to the new construction developed by the Hytron Corp., Salem, Mass., for its Y224 tube. All elements are interlocked, removing strain on stem of tube and preventing the elements from being jarred out of alignment.—*Radio Retailing*, May, 1931.

## Hammond Kit to Electrify Clocks

SO many inquiries have been received about electrifying old clocks, that the Hammond Clock Co., 2915 N. Western Ave., Chicago, Ill., decided to put on the market a complete kit of parts which which the dealer can electrify the old time spring clock. The kit includes a complete movement, adjustable mounting brackets for installation in cases of various sizes and design, five sets of hands to accommodate various size dials, and all the other necessary parts.

The retail value of the parts is \$9.75; dealer's cost, \$5.85.—*Radio Retailing*, May, 1931.



Lyric Model P-9

## Lyric Pentode Sets

IN addition to the pentode tube, the new Lyric sets take four 224's and a 280. Each is equipped with tone control.

Model P-4 is a mantel set of butt walnut, listing at \$69.50.

Model P-8, the console, is \$89.50, and the full size console, P-9, is \$99.50; all prices complete.—*Radio Retailing*, May, 1931.



### ICA "Envoy" with New Tubes

PRODUCTION is being started on the "Envoy" midjet by the Insuline Corp. of America, 68 Cortlandt St., New York. This set uses both the variable mu and pentode type tubes, two of the former and one of the latter, in combination with a 224 and a 280. Phonograph jack and tone control are furnished. The cabinet is American walnut, 18 in. high. For 110-225 volt, 60 cycle operation, the price is \$55.50; 220-240 volt, \$57.50.—*Radio Retailing*, May, 1931.

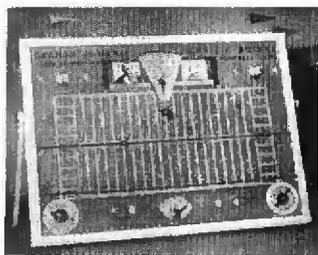
### Radionica Coin Devices

THE "Radionica" electric coin-operated timing device has many uses. It can be installed on radios, washing machines, amusement machines, player pianos, phonographs, motion picture machines, etc. Built to operate on a.c., d.c. or battery-operated machines.

Model R-220-M is made for inside installation in a radio set. Model 420-S is a single coin-operated timer which can be had in five, ten and twenty-five cent models, with special timer with six-ampere lever control. The coin lever may be permanently adjusted from one to nine minutes.

Model 421-S is the same, but is made for 1 to 20 minute timing.

These timers may be obtained from the Radionica Coin Devices of New Jersey, 355 Radger Avenue, Newark, N. J.—*Radio Retailing*, May, 1931.



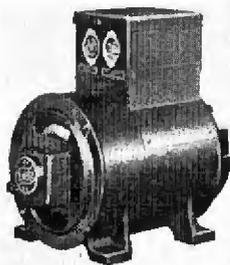
### Radio Games

THE master hand of the late Knute Rockne can be seen in the perfection of every detail in the combination football and baseball game which Radio Sports, Inc., 6 E. 44th St., New York City, has placed on the market. It is equipped with an automatic timing clock which runs while each play is being made.

There are two games and two radio scoreboards, one on either side of the stand. In addition to being a regular game which can be played at home, this device can also be used in following football and baseball games as they are broadcast. The list price will be about \$6.—*Radio Retailing*, May, 1931.

### Amertran Amplifier Equipment

FIVE items of associated equipment especially designed for use with Amer-Tran Series 80 power amplifiers may now be obtained from the American Transformer Co., 178 Emmet St., Newark, N. J. The new equipment is also arranged so that it may be used with other standard amplifiers having 500-ohm input circuits. The various units are: master control, Type C-81; master control with one-stage pre-amplifier, Type A-83; two-stage low-level input amplifier, Type A-89; A-power supply unit (12 volt), Type P-78; and dynamic field supply unit, Type P-101.—*Radio Retailing*, May, 1931.



### D.C. to A. C. Alternator

ALTERNATING current from direct current source for radio use is supplied by the "Inductor" current supply unit of the Diehl Mfg. Co., Elizabethport, N. J. The unit consists of a d.c. motor having an induction type alternator, both machines housed in one frame. The alternator does not have any rotating winding, hence, there are no slip rings or brushes. The motor armature and alternator inductor are mounted on a common shaft, reducing the size of the unit to permit its adaptation to radio cabinets. The approximate over-all dimensions are 1 1/2 in. long, by 3 1/2 wide, by 1 1/4 in. high. The net weight is 7 1/2 lbs.—*Radio Retailing*, May, 1931.

### Pentode Adaptors for Supreme Instruments

RADIO service men who have investments in radio testing equipment are interested in its adaptability for the new test requirements imposed by the power pentode tube. The variable mu tube apparently will not introduce any problems. In line with this thought, the Supreme Instruments Corp., Greenwood, Miss., has announced that the Supreme set analyzer is adaptable without modification for measurements of all potentials involved in the new power pentode. This adaptability is automatically provided by the switching arrangement which permits the optional connection of any range of the meter across any tube circuit, so that cathode or power pentode potential may be read on meter ranges of 3, 30, 90, 300 and 900 volts. The power pentode tests will best be accommodated on the 300-range.

Adaptors are being furnished for all Supreme tube testing devices, so that these may be used for the pentode. The average tube test readings will be published by this company shortly.—*Radio Retailing*, May, 1931.



### Serge-Smith Electro-Dynamic Speaker

DESIGNED by I. B. Serge the new Serge-Smith electro-dynamic reproducer is manufactured by the Peter Smith Stamping Company, Fordson-Detroit, Michigan. An efficient magnetic circuit with minimum heat radiation but with large heat radiation surface has been developed. The center suspension at the apex of the cone is made of special material which has long life and is strong mechanically. The voice coil is provided with special terminals which are arranged to keep the voice coil leads away from the cone to prevent buzz.—*Radio Retailing*, May, 1931.

### Hickok SG-4700 Tester

AS CUSTOMARY with all previous Hickok testers, separate meters are supplied in Model SG-4700 for each portion of the screen grid circuit. This new model product of the Hickok Elec. Instrument Co., Cleveland, Ohio, incorporates several new developments. Among them are: a self-contained ohmmeter operated by an internal battery instantly available for use by means of a double pin jack plug attached to test leads; a self-contained capacity meter available for plugging in the a.c. line and then plugging in the test leads in another set of pin jacks; and self-contained resistors for reading line voltage and transformer secondaries up to 160 and 800 volts.—*Radio Retailing*, May, 1931.



### Thor Washers

MODEL 16 Thor washer (Hurley Machine Co., 22nd St. and 54th Ave., Chicago) is designed to prevent tangling and braiding of clothes and at the same time produce the correct washing action. It has built-in electric water heater to keep the water at a uniform temperature. The tub capacity is 8 lbs.

Model 9, the new "Golden Bowl" model gets its name from the golden bronze finish of the extractor bowl. It has the pneumatic-type water extractor which dries a tubful of clothes in 2 minutes. \$175.—*Radio Retailing*, May, 1931.

### Weston Mutual Conductance Meter

A NEW instrument for the direct measurement of the mutual conductance of all radio tubes having an amplification factor between 3.5 and 42, and of all screen grid tubes, may be obtained from the Weston Electrical Instrument Corp., Newark, N. J.

This instrument is of the copper-oxide rectifier type, with a 7 1/4 in. diameter case for surface mounting. A compensator is supplied as a part of the instrument.

To measure the mutual conductance of a tube it is necessary to apply one volt 60 cycles a.c. to the grid. The other elements of the tube are energized with their standard rated d.c. voltage and the compensator dial is set for the value most nearly corresponding to the "Mu" of the tube under test. The mutual conductance is read direct on the scale.

The signal voltage of exactly one volt is easily obtained by means of a small step-down transformer with a 1.5 volt voltmeter and a potentiometer connected across the secondary so that the voltage may be adjusted in case of variations in the line voltage. List price \$100.—*Radio Retailing*, May, 1931.



### Neutralizing Tool Kit and Test Leads

A KIT of neutralizing, balancing and aligning tools has been developed by the Insuline Corp. of America, 78 Cortlandt St., New York City. The tools telescope for ready portability and maximum convenience.

The kit comprises a large and a small socket wrench, fully insulated, an insulated screwdriver and a special magnet steel for picking up and placing screws, bolts, nuts, washers, etc.

Test leads supplied with red and black tubing for positive and negative identification are also available. There are two types: one with lips and the other with spades.—*Radio Retailing*, May, 1931.

### Universal Adaptor and Trouble Finder

BY removing a tube from its socket, inserting the Universal adaptor and trouble finder into the socket and replacing the tube, means are provided for making connections to any part of the tube or associated circuit. This adaptor can be obtained from the Best Mfg. Co., 1200 Grove St., Irvington, N. J. Leads with special tips are provided for plugging into the adaptor, thus obtaining good electrical connections thereto.

The complete set (which includes a 4 and 5-prong adaptor) lists at \$4.90. The parts may be bought separately.—*Radio Retailing*, May, 1931.

# Now available to all Radio Dealers

## THE NEW

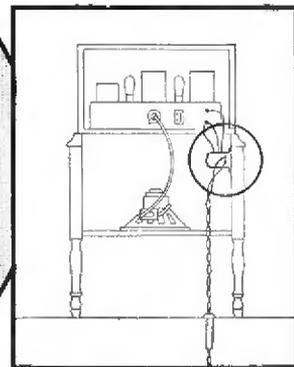
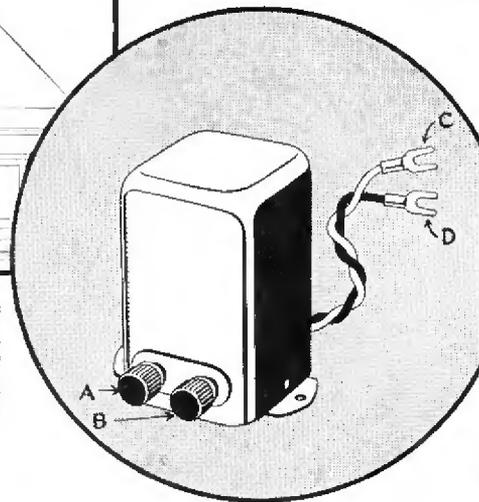
# General Motors Radio

# ANTENNA COUPLER

*which greatly improves reception and permits operating 20 or more receivers with a single antenna*



*The new General Motors Radio Antenna Coupler can be used with any installation. It greatly improves reception by eliminating interference; it allows long lead-ins without reducing sensitivity or selectivity; and it enables a single antenna to serve from two to twenty receivers simultaneously.*



*Here is shown the Antenna Coupler installed in the radio speaker compartment.*

**I**N the course of intensive development work on antenna installations, General Motors Radio engineers have perfected a scientific device which makes two major contributions to radio reception. This device is the Antenna Coupler—now available to all radio dealers.

Connected into any single receiver installation, the Antenna Coupler eliminates interference and permits long lead-ins without loss of signal strength, sensitivity or selectivity.

When there are two or more receivers in the same dwelling, the Antenna Coupler saves much trouble and expense by permitting multiple reception from a single antenna. Dealers will see the great possibilities—with apartment houses and hotels installing many sets, and even private homes

wanting two or more receivers for different rooms. Each set takes a Coupler—installed in the speaker compartment—and, where two or more sets are used, an additional or Master Coupler is connected into the lead-in wire or wires, one Master Coupler to every ten receivers.

This useful accessory, the G. M. Antenna Coupler, retails for \$3.95 each, a price which should assure volume sales.

The diagrams above indicate in part how the General Motors Radio Antenna Coupler is employed. More detailed diagrams are available, together with complete data on installations for different types of buildings. Write Service Department for dealer proposition.

# GENERAL MOTORS RADIO CORPORATION

## DAYTON, OHIO

# HOT Numbers

## Growing Value of the Foreign and Sectional Supplements

**P**OPULAR-MUSIC record dealers should pay more attention to the Brunswick, Victor and Columbia International advance lists and supplements. For instance, it is not commonly known—although the more alert record specialists have availed themselves of this productive side line—that many of the best sellers now in vogue, the pieces with that “foreign flavor,” were actually available months before their general release.

The German lists, published by the major phonograph companies, contained excellent recordings of such hits as “Oh, Donna Clara,” “Falling in Love Again,” and “Two Hearts in  $\frac{3}{4}$  Time” quite sometime before the public demand made the pieces naturalized, so to speak. We haven’t the space to dwell at length on this fact, but we would like to hint that “Ein Mädel von der Reeperbahn,” the German movie which is running so successfully in many cities throughout the United States, contains two melodies of the “hit” variety: a foxtrot by the film’s name and “Mach’ rotes Licht, wir wollen Tango tanzen Tango.” Victor disk No. V-6116 has them both, played by Dol. Daubers Jazz-Orchester, one of the most famous continental dance bands. You’ll be seeing both selections with more familiar serial numbers before long. Surprise your patrons with this disk, and if your shop is near a German neighborhood—play either side of the record on your demonstration speaker. They’ll like it.

Another novelty which you most assuredly will sell to “danzón” and “rumba” fans is Brunswick disk 41266 (South American list) featuring “Negra Linda” and “Atzimba,” played by La Orquesta de Los Castilians, exclusive Brunswick artists. See to it that you are put on your company’s mailing list for these “foreign” supplements, and study your neighborhood for the “foreign” element among your customers and prospects. Furthermore “Dixie” and “Southern” series records have been known to enjoy immense popularity way above the Mason-Dixon line and “Race” records go over big miles beyond the black belt.

Victor issues two unusually well-orchestrated “Wonder Bar” hits: “Oh, Donna Clara” and “Elisabeth,” both played by the perennially popular Waring’s Pennsylvanians, a band that continues to be one of the big spots in the Broadway success, “The New Yorkers.”

A melody which seems on the way toward tremendous sales is “Out of Nowhere.” This beautifully smooth and appealing tune won’t need to be plugged, but a copy should be handed to every customer. Jack Denny and his orchestra, who broadcast regularly from the Mount Royal Hotel in Montreal, play it in brilliant fashion on Brunswick 6088. The reverse contains “Say a Little Prayer for Me,” which, for attractive arrangement and smoothness, is equally enjoyable. The vocal refrains, in a rich baritone, are particularly striking and the bass parts of the orchestra come out splendidly. An excellent disc for demonstration. The Bing Crosby “Out of Nowhere,” mentioned in the box, is a winner too.

A favorite radio attraction has been the Boswell Sisters. You have heard them on the air and now Brunswick records their unique vocalizing in permanent and consummate fashion. This extremely musical and peppy trio not only do close harmony singing in an unusual manner but they arrange their own fascinating accompaniment, played by the popular Dorsey Brothers. Abrupt changes in rhythm and piano arpeggios and muted trumpet and clarinet duet passages of a never-staling nature lend additional variety and vigor to the tricky singing by these talented young ladies. Featured on Camel Hour, the Boswell Sisters will have no difficulty putting over “Wha’d

Ja Do To Me” and “When I Take My Sugar for Tea” (Brunswick 6083) in their recorded version. Put this disc in the sale with “Out of Nowhere.”

### An Oriental Hit—More “Rumba” Sales

Ted Lewis and His Band, of the silver and black Columbia label, offer another of their prescriptions for the blues. “Egyptian-Ella,” with incidental singing by Ted, is a fast oriental number of the “Dardanella” variety with plenty of appetizing clarinet, trumpet and trombone prominences. “I’m Crazy About My Baby” is slower, has a really fetching rhythm and a swell piano opening in the high register. A throaty vocal refrain by the colored lad who accompanies “Dr.” Lewis is great stuff. Columbia 2428D.

For two genuine “rumbas” by the specialist, Enrique Madriguera, with his Havana Casino Orchestra, demonstrate Columbia 2434D: “Siboney” and “Adiós.”

### We Predict a Great Future for These

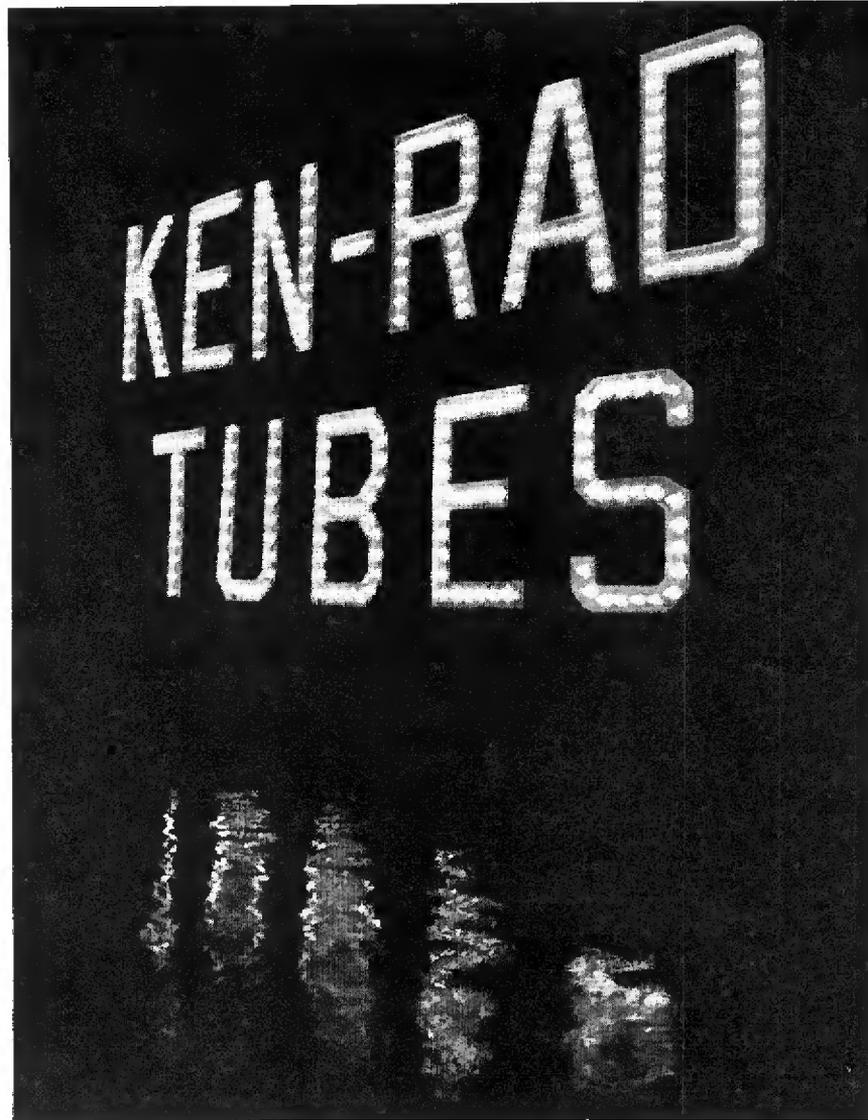
**BRUNSWICK’S** featuring of Bing Crosby, the vocal sensation on the west coast, will be good news for Brunswick dealers. Bing possesses a manly baritone of more than sentimental appeal; his first featured release is the up and coming “Out of Nowhere,” coupled with “If You Should Ever Need Me.” No. 6090.

Ben Bernie and His Orchestra turn out a sentimental tune in “That Little Boy of Mine.” This number is especially popular in Chicago where it has been featured from the College Inn on Bernie’s broadcasts. “Whistling in the Dark” is the coupling. No. 6097.

**COLUMBIA’S** current best seller, based on dealer’s orders, is Guy Lombardo’s orchestral record of “By the River Sainte Marie” and “Running Between the Raindrops;” two Lombardo specialties, played in that maestro’s inimitable and sales producing manner. No. 2401D. For lovers of vocal ensemble music play “Chilins” (from Metro-Goldwyn-Mayer production “The Southerner”). The Rondoliers, male quartet, slide from key to key in the most intriguing manner. An ideal coupling is “You’ll Be Mine in Apple Blossom Time,” this time by Helen Rowland and Paul Small. No. 2435D.

**VICTOR,** in keeping with the “rumba” craze, releases two more Don Azpiazu hot hits, “Voodoo” and “African Lament.” The Cuban specialist does right by these twisters on record No. 22657.

“Star Dust” sales are steadily increasing. Wayne King’s Orchestra plays it on No. 22656. Ted Weems and his orchestra add a striking contrast, “My Favorite Band.” No Spanish or foreign influence here. Just good snappy American pep. Leo Reisman tenders an elegant waltz “For You.” No. 22670.



AN actual photograph of the mysterious Ken-Rad illumination on the ocean at last year's Atlantic City trade show—where Ken-Rad set sail with new and more profitable sales policies for distributors and dealers.

★ AT THE SHOW THIS YEAR KEN-RAD WILL PRESENT:

## *The First Really Complete Plan*

FOR DISTRIBUTORS AND DEALERS  
TO GET THE REPLACEMENT TUBE BUSINESS

KEN-RAD is soon to announce the most effective radio tube merchandising plan that has ever been offered—a plan that completely solves the problem of how to get the replacement tube business. Without the slightest question this Ken-Rad plan will bring about a big increase in tube



*At the R. M. A.  
Trade Show in Chicago  
June 8-12, Hotel Stevens*

sales for every dealer and distributor who is fortunate enough to obtain it.

Announcement will be made at the Show next month. But in the meantime, if you will write us, we will place your name on the list to receive full details before the general trade announcement is made.

THE KEN-RAD CORPORATION, *Incorporated*, OWENSBORO, KY.

*Licensed Radio Tubes and Incandescent Lamps*

## Auto-Radio Dealer Has "Twin" Prospects

(Continued from page 23)

28 sets sold through these agencies since January furnishes an interesting example of what can be done by enlisting the aid of a number of sub-dealers.

Dealer	Auto-Radio Sales	Dealer	Auto-Radio Sales
Auburn	3	La Salle	2
Buick	3	Nash	1
Cadillac	1	Packard	7
Chrysler	7	Shipyard (boat)	1
Franklin	1	Stutz	1
Lincoln	1	Whippet	1

In addition to set sales and installations, Lawhon receives additional revenue through auto-radio service work. His records indicate that he has serviced 14 sets this year at an average charge of \$8.50 for labor alone. No record has been kept of the charges for materials used or the profits thereon but we gather that the sum is considerable. Batteries last from 4 to 6 months and in many instances customers come back to the shop to have these accessories and their tubes checked.

Who can do the best job with auto-radio—automotive dealer or radio merchant? This question is one that many sales managers are striving to answer. One thing stands out, however, after an examination of Lawhon's records. Irrespective of what type of dealer takes the lead he must not only go after the direct consumer business but must endeavor to install sets in new cars when they leave the salesroom by working closely with car agencies.

## Herr Hidding Comes to America

(Continued from page 47)

especially in Cortlandt Street. It is regrettable that high-class stores also follow these principles. *In Berlin we have no Cortlandt Street.*

In your country I found few large sales firms with extensive branch systems. In Berlin, for example, a city which has only one-half the inhabitants of New York, we have about the same number of radio chain store companies as here. Furthermore, we have many radio

stores—scattered throughout the city—which carry only radio. Centralization of a great many radio stores, like I have seen in the Cortlandt Street neighborhood, would be unthinkable in Germany because the manufacturers and the radio business organization would stop such a movement. Our manufacturers offer their products as standard merchandise and control the selling prices.

All interested parties are compelled to respect their contracts. It therefore occurs very seldom that a contract is broken. If this should happen, the manufacturer will immediately stop deliveries and even will call on the legal institutions in order to punish the offender.

While we have very little sales price competition, we do have competition because of service, location, technical personnel, publicity methods and general progressiveness.

## Your Talk Should Be Recorded

Mr. Caldwell, Editor:

I LISTENED to your talk on the chain last night, on good and poor radio sets, and as an enthusiastic reader of *Radio Retailing* want you to know I appreciated it.

You certainly hit the nail on the head in a very clever way and taught me a few things I did not know about tone reproduction. I only wish your talk could have been the only program on the air at that time and that everyone in the United States was sitting home snowbound and listening in. I'm sure if that program could be recorded, all radio dealers would be glad to purchase a record for demonstration purposes.

Would it be possible for you to print that talk in *Radio Retailing* in a way that it might be read to prospects that are "hard to crack" and thus help many dealers to sell quality sets?

R. M. NYSTROM,

Chicago, Ill. *Calumet Radio and Electric Shop.*

*Editor's Note: Plans are now in progress to make this talk available on a phonograph record. A summary of another of Mr. Caldwell's addresses on the broadcasting situation appears on page 27 of this issue.*

## Tube Kit Directory (Continued from page 35)

### STEWART-WARNER

12.....3-24, 2-27, 2-45, 80  
14.....3-24, 2-27, 2-45, 80  
950.....3-24, 2-27, 2-45, 80  
970.....3-22, 01A, 12-A, 2-71A  
980.....3-22, 2-01A, 2-12A  
100A.....3-24, 2-27, 2-45, 80  
100C.....3-22, 01A, 12A, 2-71A

### STORY & CLARK

36.....3-24, 27, 2-45, 80  
43.....3-24, 2-27, 2-45, 80  
51.....3-24, 2-27, 2-45, 80  
Petite.....3-24, 27, 2-45, 80  
Clock 26.....3-24, 27, 2-45, 80  
Min. 24.....3-24, 27, 2-45, 80

### STROMBERG-CARLSON

10.....4-24, 2-45, 80  
11.....4-24, 2-45  
12.....3-24, 2-27, 2-45, 80  
14.....3-24, 2-27, 2-45, 80  
641.....3-24, 27, 45, 80  
642.....3-24, 27, 45, 80  
645DC.....3-24, 3-27, 2-45  
846.....3-24, 4-27, 2-45, 80  
652.....3-24, 27, 45, 80  
654.....3-24, 27, 45, 80

### TATRO

A.....3-22, 4-12A

### TIFFANY

(Herbert H. Horn)  
49.....3-24, 45, 80  
15.....4-24, 45, 80  
79.....3-24, 2-27, 2-45, 80  
109.....4-24, 3-27, 2-45, 80

### TOM THUMB

(Automatic Radio Mfg. Co.)  
Port. B.....2-22, 3-99  
Port. DeLuxe.....2-22, 2-99, 20  
Port. AC.....2-24, 27, 45, 80  
Midget AC.....3-24, 27, 45, 80  
Midget AC.....4-24, 45, 80  
Console AC.....4-24, 45, 80  
Console DC.....2-32, 2-30, 2-71A

### TRAV-LER

7 Bat.....22, 2-99, 20  
6 Bat.....22, 3-99  
10 Bat.....22, 2-99, 20  
6 AC.....22, 2-99, 20, 80  
7 AC.....22, 2-99, 20, 80  
10 AC.....22, 2-99, 20, 80  
A-AC.....3-01A, 27, 71A, 80  
A-DC.....2-01A, 2-12A, 2-71A  
B-AC.....3-26, 24, 45, 80  
C-AC.....4-24, 45, 80  
DX-AC.....4-24, Pent., 80  
K-AC.....3-24, Pent., 80

### TROJAN

Junior.....3-24, 27, 45, 80  
Giant.....4-24, 27, 2-45, 80  
Cub.....3-24, 45, 80

### UNITED RADIO

50-301.....4-24, 27, 2-45, 80  
50-302.....4-24, 27, 2-45, 80  
50-303.....4-24, 27, 2-45, 80

### VAN HORNE

Midget.....3-24, 27, 2-45, 80

### VICTOR

(RCA-Victor Co.)  
7-11.....4-26, 27, 71A, 80  
7-26.....4-26, 27, 71A, 80  
9-16.....4-26, 27, 50, 2-81  
9-18.....8-27, 50, 2-81  
9-54.....8-27, 50, 2-81  
9-56.....8-27, 50, 2-81  
1-51.....26, 50, 2-81  
10-69.....26, 50, 2-81  
10-70.....26, 10, 2-81  
R-15.....4-24, 2-45, 80  
R35.....4-24, 27, 2-45, 80  
R39.....4-24, 27, 2-45, 80  
RE57.....4-24, 27, 2-45, 80  
RE45.....6-26, 27, 2-45, 80  
12-15A.....26, 10, 2-81  
12-15C.....26, 50, 2-81  
R16.....5-01A, 12A  
7-10.....5-01A, 12A  
R-17.....4-26, 27, 71A, 80  
R18.....4-26, 27, 71A, 80  
7-25.....4-26, 27, 71A, 80  
7-11.....4-26, 27, 71A, 80  
7-26.....4-26, 27, 71A, 80

### VICTOREEN

345.....4-24, 3-27, 50, 2-81

395.....4-24, 3-27, 50, 2-81  
595.....4-24, 3-27, 50, 2-81

### VIKING

(Osarka, Inc.)  
92.....4-24, 27, 45, 80  
91.....3-24, 27, 45, 80

### WARE

Bantam.....3-24, 27, 45, 80  
SB Super.....3-24, 2-27, 45, 80  
S1 Super.....4-24, 2-27, 2-45, 80

### WESTINGHOUSE

WR4.....4-24, 2-45, 80  
WR5.....4-24, 2-27, 2-45, 80  
WR6.....4-24, 2-27, 2-45, 80  
WR7.....4-24, 2-27, 2-45, 80  
Columnaire.....4-24, 2-27, 2-45, 80

### ZANEY-GILL

54.....3-24, 27, 45, 80  
Queen Anne.....3-24, 27, 45, 80  
Music Box.....3-24, 27, 45, 80

### ZENITH

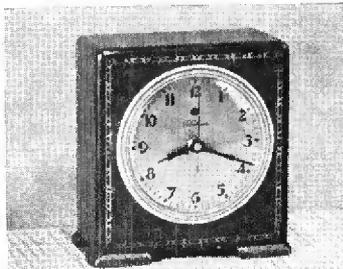
82.....4-24, 3-27, 2-45, 80  
89.....4-24, 3-27, 2-45, 80  
Zenette L.....3-24, 45, 80  
Zenette A.....3-24, 2-45, 80  
Zenette B.....3-24, 2-45, 80  
Zenette C.....3-24, 2-45, 80  
Zenette D.....3-24, 2-45, 80  
10, 11, 12.....4-24, 27, 2-45, 80



# 8 NEW SALES LEADERS

GIVE YOUR CASH REGISTER THE TIME OF ITS LIFE

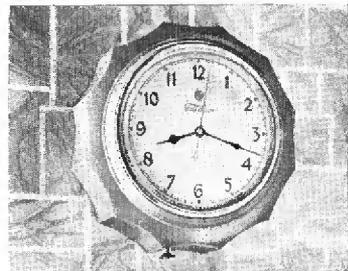
**Sell the May and June Bride Market!**



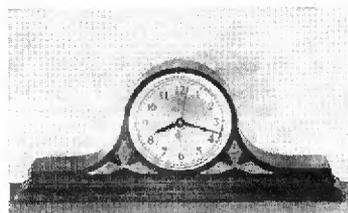
No. 326—BRISTOL. Mahogany case. 5 1/2" high. Retail price, \$11.



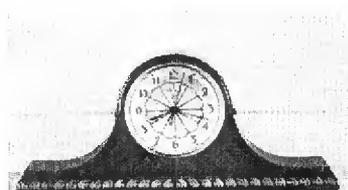
No. 327—SALISBURY. Mahogany case. 7 1/4" high. Retail price, \$9.75.



No. 454—HOSPES. Molded case. Seven colors. Retail price, \$9.75.



No. 336—TRENTON. Mahogany case. 13" wide. Retail price, \$12.50.



No. 666—NORWICH. Mahogany case. 20" wide. Retail price, \$29.50.

HALF a million young Americans get married in May and June. These eight new models are built for this market.

Like all Telechron\* motored clocks, these models deliver precise, trustworthy time from the electric outlet—without winding or regulating. They are designed to fit every room in the house—priced to fit every purse.

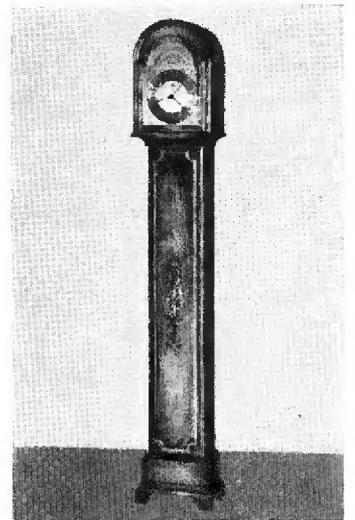
Telechron *self-starting*, synchronous electric clocks are leaders in variety and completeness of design—in price range—in public acceptance. With Warren Telechron Master Clocks in power houses, uncanny accuracy is assured by this modern method of timekeeping. Authorized Telechron dealers are supplied with complete sales helps and merchandising plans which help *sell* Telechron clocks. Telechron clocks are synonymous with progressive sales methods.

Telechron offers you maximum sales possibilities—because of the years of pioneering work behind it—and because of the dominating position it occupies in the industry. Telechron offers you prestige and sales volume.

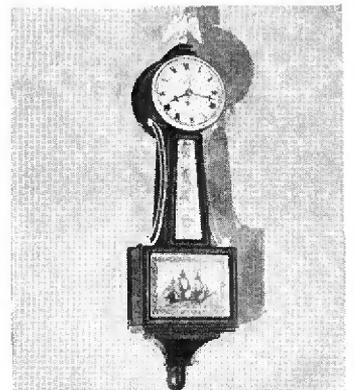
All in all, there are so many worth-while reasons for stocking Telechron that you really ought to use the coupon just below!

\*Telechron is the trade-mark, registered in the U. S. Pat. Off., of the Warren Telechron Company.

\*The Revere Clock Company, of Cincinnati, Ohio, manufactures strike and chime clocks with Telechron motors, priced from \$30 to \$1000.

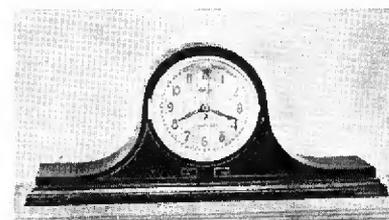


LAFAYETTE—Mahogany, 68" high. With Westminster chimes, \$97. Without, \$65.



No. 694—BELLINGH. Mahogany. Glass panels. 20 1/2" high. Retail price, \$19.75.

**"Telechron Clocks are featured in many moving pictures. Cash in when they come to your local theater!"**



No. R-802. Mahogany case. Westminster chimes. Retail price, \$39.

No. R-902. Same pattern. Hour and half-hour strike. Retail price, \$30.

WARREN TELECHRON COMPANY  
35 Main Street, Ashland, Massachusetts

Please send me information on Telechron Electric Clocks and details of your Authorized Dealer Franchise.

Name \_\_\_\_\_

Address \_\_\_\_\_

**M**erchandise advertised in  
**THE AMERICAN WEEKLY**  
moves fast for the simple  
reason that this world's great-  
est magazine does a real  
selling job in 5,500,000  
homes—or nearly twice as  
many as are reached by  
any other publication.

---

**THE AMERICAN**  
*Greatest  
Circulation  
in the World*  
**AWEEKLY**

---

*Main Office: 959 Eighth Avenue, New York City*

*Branch Offices: PALMOLIVE BLDG., CHICAGO . . . 5 WINTHROP SQUARE, BOSTON . . . 753 BONNIE BRAE, LOS ANGELES . . . 252 MONADNOCK BLDG., SAN FRANCISCO  
11-250 GENERAL MOTORS BLDG., DETROIT . . . 1138 HANNA BLDG., CLEVELAND . . . 101 MARJETTA ST., ATLANTA . . . INTERNATIONAL OFFICE BLDG., ST. LOUIS*

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# DON'T TIE YOURS

THE moment any dealer in any line permits his business to rest on the unsound foundation of unsound merchandise, he automatically ties his own hands. Sooner or later the pendulum swings back to quality products. It always has and always will. Foreseeing this swing, Sparton has kept its name clean and its merchandise the gold standard of radio value. With this as a background, we have made ambitious plans for the year to come, and we promise developments of unusual interest. If you are the kind of dealer who foresees the change that is bound to come, now is none too early to consider a Sparton franchise.

THE SPARKS-WITHINGTON COMPANY  
JACKSON, MICH., U. S. A.  
{Established 1900}

*Pioneers of Electric Radio without batteries of any kind*



The New  
SPARTON ENSEMBLE  
Model 235

A 12-record, fully automatic, combination radio-phonograph, Sparton-built throughout, for . . . \$280 less tubes

## Only SPARTON has the MUSICAL BEAUTY of SPARTON RADIO

*"Radio's Richest Voice"*

*Western and Canadian prices slightly higher*

(R251)

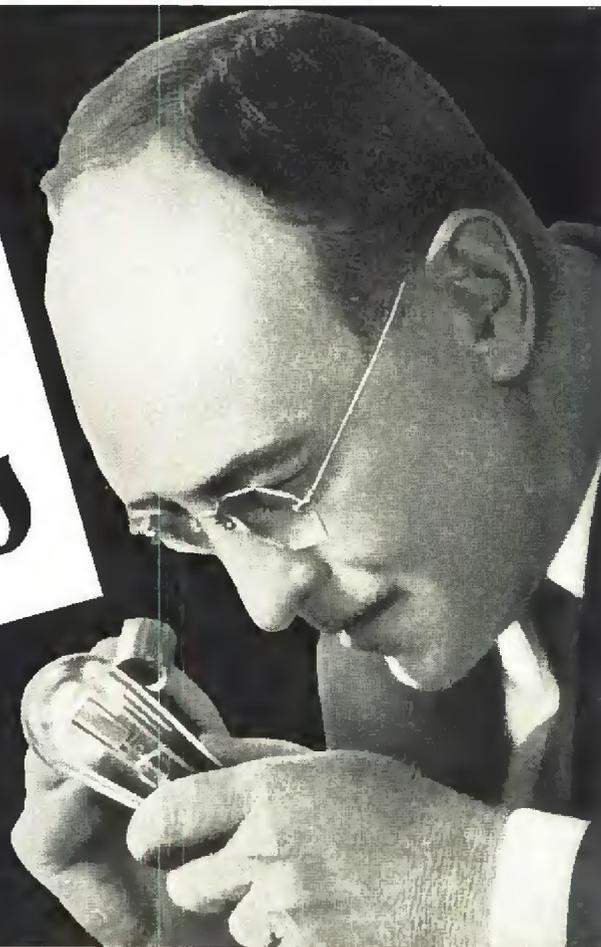


*This is the  
perfected*

#### TECHNICAL RATING AND CHARACTERISTICS

Filament voltage	2.5 Volts
Filament current	1.5 Amperes
Plate voltage, recommended	250 Volts
Screen voltage, recommended and maximum	250 Volts
Grid voltage	-16.5 Volts
Plate current	32 Milliamperes
Screen current	7.5 Milliamperes
Plate resistance	38000 Ohms
Mutual conductance	2500 microhms
Load resistance, approximate	7000 Ohms
Power output	2.5 Watts
Overall dimensions	
Length	5-5/8 in.
Diameter	2-3/16 in.

# Pentode Tube by Dr. Myers



Dr. Ralph E. Myers, famous engineer, tells several interesting facts about the National Union Pentode, which he perfected after many months' work.

Set Manufacturers who have been testing the National Union Pentode for months agree that it has earned its place with other National Union tubes as a Standard Tube for Standard Sets.

**T**HE Pentode Tube is not new. It has been used for years in both England and on the continent of Europe. Feverish research in Pentodes has recently been the work of American laboratories.

The National Union Laboratory, under the direction of Dr. Ralph E. Myers, completed its work on our Pentode March 15, 1930.

We made no wild unsupported claims for it then. There has been no ballyhoo since, despite the fact that our laboratory tests indicated that it was superior not only to American style Pentodes but also many European creations.

We have preferred to let our Pentode prove itself in performance.

Since that time various set manufacturers have been using the National Union Pentode in developing and testing their own new circuits. One set manufacturer is being shipped one thousand National Union Pentodes a day.

### *Our Great Advantage*

Thanks to a remarkable new insulating spray the National Union Pentode guarantees prolonged life. There is no cracking, no scaling. The high emission reserve so necessary in this type of tube is constant and maintained many hours longer in our tube than is true of ordinary Pentodes.

We are in a position to supply this Pentode Tube at once. The list price is \$1.90.

So ask your jobber to show you these fine new tubes. If he can't supply you, write for further information to the National Union Radio Corporation, 400 Madison Avenue, New York City.

**THE STANDARD TUBE FOR STANDARD SETS**

**NATIONAL UNION RADIO CORPORATION  
400 MADISON AVENUE · NEW YORK CITY**



**RADIO** sales managers who appreciate the value of sound sales arguments always instruct their crews to stress the fact that **CENTRALAB** volume controls permit of smoother, and more noiseless reception.

It's easier to sell a **CENTRALAB** equipped set to a customer . . . easier to sell the line to a dealer.

There **MUST** be a reason why more than twenty million **CENTRALAB** Volume Controls have already been sold.



**CENTRAL RADIO LABORATORIES**  
920 Keefe Ave., Milwaukee, Wis.

Enclosed find 25c. for which send me your new **VOLUME CONTROL GUIDE**.

Name .....

Address .....

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

Rad. Ret.

**Centralab**  
CENTRAL RADIO  LABORATORIES

*Send for New  
Volume Control  
Guide*



Here's  
your chance

# SELL

## Synchronous Sound!

### Big Profits Await

### Wide-Awake Radio Dealers

churches

• schools •

lodges • clubs

• • hotels • •

• • •

## SOUND MOVIE EQUIPMENT

There are hundreds of prospects in your town for talking picture equipment. Few of the general classifications are listed above. Here is a real opportunity for you to roll up your sleeves and dig up business that will mean big profits, and a knockout for old man "Summer Slump."

Get on the job now and be one of the first to cash in on the marvelous possibilities of this offer. Pacent Standard size sound movie equipment less projector is

**PRICED AS LOW AS \$795.00**

### COMPLETE 16 MM. TALKIE EQUIPMENT

*(Professional Type)*

Here is a real live-wire line that you cannot afford to overlook. 16 mm. sound movies are becoming more and more popular for commercial, advertising, industrial and home use.

The Pacent 16 mm. talking system is a complete, professional unit contained in two cases and is easily portable. It includes high quality projector equipped with electrically operated rewind, synchronized turntable, high power amplifier, and dynamic loud speaker and sound screen. Everything needed to run a sound show.

**\$595<sup>00</sup>**

*For audiences up to 150 people*

Complete Pacent 16 mm. Talking Picture Systems

**\$695<sup>00</sup>**

*For audiences up to 300 people*

For the first time in the history of talking motion pictures you, as a radio dealer, can share in the big, quick profits realized in the sale of sound movie reproducing equipment, and thus be headquarters for sound amplifying and reproducing equipment, complete in scope from a simple phonograph pickup to a De Luxe talking picture system.

The Pacent Reproducer Corporation offers you this opportunity to merchandise synchronous sound equipment similar to that which they have installed in almost 2,500 theatres through the world. Get into this rich field.

Thousands of lodges, churches, schools, clubs, hotels and halls, many of them in your own town, are interested in purchasing standard talking motion picture equipment. Here is your chance to share in the profits realized in selling this equipment to them.

Take advantage of this opportunity immediately by filling out and mailing the coupon below so that we can send you complete information on the line, and confidential data relative to special discounts, and contract arrangements.

**IT PAYS TO SELL  
SYNCHRONOUS  
SOUND EQUIPMENT!**

PACENT REPRODUCER CORPORATION

91 SEVENTH AVENUE  
NEW YORK CITY

NEW YORK  
U. S. A.

CLIP THIS COUPON AND MAIL

Pacent Reproducer Corp.,  
91 Seventh Ave.,  
New York, N. Y.

**NOW!**

Gentlemen:

Please forward information concerning Pacent Reproducer line; also confidential data on discounts, and contract arrangements.

Name of dealer: \_\_\_\_\_

Address: \_\_\_\_\_

Name of Individual: \_\_\_\_\_

# PACENT

# THE NEW

## *Superheterodyne*

CHECK THESE SPECIFICATIONS  
*against any other radio set*

NO OTHER HAS *ALL* THESE FEATURES

- |                                    |                           |
|------------------------------------|---------------------------|
| 1. Superheterodyne circuit         | 12. Greater sensitivity   |
| 2. 8 tubes                         | 13. Finer selectivity     |
| 3. *MAGNAVISION Dial               | 14. Superior tone quality |
| 4. Automatic volume control        | 15. Dial Light            |
| 5. Pentode                         | 16. Large Dynamic speaker |
| 6. Multi-Mu                        | 17. Quality cabinets      |
| 7. Screen-Grid                     | 18. Authentic design      |
| 8. 7½ in. logging scale            | 19. Low List prices       |
| 9. Ratio 4¼ to 1 on tuning vernier | 20. Standard discounts    |
| 10. Antenna Equalizer              | 21. Made by Zenith        |
| 11. Tone control and Noise Reducer |                           |



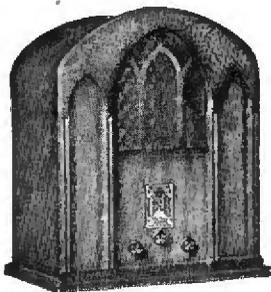
Magnavision is a specially designed dial and exclusively a Zenette feature. The ordinary type of small "full vision" dial in common use today on low-price sets is lacking in the essentials of accurate tuning because 95 wave channels must be clearly marked on the logging strip...and this usually averages 3" in length.

The Magnavision Dial employs a 7½" logging strip...and a magnification made possible through the use of this new device enlarges the logging strip 2¼ times. To the eye it is the equivalent of a logging strip 16⅞" long. It is obvious that 95 wave channels calibrated on a 16⅞" strip in effect are far easier to tune with accuracy than 95 wave channels on a 3" logging strip.

The new ZENITH and ZENETTE receivers will be exhibited

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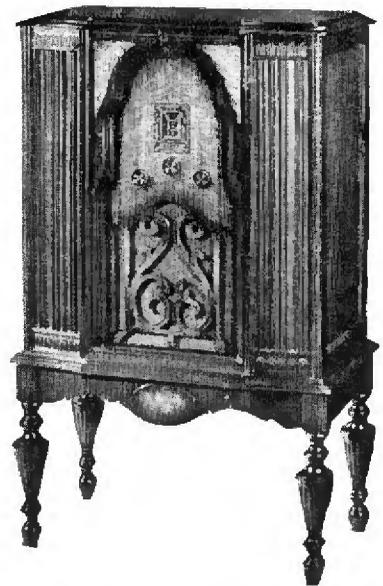
# ZENETTE



ZENETTE MODEL AH  
—\$79.50 COMPLETE  
with Zenith *Quality* Tubes.



ZENETTE MODEL L  
—\$49.95 COMPLETE  
with Zenith *Quality* Tubes.  
*(Tuned radio frequency circuit)*



ZENETTE MODEL CH — Extra large chassis, with 10-inch Dynamic Speaker . . . \$99.80 COMPLETE with Zenith *Quality* Tubes.

MADE BY



Announcement will shortly be made of the new ZENITH radios containing improvements heretofore unknown. The Zenith Radio Corporation of Chicago is the oldest (since 1914) nationally known quality radio manufacturer.

ZENITH radio sets—universally recognized as the world's highest quality receiving instruments—range in price from \$155 to \$2,500.

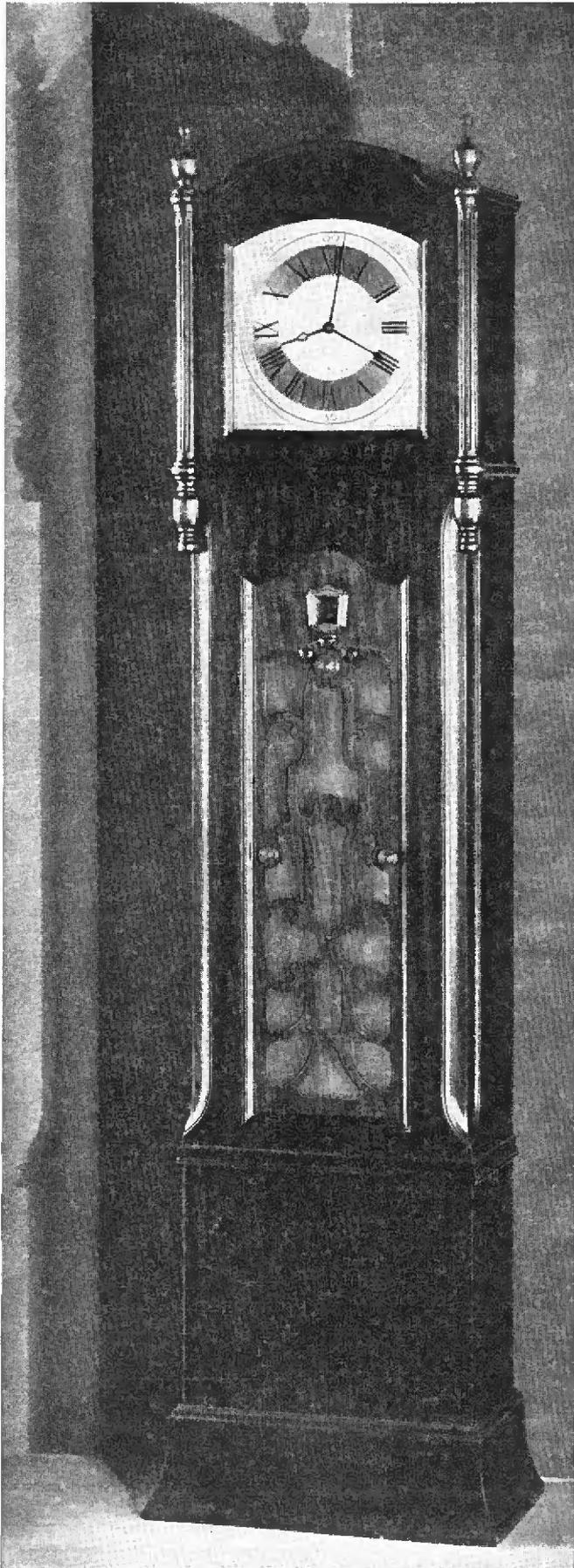
Zenette sets (advertised here) range in price from \$49.95 to \$99.80, and are outstanding in their price class.

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at the Congress Hotel, Chicago, in Suites J 22-24, June 8th to 12th

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# A NEW MODEL



by  
**STORY**  
 AND  
**CLARK**

Much could be said of the beauty, originality and exceptional value of this newest Radio by Story & Clark.

But, of primary importance to you, it has "eye appeal"—and *will sell readily!*

Your sales effort and profit margins were first thought of when it was conceived and produced.

And these factors, above all others, are the consideration that should prompt your interest in a receiving unit that can—and *will*—establish sales records!

## DESCRIPTION

5½ feet high, 18 inches wide, 9½ inches deep—bronze dial, guaranteed synchronous electric clock movement—mahogany case. A radio, that for tone quality and selectivity is unsurpassed.

*Guaranteed for one year.*

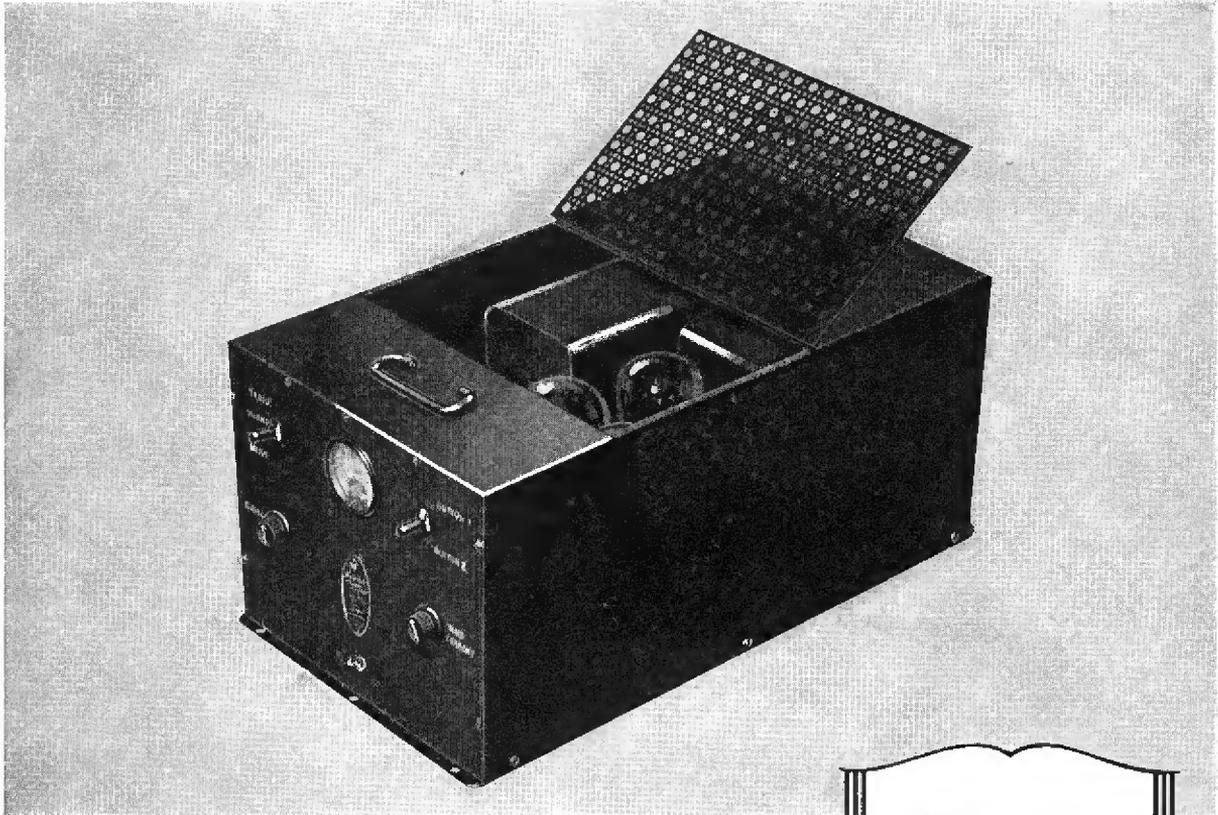
**RADIO**  
 by **STORY & CLARK**

SINCE



1857

# WEBSTER ELECTRIC CO.



**P**ORTABLE,— by reason of compact design, fully enclosed in a sturdy metal case,—this new Webster 3-stage Power Amplifier answers the requirements for “sound” truck or other portable, as well as permanent, sound installation.

It is known as Model CP-74-50. An attractive bakelite panel has direct input connections and is equipped with meter and gain control for a double button microphone. The panel also includes mixing control for phonograph and radio and an A. C. switch. Convenient terminal connections with variable output impedances are located at other end of the unit.

With a power output rating of 15 watts this model will take care of two or more dynamic speakers. Total weight — 55 lbs., outside dimensions: 18¾ inches length, 10¼ inches width, 8¾ inches height.

Webster Electric Company, favorably known for more than twenty-two years in the electrical field, manufactures standard and special equipment to meet a wide range of sound amplification and distribution requirements.

Inquiries are solicited from well established organizations engaged or interested in sales, installation, and servicing of sound distribution systems. Ask for bulletin RC 115.

*Wherever  
Sound Must  
Fill Great  
Spaces*

**Webster Electric**  
Power Amplifiers

Schools . . . Colleges . . . Academies  
. . . Institutes . . . Hotels . . . Convention  
Halls . . . Amusement Parks . . . Rail-  
road Depots . . . Swimming Pools . . .  
Apartment Buildings . . . Riding Acad-  
emies . . . Airports . . . Stadiums . . .  
Sanitariums . . . Hospitals . . . Facto-  
ries . . . Sporting Arenas . . . Assembly  
Halls . . . Play Grounds . . . Civic  
Centers . . . Race Tracks . . . Ball Parks  
. . . Skating Rinks . . . Public Parks  
. . . Gymnasiums . . . Yacht Clubs



Webster Electric Company

ESTABLISHED 1909

Racine

Wisconsin



Webster Transformers . . . Webster Electric Pick-ups . . . Webster Power Amplifiers



For many weeks prior to the actual appearance of the Majestic Refrigerator, this company assured Distributors, Dealers and the Public that its new product would be, above all else, a piece of Highest Quality Merchandise.

- Every promise made was amply fulfilled . . . as has been proved by the performance of many thousands of these refrigerators in the homes of delighted and completely satisfied owners.

- It becomes more apparent each week that a Majestic Refrigerator Franchise is one of the most valuable that a Dealer can hold. Our Distributors are rapidly closing such agreements assuring dealers the handsome profits of the greatest year in electrical refrigeration history.

GRIGSBY-GRUNOW COMPANY, CHICAGO, ILLINOIS

# *Majestic*

## **ELECTRIC REFRIGERATOR**

# Sylvania

REGISTERED U. S. PAT. OFF.

## THE SET-TESTED TUBE

It Pays to sell  
the "policy" line

**NEW  
LIST  
PRICES**

Tube Type	Was	Now
210	\$ 9.00	\$7.00
224	3.30	2.00
227	2.20	1.25
230	2.20	1.60
231	2.20	1.60
232	3.30	2.30
235	3.50	2.20
245	2.00	1.40
250	11.00	6.00
280	1.90	1.40
281	7.25	5.00
551	3.80	2.20

Licensed under RCA Patents



Despite low list prices—Your  
*Sylvania Discounts Remain Unchanged!*

Sylvania list prices change to meet current  
selling conditions—*But Still*

THE SAME—generous MARGIN of PROFIT  
THE SAME—dependable PRICE PROTECTION  
THE SAME—helpful COOPERATION

and

The Sylvania 100% Dealer Plan  
(100% for you)

It's new—different—unselfish—productive—  
profitable—successful

Sells every product you handle with slight  
effort on your part

**MAIL THIS  
COUPON NOW!**

Sylvania Products  
Company  
Emporium, Penna.

Please send me full  
details on the new  
Dealer Plan.

Name \_\_\_\_\_

Address \_\_\_\_\_

State \_\_\_\_\_ R5-1A



STEVENS HOTEL  
(HEADQUARTERS)



# GO!



BLACKSTONE HOTEL

TO THE  
FIFTH ANNUAL

# RMA Trade Show

AND 7TH ANNUAL RMA CONVENTION

# CHICAGO

# JUNE 8 to 12th



**BU\$INE\$\$ FOR YOU WITHOUT BALLYHOO**

**EVERYBODY WILL BE THERE.**

*Bu\$ine\$\$* will be the key-note during "Radio Week" of June 8th. This will be a "bu\$ine\$\$" show and bu\$ine\$\$ for YOU, bu\$ine\$\$ for everybody in radio.

The National Furniture Industry and the Music Industry also will be holding conventions and exhibits in Chicago, drawing thousands of visitors, during "Radio Week."

All the new radio products on display in the trade show. Every leading manufacturer of receiving sets, tubes, speakers and accessories has reserved exhibit booths in the trade show and demonstration rooms in hotels. There will be *more* new circuits, new tubes, new speakers, new cabinet designs, and new radio products, including home talkies, television, remote control, and other radio devices and products than ever before in one year.

Thirty thousand (30,000) square feet of radio exhibits in the Grand Ball Room and Exhibition Hall of the Stevens Hotel.

ADMISSION TO THE TRADE ONLY—NO VACANT BOOTHS—ALL EXHIBITORS REQUIRED TO SHOW THEIR MERCHANDISE.

Twenty-five thousand radio manufacturers, jobbers and dealers expected to attend.

Reduced railroad rates have been granted on all lines—one and one-half fare rate. Secure certificates from local railroad agents. RMA special trains from all sections.

Official hotels—Stevens Hotel (headquarters), Blackstone, Congress and Auditorium Hotels, with demonstration rooms of manufacturers.

## INDUSTRIES AND EXHIBITIONS

Radio industries, June 8-12—RMA, National Federation of Radio Associations, Radio Wholesalers Association and National Association of Broadcasters.

Music industry convention and exhibits, Palmer House—June 8-10, during "Radio Week."

Institute of Radio Engineers annual convention, Sherman Hotel—June 3-6.

Annual national "Furniture Mart" with 25,000 furniture buyers, jobbers, dealers and manufacturers—June 1-15.

Business meetings and entertainment for visitors during entire "Radio Week"—June 8-12—RMA "stag" party Wednesday, June 10—Music Industry banquet, Tuesday, June 9.

Apply now direct to hotels for room reservations.

RMA invitation credentials mailed to the trade about May 1st. For information or credentials write to Bond Geddes, RMA Executive Vice-President, Stevens Hotel, Chicago, or,



CONGRESS HOTEL

**RADIO MANUFACTURERS ASSOCIATION**

11-W. 42ND ST. N.Y. CITY

32 W. RANDOLPH ST. CHICAGO



AUDITORIUM HOTEL

# Radio's hottest line is here!



MODEL 80

7-Tube PENTODE Super-Heterodyne with 3 Multi-Mu Tubes and Light-Beam Station-Selector. Complete, ready to play—

\$67.50



MODEL 81

7-Tube PENTODE Super-Heterodyne with 3 Multi-Mu Tubes and Light-Beam Station-Selector. Complete, ready to play—

\$84.50



MODEL 90

8-Tube PENTODE Super-Heterodyne with 3 Multi-Mu Tubes and Automatic Volume Control eliminating fading, and creating noiseless tuning. Complete, ready to play—

\$79.50



MODEL 91

8-Tube PENTODE Super-Heterodyne with 3 Multi-Mu Tubes and Automatic Volume Control eliminating fading, and creating noiseless tuning. Complete, ready to play—

\$99.50

## FIRST PENTODE Super-Heterodyne in Conjunction With Multi-Mu Tubes

HERE it is, gentlemen . . . the hottest line in radio . . . Clarion 1931! Did you ever see such features . . . all under a hundred dollars? Look . . . PENTODE Tubes (four times the amplification) . . . Multi-Mu Tubes (eliminate cross-talk and blooping) . . . Automatic Volume Control (no blasting between stations) . . . combination Tone Control and



Static Eliminator . . . Full-Vision Dial (with Light-Beam Station-Selector) . . . beautiful new deluxe cabinets . . . new selectivity and sensitivity throughout the whole broadcast band from 550 to 1550—and a station at every ten-kilocycle mark . . . certified 98% pure tone . . . endorsements from stars of the opera, the theatre, and the orchestra! Get the dope today on the hottest line in radio . . . write for your copy of the "Clarion Times" . . . it tells all!

TRANSFORMER CORPORATION OF AMERICA  
Ogden and Keeler Avenues, Chicago

# Clarion Radio

98% pure tone

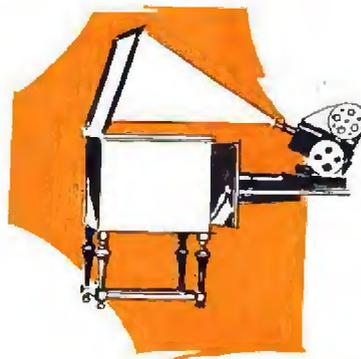
# BRAND NEW MODELS

*are to be shown at the*  
**R.M.A. Convention and Trade  
Show, Chicago, June 8-12**

**T**HE Trade Show authorities promise a real show this year. Brand new models—shown for the first time—new radio receivers, cabinets, tubes, radio-phonograph combinations, remote controls, home talkies, components, materials and supplies.

The R.M.A. meetings will be chock full of practical up-to-the-minute interest for every radio merchandiser.

Leading dealers and jobbers from all over the country, as well as manufacturers and engineers, are going to be there. All intent on new products, more business, *better net profits.*



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RADIO RETAILING, ABC-ABP, A MCGRAW-HILL

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**B**EFORE the convention meets—the Annual Convention and Trade Show Number of *Radio Retailing* will be mailed you. Watch for it! Its editorial pages will give you a clear idea of what's going to happen at Chicago—meetings, exhibits, and all. Its advertising pages will illustrate and describe the new products of manufacturers. A special trade show advertising section, printed in color on excellent coated paper will help you to determine which exhibits you'd particularly like to see at Chicago.

Copies of the TRADE SHOW NUMBER will also be available at *Radio Retailing's* Booth in the Hotel Stevens. But most readers prefer to study it in *advance* of the Show, so that they may schedule their time in Chicago to make certain of seeing the products and the people they particularly want to see.

If you do *not* go to Chicago, then of course the Trade Show Number of *Radio Retailing* and the Report Number (July issue) will be your sole reliance for complete reliable information of this, the most interesting week in the whole radio year!

*Watch for your copy of the*  
**ANNUAL CONVENTION  
& TRADE SHOW NUMBER**  
*of Radio Retailing*

**TO ADVERTISERS:** Forms close for the Trade Show Number on May 18. The Special Advertising Section entails no extra charge except for color. Regular rates for space and color will apply.

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PUBLICATION, 10TH AVENUE AT 36TH STREET, NEW YORK

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—?—

1. Is the electric refrigerator I am considering as well, and favorably known as the Kelvinator?

?

2. Is the company behind it as progressive, as liberal, and as fair as Kelvinator, and does their Sales Agreement give me as good an opportunity to make money as I would have with Kelvinator?

?

3. Is the merchandise as good a value at the price as Kelvinator?

?

4. How many new and important engineering advancements has the company pioneered and introduced in the last three years as compared with Kelvinator's splendid record?

?

5. With it, would I be getting the new engineering developments *first*—or would I get them after some competitor had gotten the publicity, the glory, and the PROFITS out of them?

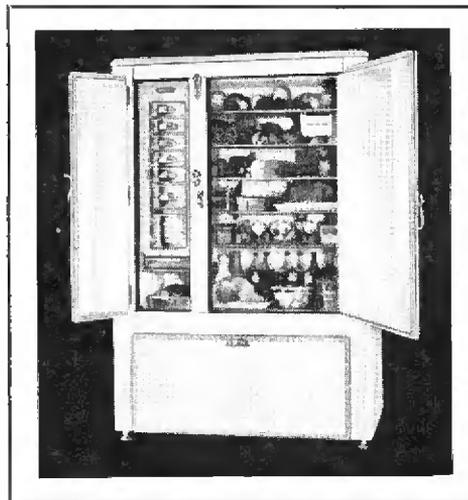
?

6. Will this line I am considering perform as well as Kelvinator and has it as many outstanding sales features to talk about as Kelvinator?

?

7. Is the line as complete as the Kelvinator line—does it reach every market like Kelvinator does—and if not, how many sales will I lose because I will not have a Model at the price the prospect wants, and can afford, to pay?

Before  
you  
decide—  
ask yourself  
these questions!



ASSUMING you have definitely decided to add electric refrigeration to your business, the important question is the selection of *the Sales Agreement* that offers you the best opportunity. Your answer to the accompanying questions will help you make an intelligent decision.

—?—

8. Doesn't the Kelvinator Sales Agreement, with the leading value in every price field—the high, low, and medium—give me a better opportunity to build up bigger volume and profits?

?

9. Can I expect, from this line, the same steady, healthy increase in business every year that can be had with the Kelvinator line?

?

10. Does the company hold as prominent a place in the industry as Kelvinator—and has it a group of executives who have the experience and ability to keep it there?

?

11. Will I be able to *keep* my profits with this line, as I would with Kelvinator, or, will I have to spend a big percentage of these profits to keep my owners satisfied and break down sales resistance I would not have with Kelvinator?

?

12. Wouldn't I be further ahead—in every way—five years from now with the *full coverage, full profit* Kelvinator line than I would be with the line I am considering?

?

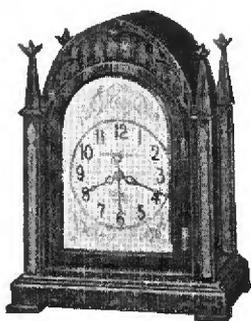
—and finally, hadn't I better see if I can get the Kelvinator Sales Agreement for this territory?

KELVINATOR CORPORATION  
14263 Plymouth Road, Detroit, Mich.

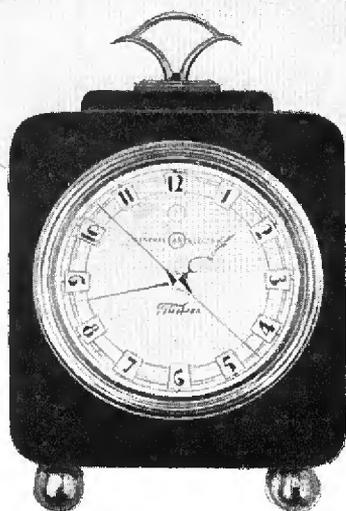
Kelvinator of Canada, Ltd., London, Ont.  
Kelvinator Limited, London, England

Kelvinator <sup>(273)</sup>

# On the face of it You can see why it sells!

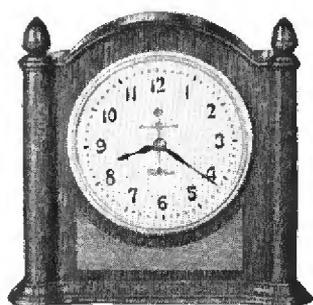


MODEL R-130—Mahogany—Westminster Chimes—List price, \$74.00.



APOLLO 357—Especially attractive as a boudoir clock—Beetle and Chrome-Finish Metal—Black Onyx Finish—Silvered Dial—also in colors to blend with the modern trend of home decoration. List price, \$15.00.

**—AND IT SELLS EVERY MONTH OF THE YEAR**



MODEL 533—Honduras mahogany with Burl overlay. List price, \$15.00.

ON the face of it is the name—GENERAL ELECTRIC—the name known to America's millions as the symbol of sterling worth—of supreme workmanship—of the utmost value in everything electrical.

When you offer your customers *General Electric* Clocks, you are offering them *exactly* what they want. An infinite variety of beautiful models from which to choose. An *all*-electric clock without a spring, without a pendulum—without an escapement. A clock that runs silently through the years without cleaning, without oiling, without winding, without even regulating.

The *General Electric* Clock is a *dependable* clock—powered with the famous Telechron Motor—regulated by a master clock at the power station which is constantly checked for accuracy by comparison with radio time signals broadcast from the Arlington Station of U. S. Naval Observatory.

And the beauty of it is that *everyone* can afford a G-E Clock. Prices range all the way from \$9.75 to \$620.

The moment you display this clock, your customers know it is the clock they are looking for. They can see on the *face* of it!

*Mail the coupon. It will bring you the latest news of the entire G-E Clock line.*

**GENERAL  ELECTRIC  
CLOCK**

Merchandise Department • General Electric Company • Bridgeport, Connecticut

Section T-685, Merchandise Department  
General Electric Company  
Bridgeport, Conn.

Kindly send me full information on  
General Electric Clocks.

Name.....

Street Address.....

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

# ATWATER KENT RADIO

## THE PUBLIC *and the* *Radio Advancement* *of the year—the* **PENTODE TUBE**

**F**OR TWO YEARS the whole radio industry has been *talking* about the PENTODE TUBE.

Atwater Kent *did something* about it.

The whole industry recognized the far greater amplification and doubled output of the PENTODE.

Atwater Kent engineers immediately *went to work* to find the way to *use* this great new five-element amplifier.

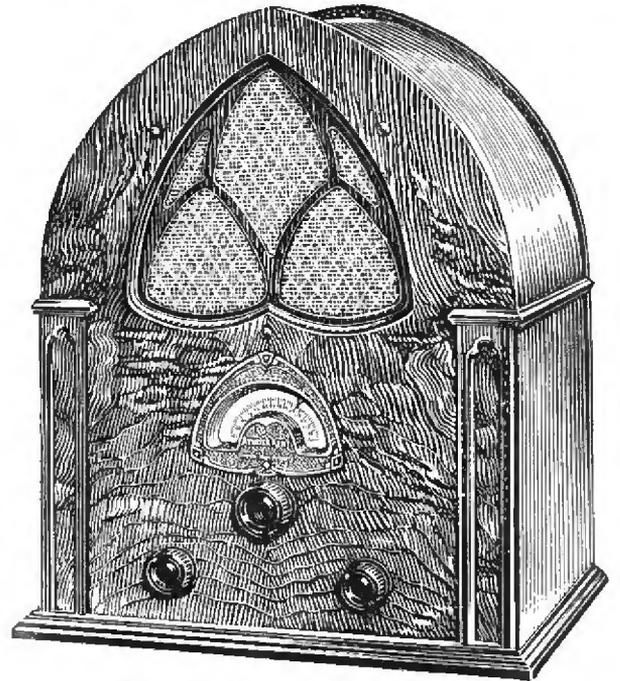
*They found the way* to make this amazing new tube take the place of three ordinary tubes.

In combining the known advantage of the PENTODE TUBE with the known advantage of the super-heterodyne circuit, *they found the way* to get big performance in a small radio.

The result is the new Atwater Kent Golden Voiced COMPACT—the radio advancement of the year—sacrificing nothing in tone, selectivity, sensitivity, beauty, workmanship, dependability, and *all* for \$69.50 COMPLETE with tubes.

And the public has *responded, accepted, demanded, purchased!*

For the public knows *value*—knows that every Atwater Kent advancement is a real forward step in radio progress. And the dealers know that the profits are in selling *what the public wants!*—the one new thing in radio, the Atwater Kent Golden Voiced Compact with the PENTODE TUBE. Phone or wire your distributor Today.



Golden Voiced  
**COMPACT**  
SUPER-HETERODYNE

**\$69<sup>50</sup>**  
**COMPLETE**  
WITH TUBES

**MODEL 34**—Golden Voiced Compact with the Pentode Tube—Cathedral Gothic design—Matched walnut woods—Super-heterodyne selectivity—Antenna adjuster securing full efficiency on any length of antenna—Quick-Vision Dial—Special electro-dynamic speaker. Fully-shielded chassis—Atwater Kent quality from top to bottom—The small radio of big performance at a low price. Approved by National Board of Fire Underwriters.

Prices slightly higher west of Rockies and in Canada

# INTO 15,000,000 HOMES

*These Great National Publications Are Carrying the Huge Cinderella Campaign*



Just plug Cinderella in any electric outlet and it does the washing in a jiffy—for only one cent an hour.



Cinderella is useful for the week's wash, and for quickly needed things that are washed every day.



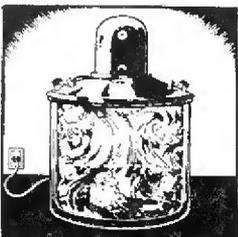
Cinderella is a big seller to small families—especially to families with young babies.



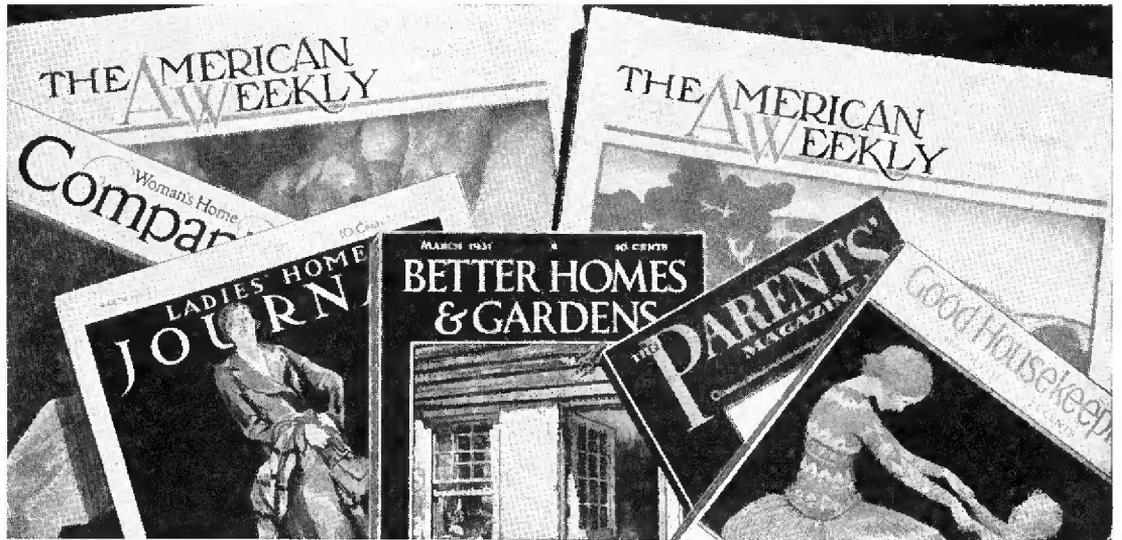
Cinderella is safe for the daintiest silks and laces; it has no moving parts to injure clothes.



Cinderella is just right for apartment dwellers. It can be tucked away in small space when not in use.



This glass demonstrator shows Cinderella's "Vacuum-Action" in action, and helps you make sales.



# Cinderella <sup>\$ 37<sup>50</sup></sup>

Portable Electric Clothes Washer



THE product is right for a tremendous market. The price is right for easy selling. And now the great publications pictured are carrying Cinderella advertising into nearly 15 million homes.

Think what that means to you. It means that the advantages of the Cinderella are being told to approximately three out of every four families whose homes are wired for electricity. It means that when you display the Cinderella in your win-

dow or store the great majority of your women customers and prospects already will have become interested in it through advertising in their favorite magazines.

Don't let this opportunity slip by. Start now, while the Cinderella advertising is real news, to cash in on this great national campaign. Get full details of the profit-making Cinderella Sales Plan by mailing the coupon NOW.

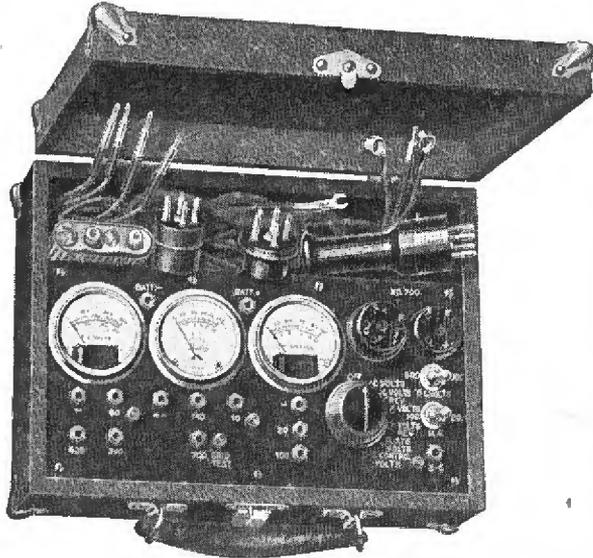


Black & Decker Mfg. Co.,  
602 E. Pennsylvania Ave.  
Towson, Md.

Please send full details of the Cinderella sales plan to:

Name.....  
Street No.....  
City..... County..... State.....

# New *Readrite* Models



No. 700

## The COMPLETE ANALYZER . . . .

- for . . . testing voltage of plate, grid, cathode and screen grid.  
 . . . grid swing test and plate current and filament and line voltage.  
 . . . set circuits  
 . . . continuous test of chokes, transformers, condensers.

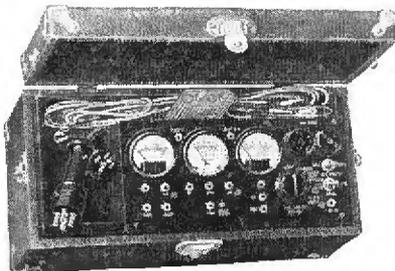
In one analyzer—at one low price—Readrite offers you testing capacity to cover every set and tube checking requirement. Tests ordinarily complicated have been reduced to the simplicity of one operation—scale readings provide a range of 0-60-300-600 D.C., 0-10-140-700 A.C. and 0-20-100 milliamperes.

Housed in a strong leatherette case it's the ideal analyzer for expert serviceman or beginner.

**No. 700 \$15.00 NET** will ship direct if not at your jobbers.

### No. 600 Analyzer Kit

Contains the same equipment as No. 700. Carrying case is lock equipped with space for tools and tubes. Test equipment is removable and can be used for complete test panel for shop purposes. Price \$18.00 net.



No. 600

**Readrite Meter Works**

Established 1904

6 College Ave., Bluffton, Ohio

## DEALERS - - Buy Your RADIO TUBES

Direct From the Manufacturer and **SAVE the DIFFERENCE**

### First Quality Grade "A" Radio Tubes

*Packed in Attractive Three-Color Boxes*

#### OUR GUARANTEE

Every tube is dated one month ahead for stock and is guaranteed for ninety (90) days of actual service. Defective tubes are replaced promptly.

#### TERMS

20% with order, balance C. O. D. Write or Wire for Details.

THESE PRICES MEAN BIGGER PROFITS

201-A	.....\$	.22
224	.....	.60
226	.....	.32
227	.....	.35
245	.....	.35
171	.....	.40
112	.....	.40
280	.....	.35
281	.....	1.25
210	.....	1.40
250	.....	1.50

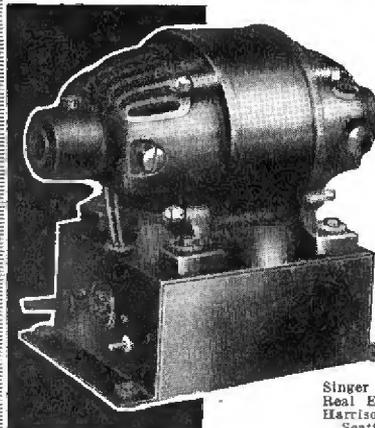
227 } **35c**  
 245 } each  
 280 }

### Wakefield Manufacturing Corp.

RADIO TUBE MANUFACTURER SINCE 1924

341 HALSEY ST.

NEWARK, N. J.



### Double-Barrelled Profits

The surprisingly low prices of Janette Converters and their effective operation are making "double-barrelled" profits for dealers everywhere—more profit through the sale of A.C. sets in D.C. districts and a handsome profit on the converters themselves. For 32, 115 and 230 Volts D.C. Output 110 v. 60 cycles, A.C.

Write for Bulletin 431-R  
**JANETTE MFG. CO.**  
 555 West Monroe St., Chicago

Singer Bldg., 149 Broadway, New York  
 Real Estate Trust Bldg., Philadelphia  
 Harrison Sales Co., 314 Ninth Ave., N. Seattle, Wash.

## WASMUTH-GOODRICH COMPANY



Fine Radio Cabinets  
*fashioned by*  
**Master Craftsmen**

103 Park Ave., New York  
 Peru, Indiana

**GROWTH!**

**-on a basic  
manufacturing  
foundation-**



*Going on!* With widely increased resources, leading to the purchase of this huge plant in Buffalo, housing its former Long Island City and Rochester facilities . . . TREBLING production . . . Colonial now occupies one of the strongest positions in the radio industry.

# COLONIAL

## NEW SUPER-HETERODYNE

GET COLONIAL'S  
**NEWS**  
at the  
**R.M.A.**  
TRADE SHOW

See why Colonial's Policy of Higher-than-Market quality at Lower-than-Market price..plus a better Merchandising Plan.. will enable you to build for permanence and give you radio leadership!

READ COLONIAL'S  
**NEWS**  
in the  
**JUNE**  
TRADE PAPERS

Using New Pentode and Variable-Mu Tubes . . . new models in utility furniture . . . full line ranging from \$49.95 complete . . . new distributor and dealer opportunities.

**C**OLONIAL RADIO . . . on a NEW, *in-keeping-with-the-times* merchandising basis . . . NEW, MODERN SUPER-HETERODYNE SETS—Midgets, Console Combinations, Furniture Cabinets—using the newest tube developments . . . giving the public the QUALITY it wants at a PRICE it can afford to pay . . . giving the distributors and dealers genuine inducement to feature the greatest line Colonial ever produced.

This is only part of Colonial's sensational 1931-32 proposition. Ask for the rest of it when you get to Chicago. Read the descriptions and facts in next month's trade papers.

COLONIAL RADIO CORPORATION, BUFFALO, N. Y.

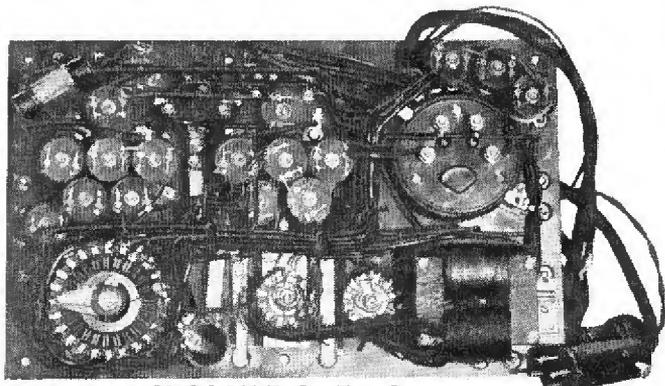
**DISTRIBUTORS**  
Several Territories Open  
on Exclusive Arrangement

**COLONIAL**  
**Radio**  
"RADIO'S CLEAREST VOICE"



# LOOK

**INSIDE BEFORE YOU BUY**



Model 565 Radio Test Set

When you buy a radio test set, you naturally want wide testing and complete servicing scope, dependable and accurate readings, ease and convenience in operation, and—what is equally important—rugged, precise, internal construction to assure years of continued good service and safeguard your investment.

Before you buy, *insist upon looking inside*. Compare the workmanship and design of parts, note their finish. Are the meters, switches, leads, wires, cables, and bus bars neatly and carefully laid out? Are the joints and connections solid? Would you be proud of the job? The inside construction of a radio test set is most important because it must do the work. Upon it depends the entire ability of the instrument to stand up under hard service and continue to give satisfactory, reliable service year after year. The inside of a radio test set reflects the character and quality of the product and its manufacturer. The inside of a good radio test set is a

masterpiece of wiring that pays the buyer many times in better, longer, and more dependable service.

If you do not already own a Weston, ask one of your friends to show you the inside of his . . . or send the coupon.



New Type 50 in. Test Prods

with new style replaceable tips and wear-resisting cables, represents the most advanced design to give long, dependable, trouble-free service.

**WESTON ELECTRICAL INSTRUMENT CORP.**  
581 Frelinghuysen Avenue, Newark, N. J.

WESTON ELECTRICAL INST. CORPORATION  
581 Frelinghuysen Avenue, Newark, N. J.

- Please show me the inside of a Weston Radio Test Set.
- Please send Booklet HHI giving detailed information about Weston Radio Test Sets.

Name .....

Street .....

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

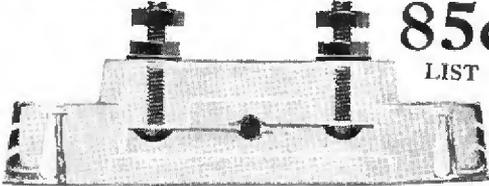


## It's NEW!

# THE VISIBLE VULCAN

### LIGHTNING ARRESTER

**85c.**  
LIST



**MADE OF CRYSTAL CLEAR GLASS**

Here's a brand new idea in Lightning Arresters. Made of crystal clear glass, this new Visible Vulcan Arrester has the eye appeal that leads to sales. On your counter or in your window this item attracts instant attention. Here's the big feature of the Visible Vulcan Arrester—a "short" can be easily detected—no more blind spots in the antenna circuit. Costs less than old style arresters.

The Visible Vulcan Arrester is manufactured under a new process and engineering principle. It not only protects the radio against lightning damage but also dissipates accumulative static charges. Backed by \$100.00 guarantee.

Enclosed in an attractive three color box. Packed ten to a three color counter display carton. Order a trial carton today.

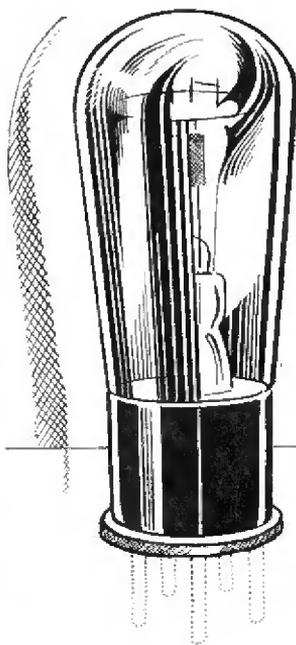
*If Your Jobber Cannot Supply You—Order Direct*

Write for catalog and prices of the complete line of Corwico Radio Wires and Antenna accessories.

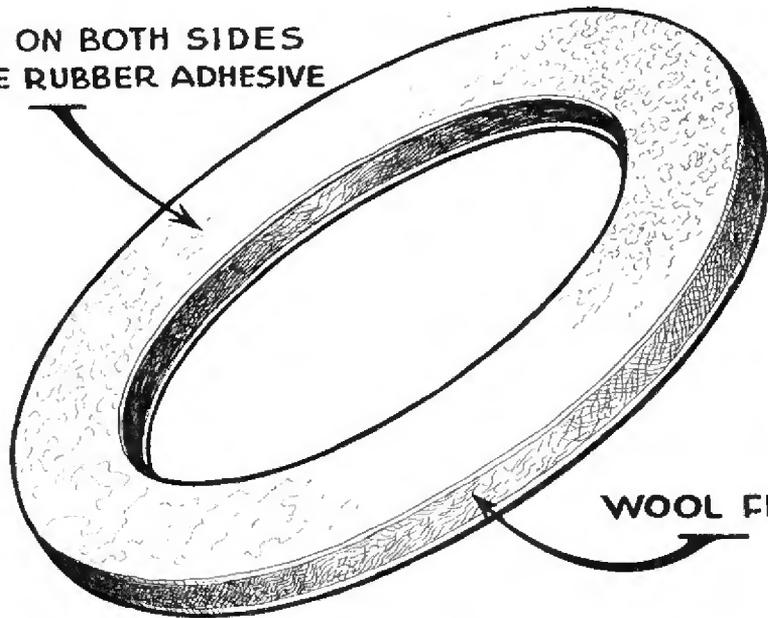
## CORNISH WIRE CO., INC.

30 Church St., New York

MAKERS OF  
**CORWICO BRAIDITE HOOK UP WIRE**



FACED ON BOTH SIDES  
with PURE RUBBER ADHESIVE



WOOL FELT

# Now - A Shock Absorber for Radio Tubes - - !

**FIFTEEN** of the largest set manufacturers in the Country are now using **STIKTUBE SOCKET WASHERS**. Look in your sets and see if they contain **STIKTUBE**. They are evidence of conscientious set design. Take advantage of this extra effort on the part of the manufacturer by using them as added selling force with your customers.

“**COMPLETE** with tubes” — What a welcome phrase and now a reality! Manufacturers, by the use of **STIKTUBE SOCKET WASHERS** (Patent Applied For) are now shipping sets from the factory with the tubes firmly inserted in the sockets but gently cushioned there by this adhesive wool felt shock absorber.

All the way to your store and into the home with the same tubes which were in the set when it was tested and balanced at the factory.

No more useless service calls by you—just to push a tube into its socket—no more losses where you had to replace tubes which were paralyzed, due to others in the set chassis having sprung loose.

A complete unit from the factory to the home—an end now to the malpractice of quoting list prices less tubes. Look at your sets—see if they are equipped with **STIKTUBE SOCKET WASHERS** then use them as a selling point with your customers.

**SAMPSON INDUSTRIES, INC.**

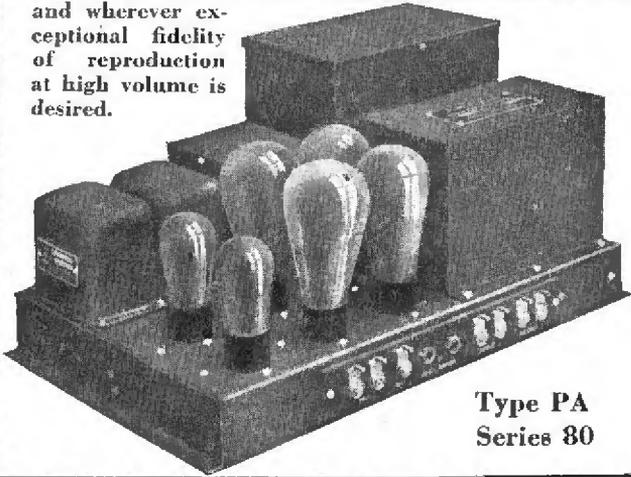
4225 OLIVE STREET

ST. LOUIS, MO.

**MAKERS OF STIKTAPE AERIAL**

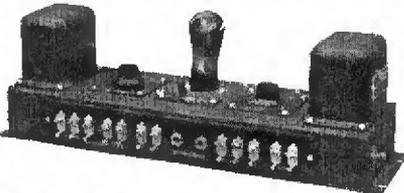
# AMERTRAN POWER AMPLIFIERS and ASSOCIATED EQUIPMENT

For installation in restaurants, clubs, dance halls, schools, and wherever exceptional fidelity of reproduction at high volume is desired.



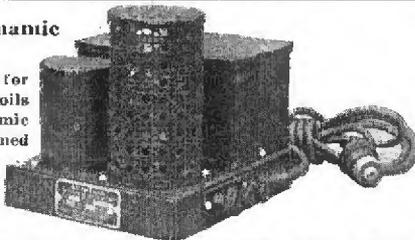
**Type PA  
Series 80**

**Type A-88 Master Control and Input Amplifier.** This unit will select between 200- and 500-ohm input sources and control volume. It also contains a one-stage pre-amplifier.

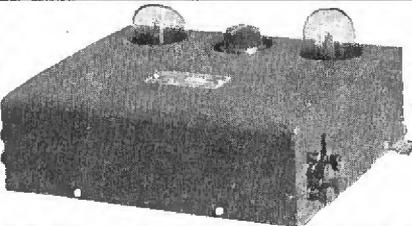


**Type P-101 Dynamic Field Supply.**

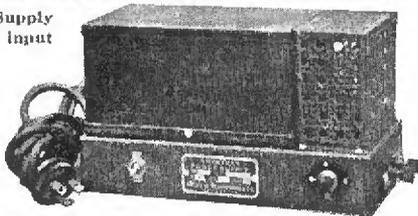
Filtered d.c. current for energizing the field coils of one or two dynamic speakers may be obtained from this compact unit. It operates from 110-volt, 60-cycle circuits.



**Type A-89 Input Amplifier.** This two-stage, transformer-coupled amplifier is utilized in raising low-level input signals to values sufficient for operating the main amplifier. Two 827-type tubes are required.



**Type P-78 "A" Supply Unit.** All AmerTran input amplifiers are d.c. operated and this unit has been designed to provide filtered filament current. It operates on 110-volt, 60-cycle lighting circuits.



**AMERICAN TRANSFORMER COMPANY**  
178 Emmet Street, Newark, N. J.

Gentlemen: Send me bulletin 1000B with complete information on AmerTran power amplifiers and audio parts.

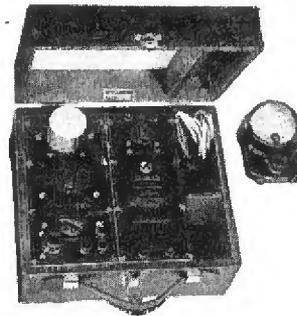
Name .....

Street and No. ....

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

**STOP** There's an accurate **TEST OSCILLATOR** \$27.50  
The DAY-RAD TYPE 330

The greatest combination of accuracy and low price ever offered in a radio service instrument is found in this Multi-Frequency Oscillator. It has 8 fixed broadcast frequencies to meet the standards of most manufacturers. These frequencies are 600, 750, 800, 1000, 1200, 1250, 1400 and 1500 Kilocycles.



There are three intermediate frequencies for super heterodyne alignment. These are 130, 175 and 180 K.C. with vernier calibrated in one K.C. steps from 170 to 183 Kilocycles.

The instrument is thoroughly shielded and has shielded variable output control. Filament current to '30 tube supplied by 4 dry unit cells; plate current from one 22½ B battery; all self-contained.

Adapted for alignment, tracking, neutralizing super heterodyne receivers and all other types using tuned frequency stages, neutrodyne, etc.

The Dayrad Vari-Range Output Meter, Type 50, to follow adjustments. Dealers Net Price \$10.

**THE RADIO PRODUCTS COMPANY, Dept. R**  
5th and Norwood, Dayton, Ohio

Official [ \$3.50 List Price ] **FREE**  
**Radio Service Manual**

and complete Directory of all Commercial Wiring Diagrams

(352 pages—9x12-in.)

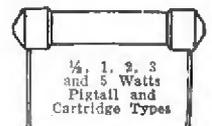
To Dealers and Servicemen with our Special Introductory Deal on

**LYNCH METALLIZED RESISTORS**

USING NEW "K" FILAMENT

Write today for details of this Unusual LIMITED offer

Lynch Mfg. Co., Inc.  
Dept. R, 1775 Broadway, N. Y.



Precision Wire Wound Pigtail and Cartridge Types



Anyone Can Be the "Life of the Party" With a UNIVERSAL "BABY MIKE"

**Superb Home Microphone**

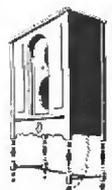
Real microphone of amazing quality—not a toy. Used with radio or amplifiers. Endless home entertainment—a ready, waiting market for live dealers. Single button carbon microphone—exclusive circuit adjusting screw (pat. pending). Truly damped diaphragm eliminates "feed back." Handsome bronze case, 3½ in. high. Packaged with 25-ft. cord, prong adapter and detailed instruction sheet. Better stock now!

LIST PRICE \$7.50  
COMPLETE

**UNIVERSAL MICROPHONE CO. (LIMITED)**

1163 Hyde Park Blvd., INGLEWOOD, CALIF.

Other models \$5 to \$30. Also cables, plugs, transformers, mountings, stands, etc. Get complete catalog.



# \$69<sup>50</sup>

WORTH OF

# Real Radio!

## the new RCA Victor SUPERETTE

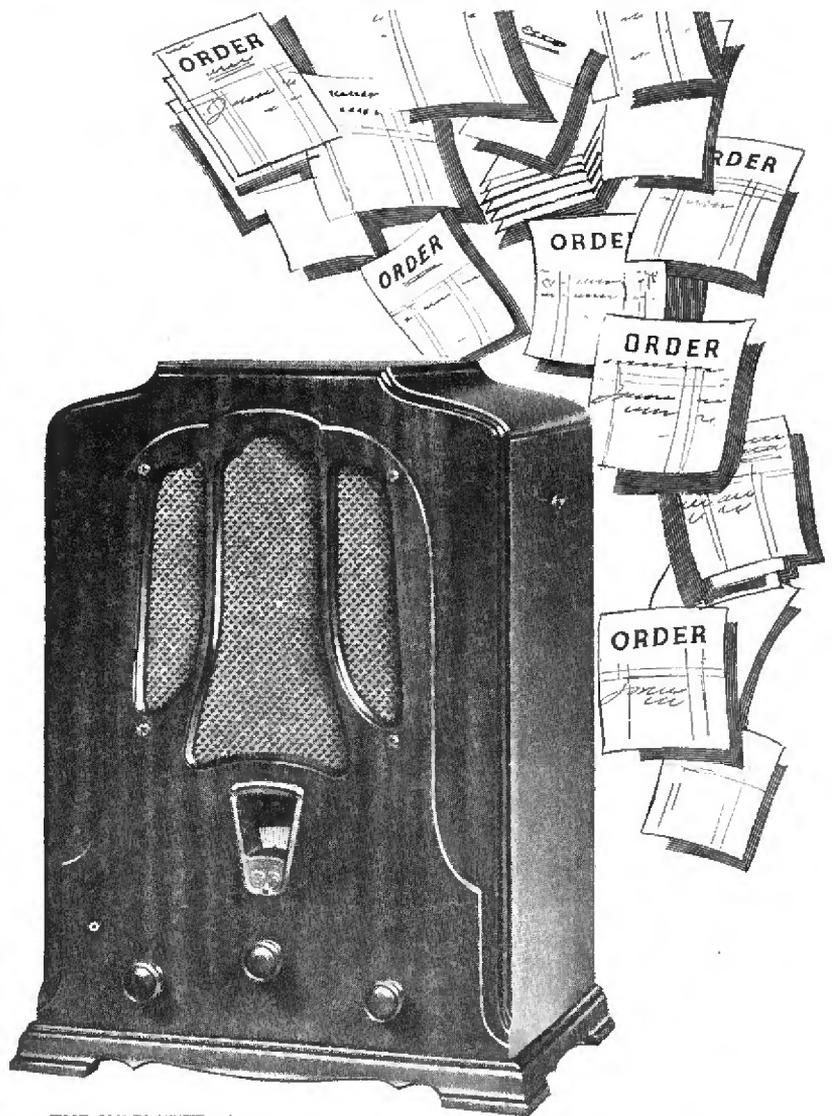
*Sensational new 8-tube  
Super-Heterodyne in con-  
venient small-size cabinet  
—the smallest BIG radio  
ever built*

It's just the radio America wanted! Sales prove it! Thousands of people are enthusiastically buying it!

No wonder! Never before has \$69.50 bought so much radio! Imagine it . . . a real full-sized Super-Heterodyne . . . using 8 tubes . . . *eight!* Including two new Radiotron Super-Control Tubes that separate stations more clearly, and afford finer performance in smaller space. Also tone color control! It's a real man-size radio!

The Superette is not merely screen-grid . . . it's *more* . . . it's a genuine RCA Victor SUPER-HETERODYNE . . . and you know how the Super-Heterodyne is revolutionizing the radio industry!

Feature this marvelous new set . . . and watch it SELL! Also use it as a powerful leader to attract customers for larger sets into your store! Ask your jobber about it today! RCA Victor Company, Inc., Camden, N. J., a Radio Corporation of America Subsidiary.



THE SUPERETTE—An 8-tube Super-Heterodyne employing two new Radiotron Super-Control Screen-Grid Amplifier Tubes, tone color control, improved volume control, push-pull amplification; cabinet in Burr walnut or Georgian Brown Mahogany finish. **\$69<sup>50</sup>**  
COMPLETE  
Ready to Operate



FIRST SET TO BEAR RADIO'S TWO MOST FAMOUS TRADE-MARKS

# ACME WIRE PRODUCTS

Parvolt Filter and By Pass Condensers,  
Coils—Magnet Wire Wound,  
Varnished Insulations

Magnet Wire - - - All Insulations  
Aerial Wire - - - Stranded and Solid

All products made to Recognized Com-  
mercial Standards, including those of:

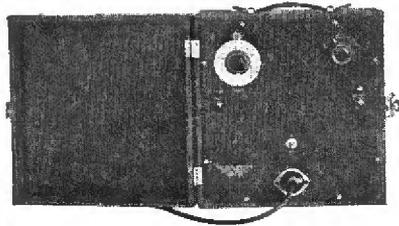
- National Electric Mfrs. Assn.
- Radio Manufacturers' Assn.
- American Society for Testing Materials

For more than 25 years manufacturers  
and suppliers to the largest and most  
discriminating users.

## THE ACME WIRE CO. NEW HAVEN, CONN.

Branch Offices

New York	Rochester, N. Y.	Cleveland
52 Vanderbilt Ave.	135 Spring St.	Guardian Bldg.
Chicago		
842 N. Michigan Ave.		



Type 404 Test-Signal Generator—\$95.00

## WHY GUESS...

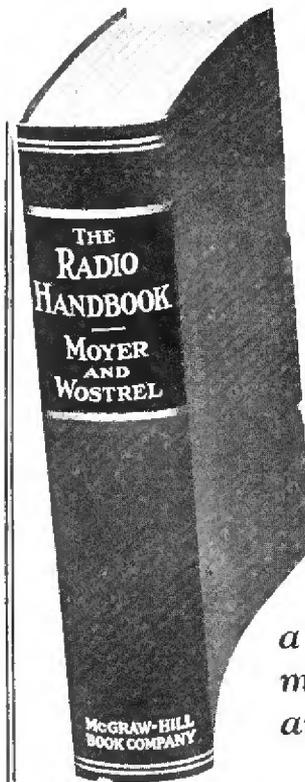
at the sensitivity of the receivers you service?  
And why use makeshift methods when an in-  
strument designed particularly for sensitivity  
measurements in the service laboratory is  
available?

The TYPE 404 Test-Signal Generator consists of  
a carefully shielded oscillator and attenuator which  
delivers a known modulated voltage to the receiver  
under test. By measuring the receiver output, its  
sensitivity can then be determined.

It's an indispensable service instrument. Write for  
Bulletin 932-T4 which describes it in more detail.

**GENERAL RADIO COMPANY**  
OFFICES :: LABORATORIES :: FACTORY  
CAMBRIDGE A, MASSACHUSETTS

Pacific Coast Warehouse: 274 Brannan Street, San Francisco



Just  
Published!

The most important  
radio book of the year

## The RADIO HANDBOOK

Including Television and Sound  
Motion Pictures

by JAMES A. MOYER  
and JOHN F. WOSTREL

Both of the Massachusetts Depart-  
ment of Education; Authors of Radio  
Receiving Tubes, Practical Radio  
Construction and Repairing, etc.

886 pages, 5½x8, 650 illustrations,  
flexible, \$5.00

a complete, modern  
manual of practical  
and technical radio  
information

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HERE at last is a handbook that meets the need  
for a complete digest of authoritative radio  
data, both theoretical and practical, in one logically  
arranged and thoroughly indexed volume. From  
the fundamentals of electricity, magnetism and  
electron theory right down to full details on latest  
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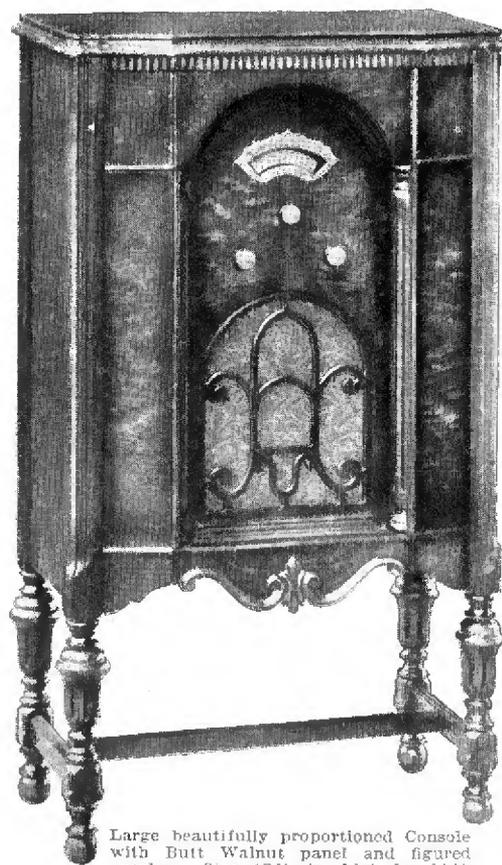
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Ten years of building fine radios—and stronger today than at any time since we started.

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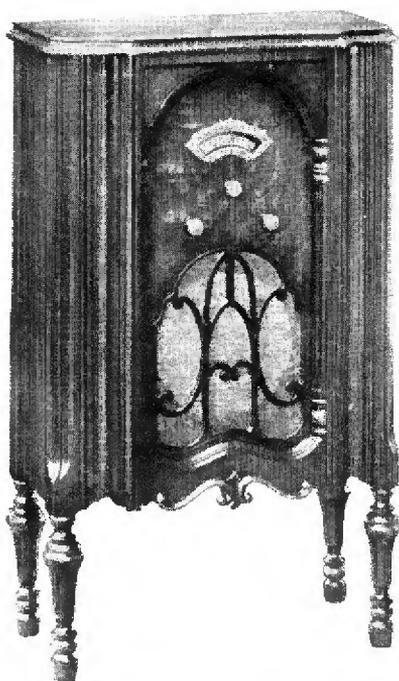
FULL VISION DIAL



Large beautifully proportioned Console with Butt Walnut panel and figured overlay. Size 42½ in. high by 24½ in. wide.

Model 814 Eight Tube Full Size Superheterodyne Receiver employing both Variable-Mu and Pentode tubes with large 12 in. dynamic speaker, tone control, full vision dial. List Price.....\$76.50  
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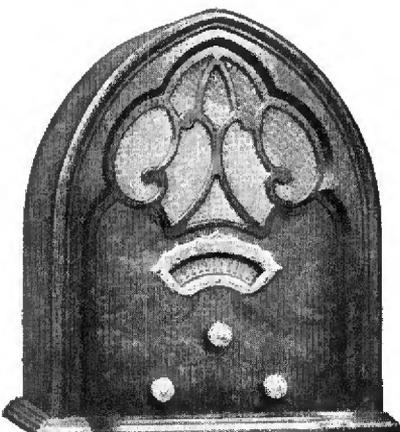


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Model 612 Six Tube Full Size Receiver employing both Variable-Mu and Pentode tubes, tone control, full vision dial, dynamic speaker. List Price...\$60.00  
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Walnut veneer with figured Butt Walnut panel.

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*Less tubes*

Model 810 Eight Tube Junior Superheterodyne Receiver employing both Variable-Mu and Pentode tubes, tone control, full vision dial, dynamic speaker. List Price.....\$57.00  
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SUPERHETERODYNE

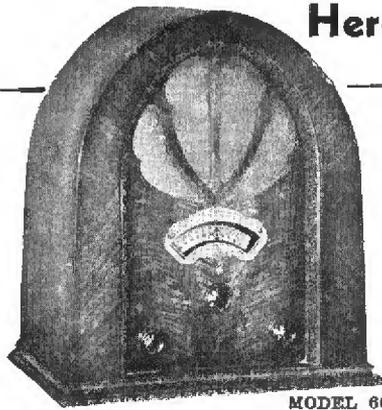
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## AUDIOLA RADIO CO.

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MODEL 60

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Here are new profits for wide-awake dealers. Here is one of the most powerful midgets on the market—perfect in tone quality—knife-like in selectivity for local or distant reception—with tone control—the nine-tube Cardinal Super-Heterodyne.

The Model No. 60, using the Magnavox Dynamic Speaker, is 17 inches high; cabinet of walnut, with butt-walnut front; full vision dial. The list price is \$75.50 complete with tubes. Discounts attractive.

Wire your order immediately. Prompt shipments.

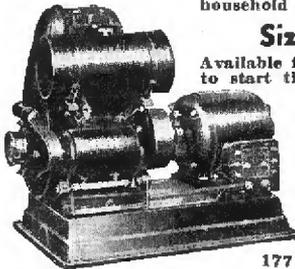
The Model 66 Cardinal—a six tube super-heterodyne is also available in same size cabinet at ~~\$59.50~~ complete with tubes. Models 71 and 72 Cardinal Combinations with super-het. circuits at \$99.50 and \$106.50.

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ONAN ALTERNATING CURRENT ELECTRIC PLANTS furnish the same current as city service—110 volt, 60 cycle, A. C. Operate Radios, Water Systems, Refrigerators, all household appliances.



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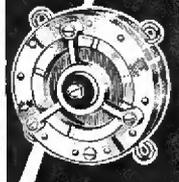
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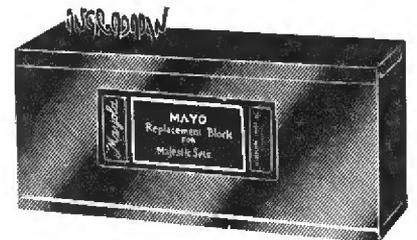
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AMERICA'S ANTENNA HEADQUARTERS

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Get your Replacement Transformers, Condensers and Resistances from

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Our new catalog sheets will be helpful in your work. Gladly sent.

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Factory and Office

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**W**HEN you see a manufacturer's advertising in the pages of your business paper, you may know that *that* manufacturer is not only efficient in production, but that he also knows how to *distribute* effectively and economically.

And that is important to you as a purchaser of manufactured articles. For the cost of distribution enters into the cost of everything you buy. Efficiently distributed goods cost less, quality for quality, than goods distributed through haphazard methods.

Manufacturers who advertise in business papers use the shortest, most direct, and economical way to reach you with a selling message. They are buying concentrated circulation *without waste*. They are applying advertising dollars wisely where those dollars will reduce other selling costs.

Through their selection of efficient means to advertise, they are giving proof that the products they offer to you bear the minimum cost of distribution—that those products, quality for quality, are lower in cost than products distributed either laboriously *without* advertising or carelessly with *wasteful* advertising.



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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of Radio Retailing, published monthly at New York, N. Y., for April 1, 1931.  
State of New York ) ss.  
County of New York )

Before me, a Notary Public in and for the State and county aforesaid, personally appeared C. H. Thompson, who, having been duly sworn according to law, deposes and says that he is the Secretary of the McGraw-Hill Publishing Company, Inc., publishers of Radio Retailing, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, McGraw-Hill Publishing Company, Inc., 10th Ave. & 36th St., N. Y. C. Editor, O. H. Caldwell, 18th Ave. & 36th St., N. Y. C. Managing Editor, Ray V. Suttler, 10th Ave. & 36th St., N. Y. C. Business Manager, Maurice Clements, 18th Ave. & 36th St., N. Y. C.

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We guarantee to replace free any tube that does not give satisfaction.

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Complete Line Always on Hand. 20% With Order; Balance C.O.D.—2% discount for full remittance with order. All orders receive prompt attention. We do not substitute.

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2 1/2 and 6 volt  
\$5.00 per 100.  
\$3.00 for 50.  
No Less than 50 Assortment



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Our Price \$6.50

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Our Price \$12.50

20% cash with order. Balance C.O.D.

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McGraw-Hill Publishing Company, Inc.  
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H. E. BEIRNE,  
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(My Commission expires March 30, 1933)

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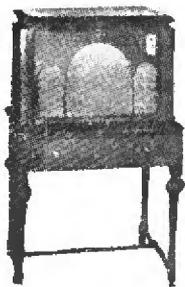
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**CONSOLE RECEIVER**



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Height 42 in.  
Width 25 1/2 in.  
Depth, 19 in.

**FEATURES**

1. Electro-Dynamic Speaker (10 1/4-in. diameter).
2. 210 (or 250) Power Amplifier, and Power Supply. Fine tone quality.
3. Can be used with any electric or battery set.
4. Complete A.C. Electric operation.
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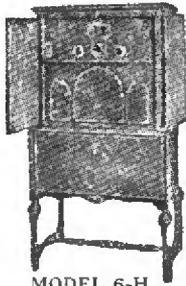
**\$175.00**

(without tubes.)

**Clearance Price**

**\$11.00**

- K-5 Chassis with Speaker, less cabinet .....\$9.50
- K-5 Cabinet only .....\$2.25
- 6-H Cabinet only .....\$5.00



**MODEL 6-H**  
Height 53 in.  
Width 27 in. Depth, 18 1/2 in.

**FEATURES**

1. Beautiful highboy console of burlled walnut with maple overlay.
2. Kolster K5, Electro-Dynamic Speaker with built-in 210 (or 250) Power Amplifier included for fine tone quality.
3. Famous Kolster 6-tube T.R.F. Battery Receiver.
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**LIST PRICE**

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(without tubes)

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SALES COMPANY**

**44 West 18th Street  
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These Anachronisms are the basis for an interesting radio program from WLW, Cincinnati, (700 K.C., 428.3 Meters) every Wednesday night at 8.00 E. T.

This is a reproduction of a CROSLLEY national advertisement appearing in such magazines as:

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- American Weekly
- Collier's
- Liberty
- New Yorker
- Sportsman
- Time

**“Gadzooks” said King Arthur,  
“I would dance at my Feast!  
Tune in yon CROSLLEY.”**

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The CROSLLEY WIGIT

Now comes the sensational CROSLLEY WIGIT — a small-size, low-priced, super-performing radio receiver readily adaptable as a personal radio set for every member of the family and capable of bringing in distant stations in a sensational way. It incorporates THREE Screen Grid tubes, Neutrodyne circuit, electro-power speaker and Mershon condenser. The one-piece cabinet is of

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**\$39.75**  
Complete With Tubes

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Join the growing army of radio retailers who are seeing the wisdom of concentrating their sales efforts on Radiotrons—the industry's fastest selling radio tubes.

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THE HEART OF YOUR RADIO