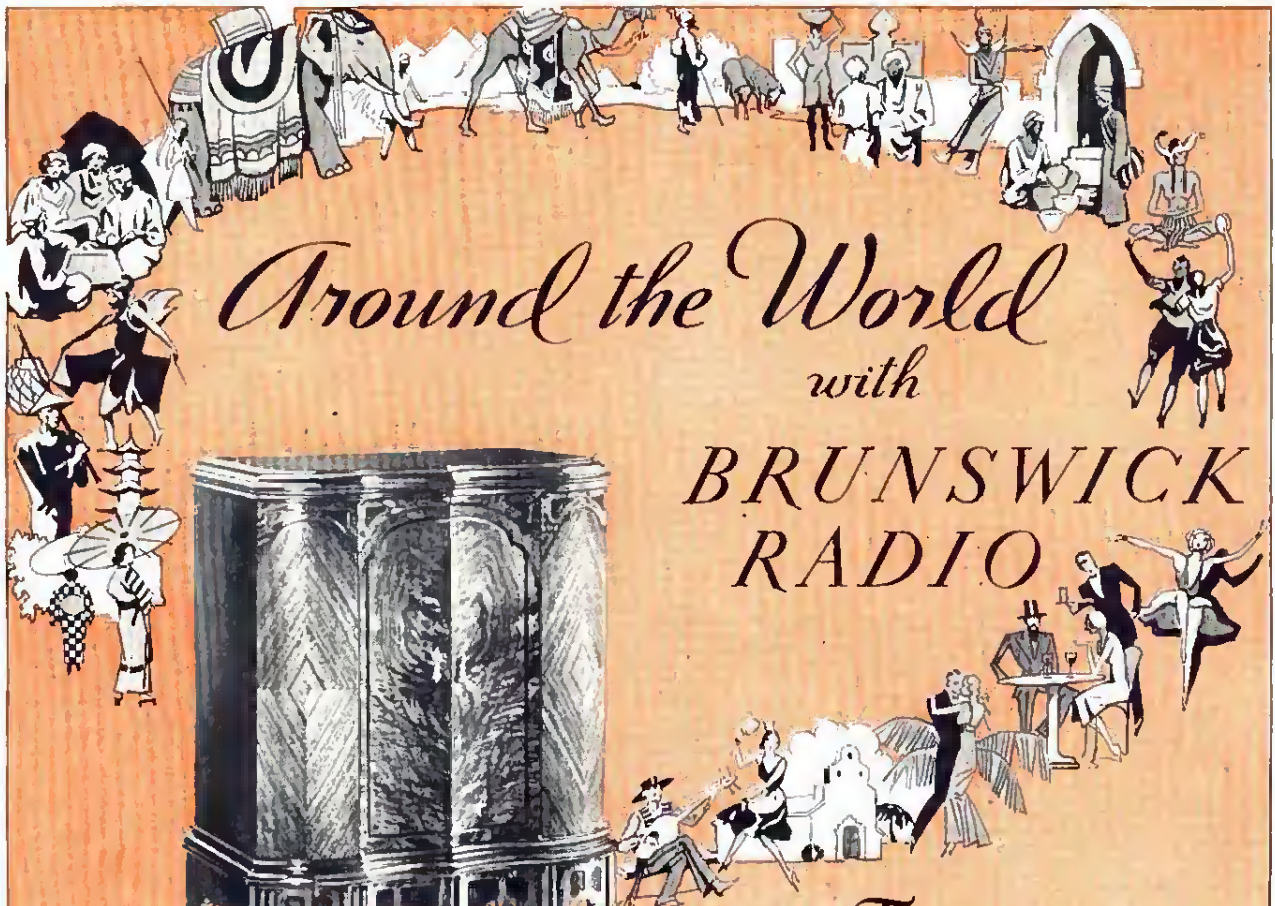


RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING



*Around the World
with*

**BRUNSWICK
RADIO**

MODEL 25
List price \$225 complete with Brunswick Tubes
Other models \$39.50 to \$169.50

THE short-wave-length and long-wave-length receivers, used in Brunswick Radio, Model 25, bring in the programs of the whole world—Berlin or London as easily as New York, or the nearest local station . . . Just one of the eight new Brunswick Models that will give music-satisfaction to your customers, and profit-satisfaction to you.

THERE IS A DIFFERENCE IN THE MUSICAL QUALITY OF A RADIO



A RICH OPPORTUNITY *for Smart Retailers*

DISCRIMINATION in radio retail franchises is attracting to Sparton many of the country's smartest merchandisers—not only because of the intrinsic values of Sparton instruments but also because back of the merchandise are sound policies which make for permanent identification and long-haul profit.

In your consideration of radio franchises remember that Sparton took its place among the leaders by manufacturing superlatively good merchandise at a price somewhat above the market

average. Present Sparton prices are *not* higher than the average.

There is a world-wide respect for the Sparton name—a world-wide preference. And the new Sparton line is of a wide range in models and prices.

As manufacturers we stand squarely behind our Distributors and assure you that we shall hold steadfast to those principles of doing business which have succeeded over the 31 years of our history.

Manufactured by THE SPARKS-WITHINGTON COMPANY, (Established 1900) JACKSON, MICHIGAN, U. S. A.
SPARTON OF CANADA, LIMITED, LONDON, ONTARIO

Sparton Model 26 illustrated above.

Only Sparton has the Musical Beauty of
SPARTON RADIO
"Radio's Richest Voice"

(696)

RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

VOL. 14

No. 5

Contents for November, 1931

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CABLE ADDRESS:

"MACHINIST, N. Y."

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NEXT MONTH—



A Day With a Refrigerator Salesman

The electric refrigerator is the radio dealer's most important auxiliary item. Highly effective promotional methods, many equally applicable to radio, are identified with this business. It is, in fact, the originality of such sales plans, devised by keen refrigeration merchandisers, that have so quickly pushed this industry to the fore.

One such idea, formulated by a man who sells more than \$15,000,000 worth of refrigeration a year, will be described pictorially in December. It has to do with the daily routine of retail salesmen—*laid down for them before they leave the store!*

"A Day With a Refrigeration Salesman" will be of interest to every reader of *Radio Retailing*.

Yes, "TRADE-UP" if you want to stay in Business

THIS season is the last stand for many radio dealers. If you don't make a profit this year can you survive . . . and can you make a profit on units of sale that are too small?

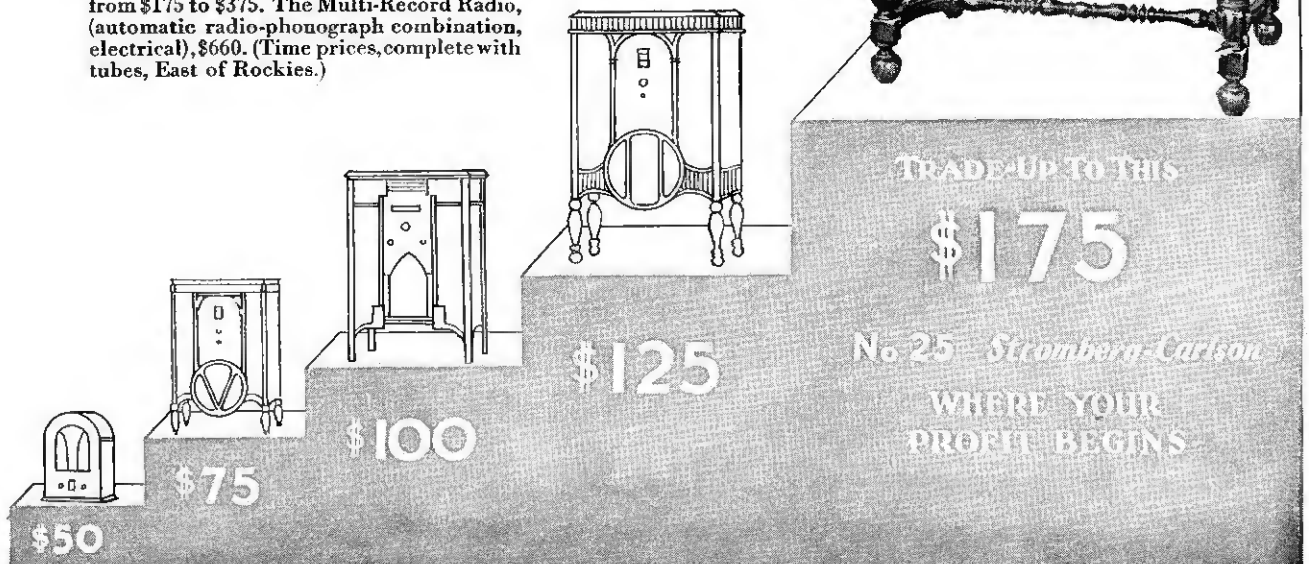
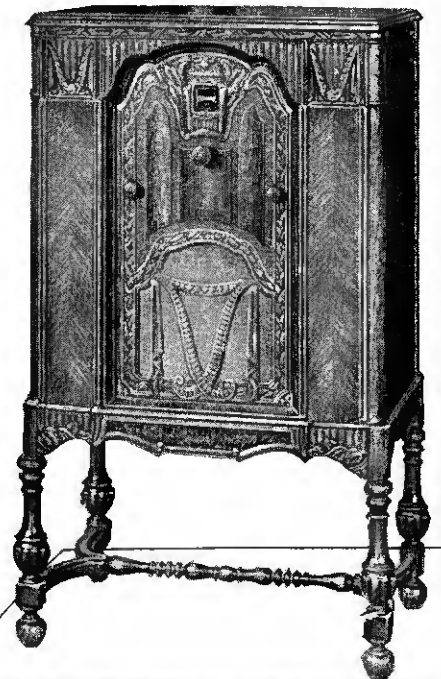
Stromberg-Carlson is a radio line where *quality* justifies to the public the price—and this price means a high enough unit of sale to make *net profit* a certainty.

Far-sighted radio merchants, in greater numbers than ever before in Stromberg-Carlson history, are seeking this franchise which leads other lines in profitable sales.

"Trade-up" with Stromberg-Carlson!

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

Distinctive Stromberg-Carlson Consoles from \$175 to \$375. The Multi-Record Radio, (automatic radio-phonograph combination, electrical), \$660. (Time prices, complete with tubes, East of Rockies.)



1894

Stromberg-Carlson

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



1931

FEWER COMPLAINTS

~ ~ ~ more Satisfied Customers



U. S. Patents 1,419,564
1,804,122 — 1,897,954
Other patents pending.
Foreign patents.

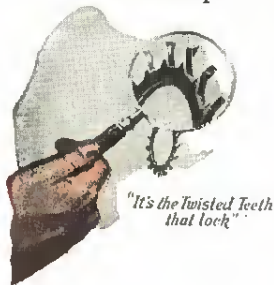
from Products Equipped with
SHAKEPROOF
 Lock Washers

WHEN you sell a washing machine, radio, vacuum cleaner or any other device, you know that you are likely to have calls for service. These calls cost you money and reduce your profits, but you must keep your customers satisfied.

Products that are equipped with Shakeproof Lock Washers will need less service because they are thoroughly protected against vibration. The twisted steel teeth of this marvelous locking method dig into both the nut and the work surface and they cannot let go. This prevents faulty connections—lost parts and poor performance that is so often due to ordinary washers.

Test Shakeproof Lock Washers on your next service job and you'll realize why leading manufacturers in over 100 industries are now using this washer. Send for samples today.

Insist on Shakeproof equipped products—it means bigger profits for you!

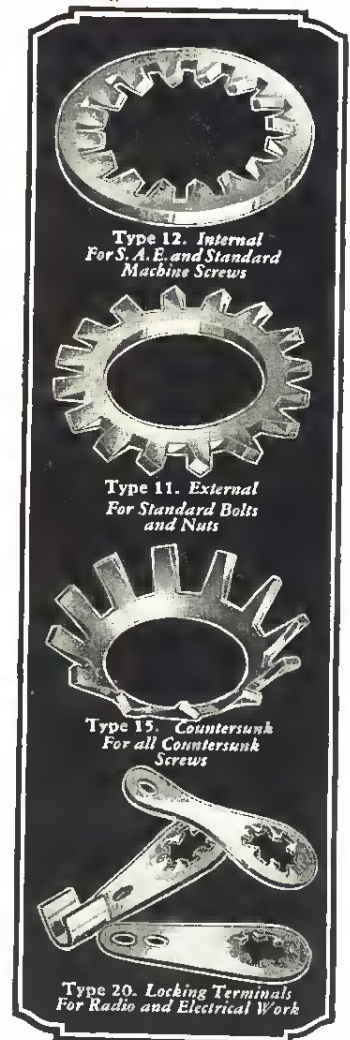


SHAKEPROOF Lock Washer Company

(Division of Illinois Tool Works)

2531 KEELER AVE.

CHICAGO, ILLINOIS



Type 12. Internal
For S. A. E. and Standard
Machine Screws

Type 11. External
For Standard Bolts
and Nuts

Type 15. Countersunk
For all Countersunk
Screws

Type 20. Locking Terminals
For Radio and Electrical Work

Sell the
Radios
that

TUNE IN STATIONS
all over the World



Radio's Latest Greatest Sales Feature



**TUDOR
CONSOLE**
Only

\$65⁷⁵
with
tubes

equipped for standard broadcast
reception

Same model equipped for both standard
broadcast and foreign or domestic
short-wave reception, as
shown, complete with **\$87⁷⁵**
tubes.

Distinctive walnut cabinet, 36 $\frac{1}{4}$ inches
high. Contains new Stewart-Warner sim-
plified Superheterodyne Circuit, using the
latest Pentode and Multi Mu tubes. Tone
Control, Television Terminals, Full Vision
Dial, Electro-Dynamic Reproducer. Other
models from \$23.95 to \$104.75 with tubes.
Western prices slightly higher

In the new Silver Jubilee Line, including sets, that for the first time in the history of the industry combine in one simplified unit complete equipment for BOTH standard wave and short wave reception—Stewart-Warner again demonstrates its position of leadership.

World-wide reception—is radio's biggest, most outstanding sales feature. Proved by the tremendous interest in Stewart-Warner Radio at the *Radio Shows*. Proved by the steady rush of orders for these sets from dealers everywhere.

And here it is. In the hottest line ever offered even by Stewart-Warner. And because of Stewart-Warner's huge production facilities, offered at the *Lowest Prices in Radio History*.

Here are beautiful, modern sets with everything your trade can need in radio for years to come—even to television terminals.

Silver Jubilee Radios incorporate more worthwhile, built-in features than ever before combined at the price. Includes Full Vision Dial, Tone Control and a simplified superheterodyne circuit so equipped with the new Multi Mu and Pentode tubes as to raise all performance standards to a new high level.

And in addition to all—World-Wide Reception! With the same set that brings in his favorite standard program, your customer can *also* tune in on airplanes, ships at sea, police calls, foreign stations—explore an entirely new field of thrills. Think what you have to sell!

A great radio backed by a great name! Heavily advertised nationally! And with the Silver Jubilee Line goes the fairest franchise of the industry! For details write your Stewart-Warner Distributor or us. Stewart-Warner Corporation, Chicago, Illinois.

THE STEWART-WARNER SHORT WAVE CONVERTER

converts virtually any A. C. set of adequate sensitivity into a short wave receiver for world-wide reception. Quickly and easily attached. No interchanging of coils and tubes. Only one dial. Housed in attractive walnut finish cabinet only 9 $\frac{1}{2}$ inches high, 11 $\frac{1}{4}$ inches wide, 7 $\frac{3}{4}$ inches deep. Can be set on top of your customer's present radio set. **\$23⁹⁵**

Complete with tubes, only



STEWART-WARNER
Silver Jubilee **RADIO**

When a manufacturer advertises in The American Weekly, you can expect that manufacturer's product to *move* across your counter because THE AMERICAN WEEKLY is a mighty magazine that *influences* the buying habits of 5,500,000 different families.

THE AMERICAN
*Greatest
 Circulation
 in the World* A WEEKLY

Main Office: 959 Eighth Avenue, New York City

Branch Offices: PALMOLIVE BLDG., CHICAGO . . . 5 WINTHROP SQUARE, BOSTON . . . 753 BONNIE BRAE, LOS ANGELES . . . 222 MONADNOCK BLDG., SAN FRANCISCO
 11-250 GENERAL MOTORS BLDG., DETROIT . . . 1138 HANNA BLDG., CLEVELAND . . . 101 MARIETTA ST., ATLANTA . . . INTERNATIONAL OFFICE BLDG., ST. LOUIS

New 30-minute record Going Over Big!

... Has caused rebirth in
phonograph music. Dealers
predict new field of profits.

IT is bound to take America by storm ... this marvelous new Victor record that plays half an hour! And it will! Dealers everywhere say it's just the thing the industry needs!

It plays 15 minutes on a side ... nearly four times longer than the ordinary type. It affords a complete symphony on one 12-inch record. It is made of Victrolac, a new material that is lighter, more flexible, and minimizes surface noise.

Cash in on this new product, and enjoy a profitable repeat business. Put in a sample stock of records right away. Call up your RCA Victor distributor today. RCA Victor Company, Inc., Camden, N. J., A Radio Corporation of America subsidiary.

RCA Victor
Victor Records

Radios Phonograph Combinations



Present type: 8 minutes

New type: 30 minutes

New Victor records that play as long as 30 minutes apiece:

- 1.** *Selections from "Band Wagon"*—Fred and Adele Astaire, in "High and Low," "Dancing in the Dark," "I Love Louisa," "New Sun in the Sky," and 5 other numbers ... played by Leo Reisman and 23-piece orchestra ... 10-inch record \$1.50
- 2.** *Rhapsody in Blue*—by Paul Whiteman's Orchestra, and Victor Prize Selections—"Nocturne," "March," and "Song of Bayou" by Victor Salon Group ... 10-inch record \$1.50
- 3.** *Victor Herbert Melodies No. 2*—Victor Concert Orchestra and Victor Salon Group ... Two 10-inch records \$1.75 each
- 4.** *Symphony No. 5 in C Minor (Beethoven)*—by Stokowski and Philadelphia Symphony Orchestra ... complete on one 12-inch record \$4.50
- 5.** *Nutcracker Suite (Tchaikowsky)*—Stokowski and Philadelphia Symphony Orchestra ... complete on one 12-inch record \$4.50
- 6.** *H. M. S. Pinafore (Gilbert-Sullivan)*—by D'Oyly Carte Opera Company ... complete on three 12-inch records. \$3.00 each
- 7.** *Salon Suite No. 1*—by Victor Salon Orchestra ... 10-inch record \$1.50

The sensation of the day in Radio is
Auto-Radio
.. and the sensation in Auto-Radio is

MOTOROLA

● The enthusiastic, nationwide welcome accorded to AUTO-RADIO has opened a new source of PROFIT for alert Radio dealers.

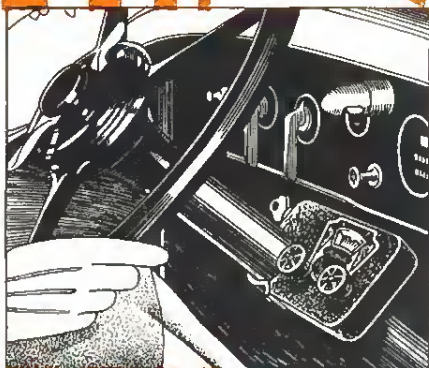
And in this new Profit-Field, MOTOROLA has become firmly established as the ideal receiver for performance and sales.

Designed and built by PIONEERS in Auto-Radio, MOTOROLA has scientifically and successfully solved the problems of home-like reception under motoring conditions, and simple, practical, trouble-free Installation.

You have but to DEMONSTRATE A MOTOROLA to SELL it — and the next step, Installation, is easily and profitably handled, either by one of your own service men, or by contacting an authorized Installation Station.

Take advantage of the business-building Opportunity in Auto-Radio with MOTOROLA.

There is an established MOTOROLA Distributor and Installation Organization in every principal city in the United States. Write for the name of YOUR convenient Distributor.



Galvin Mfg. Corporation
847-851 W. Harrison St., Chicago, Illinois
PIONEERS IN AUTO-RADIO

Consider Your Profits

• • • INVESTIGATE THIS UNPARALLELED OPPORTUNITY

CREATING a new market for Radio dealers has won first rank position for the L. Tatro 32 Volt Superheterodyne. Quick sales to hundreds of thousands of farm light plant owners are waiting — so we say investigate this unparalleled opportunity without delay. Write or wire for full details of our unusual profit-making dealers sales plan.

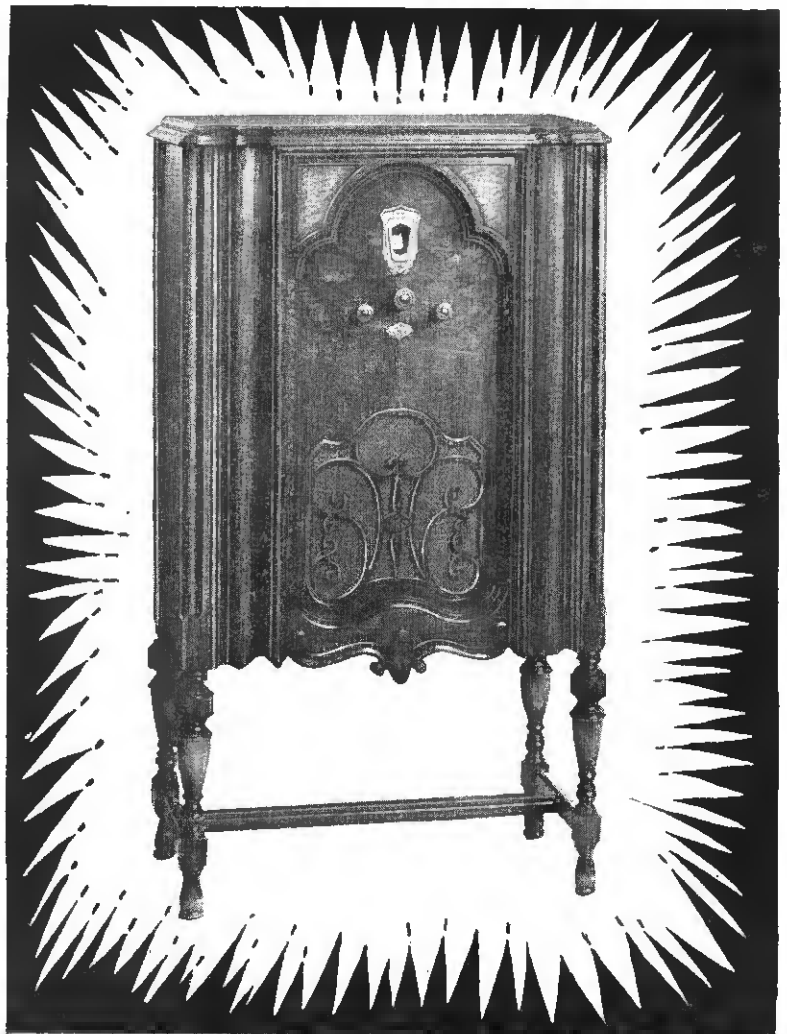
FEATURES

A 9 tube Superheterodyne with 9 tuned circuits employing the new variable voltage tubes; namely, four No. 336 Screen Grid Tubes, three No. 337 General Purpose Tubes and two No. 338 Power Pentodes in push-pull audio arrangement developed by L. Tatro engineers to give greater sensitivity and 25% more undistorted volume. Economical operation using less than 35 watts from the light socket and in addition to give surplus volume it employs a 90 volt plate supply unit which is guaranteed for 8 months. 10 kilocycle selectivity, shadow tuning, tone control, static modifier, full size chassis, 12" dynamic speaker and finely finished cabinets of walnut and contrasting woods. Pioneer in the field. Time tested and proven.

NEW LOW LIST PRICES

Nationally advertised. Leading national and sectional farm papers throughout the country are carrying L. Tatro advertising — More than 10,000,000 sales messages for you to cash in on.

**L. TATRO PRODUCTS
CORP. Dept. R R
DECORAH ❖ ❖ IOWA**



**L
TATRO** **32
VOLT
SUPERHETERODYNE**



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.



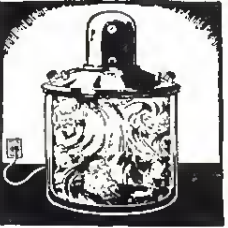
Cinderella is a big seller to small families, especially families with babies.



Cinderella is safe for the daintiest silks and faxes; it has no moving parts to injure the 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.

"That's What I Want
for Christmas!"

—and that
means
PROFIT
to you



Cinderella \$27⁵⁰
ELECTRIC CLOTHES WASHER

WHAT woman isn't grateful for a Christmas gift that lifts a heavy burden of work from her shoulders the whole year 'round? And Cinderella is the answer to what that gift should be.

It's perfect for baby's daily wash, for small children's clothes and other quickly needed things that are washed from day to day. And it's a big help on washday, too. Priced at only \$27.50, it isn't too expensive for the average man to afford.

Cinderella appeals to the man because of its scientific simplicity as well as its capacity for saving work. Its amazing new "Vacuum-Action" principle, without moving parts, quickly washes out all the dirt, and rinses the clothes spotlessly clean.

Advertisements in five leading magazines, with a total circulation of over 8,000,000, will stress the value of the Cinderella as a Christmas gift. Live dealers will use this advertising as a

lever to make extra sales and extra profits, by featuring Cinderella in window displays, in their stores and in their advertising.

If you aren't already a Cinderella dealer, there's still time to cash in on extra Christmas profits. Send the coupon *now* for full details of the Cinderella Sales Plan that will give you more profits at Christmas and the entire year 'round. Don't delay—mail coupon NOW!



The Black & Decker Mfg. Co. *World's Largest Manufacturer of Portable Electric Tools*
602 E. Pennsylvania Ave.
Towson, Md.

Please send me full details of the Sales Plan on the Cinderella Clothes Washer.

Name _____
Street and Number _____
City _____ State _____

Here's Another Gift Modern Women Want

another source of
Christmas profits

Cinderella

ELECTRIC
DISH WASHER \$127⁵⁰

ASK yourself the question: What gift has more possibilities than the one that saves the housewife 1,095 jobs a year? Put yourself in her place. Wouldn't you give almost anything to get rid of so many back-breaking jobs a year? To keep your hands out of caustic dish water that shrivels and wrinkles the skin? Sure you would.

And that's why housewives throughout the country are greeting the new Cinderella Electric Dish Washer with enthusiasm. And no wonder they're enthusiastic. For now, simply by turning on the water and electric current her dishes are washed, rinsed and drained—quickly, safely, perfectly. No racks, no trays, no moving parts. Everything as simple and easy to operate as an electric fan. And when the



SAFETY: "Vacuum-Action" cushions the dishes. No racks. No moving parts. No danger of breakage. Safe for the finest china, porcelain, and glass-ware.

SIMPLICITY: Dishes are simply stacked around the large center post, which contains fully enclosed "Vacuum-Action" unit. Uses any standard soap flakes or powder.

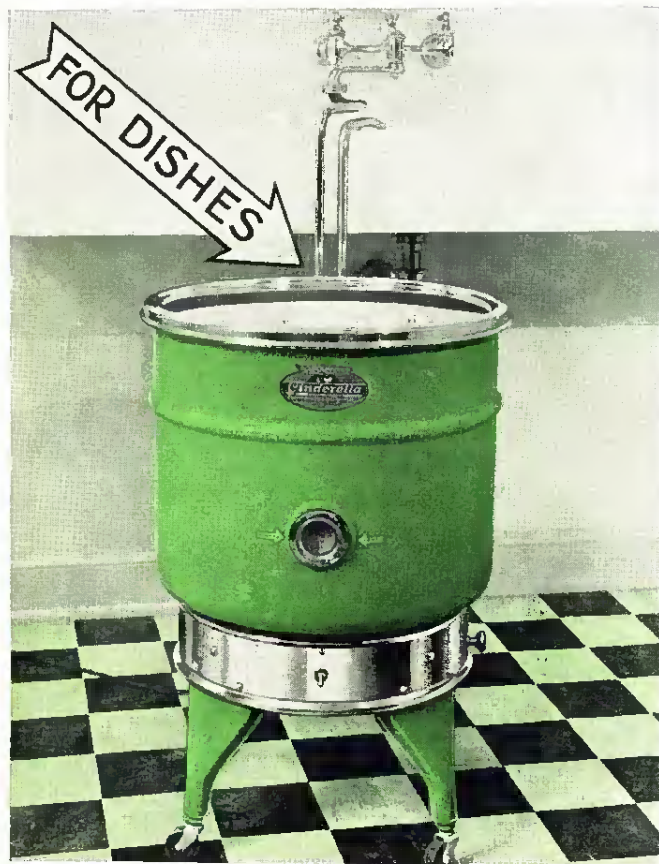
CAPACITY: Ready to put on lid and start running. The Cinderella Dish Washer holds all dishes, knives, forks, etc., for the average meal of a family of five.



The Black & Decker Mfg. Co. *World's Largest Manufacturer of Portable Electric Tools*
602 E. Pennsylvania Ave.
Towson, Maryland

Please send me full details about the new Cinderella Electric Dish Washer.

Name _____
Street No. _____
City _____ County _____ State _____



Beautifully finished in porcelain enamel and chromium. By means of a soft rubber fitting, the water pipe of the Cinderella Dish Washer easily attaches to any faucet. The drain pipe simply extends over the edge of sink.

dishes are through there's no work to do, as Cinderella is self-cleaning!

As the dish washer market is virtually untouched it will pay you to get the facts *right now* on how to make additional Christmas profits with the Cinderella Electric Dish Washer. Your holiday experience will quickly convince you that here is a new item that will pay you well the whole year 'round. Mail the coupon now for complete information.

NO DISHES TO DRY: In perfect draining position, and having been rinsed in hot running water, the dishes dry in the washer in a few minutes after the lid is removed. The chromium-plated lid serves as a handy tray for carrying dishes.



NO CLEANING NEEDED: When the dishes are removed, there are no racks or other parts to clean. The Cinderella is "self-cleaning" and is as spotless as the dishes themselves. Easily detached from the faucet, it rolls out of the way under the sink.

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 57 for the name of your nearest Kellogg tube jobber.

KELLOGG

SWITCHBOARD AND SUPPLY COMPANY

1066 W. ADAMS ST.

CHICAGO

Sales of Fada Sets for the first 7 Months of this year exceed the **WHOLE** of last year



F. A. D. Andrea

“And here’s the reason”

— says the president and founder of the FADA Company!

— The FADA AUTOMATIC FLASHOGRAPH!

Because it insures accurate tuning, and perfect tone is automatic when red light reaches highest point in the Neon tube.

This amazing device added to genuine FADA quality at the lowest prices in FADA history will make bigger sales for you.

FADA Automatic Flashograph is exclusive with FADA. You have something to sell that the other fellow hasn’t got.

Business is good with FADA—business will be better for dealers who sell FADA.

And FADA prices give you something to shoot at clear across the market dial. No blind spots in this price range and FADA reputation for quality makes selling easier.



FADA

Radio

1920 — SINCE BROADCASTING BEGAN — 1931

Here are values!
Prices complete with tubes on the New Fadas

\$69.50	\$89.50
\$112.50	\$124.50
\$147.50	\$159.50
	\$175.00

Forge ahead with FADA!

Manufactured by F. A. D. ANDREA, Inc.
Long Island City, N. Y.



Sell them a New Set if you can— if not, you can still make a profit by repairing the old one

Under existing conditions many radio set prospects, are using their old sets another year. You can build for future sales by specializing in competent repair service with quality parts. Make a profit both NOW and LATER.

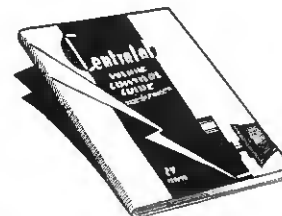
CENTRALAB REPLACEMENT VOLUME CONTROLS are made for your convenience to give quick, efficient service. There is a type for every set . . . that many times will work better than the original control. Stocks are maintained for quick delivery by distributors everywhere.

Consult the new 3rd Edition CENTRALAB Volume Control Guide on all service jobs. Shows

correct circuit and replacement control for all old and new sets with many pages of circuit illustrations and explanatory text.

- There is also definite data on
- TONE CONTROL
- MULTIPLE SPEAKER INSTALLATIONS
- PUBLIC ADDRESS SYSTEMS
- T PAD AND FADER
- ATTENUATION CIRCUITS
- FIXED RESISTORS

The 3rd Edition is just off the press . . . use the coupon below at once.



SEND THIS COUPON NOW

Central Radio Laboratories,
920 E. Keefe Ave.
Milwaukee, Wis.

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

Name

Address

City State.....

Rad. Ret.



ATWATER KENT RADIO

For the **Real** Holiday **PROFITS**

SEVENTEEN GREAT FEATURES

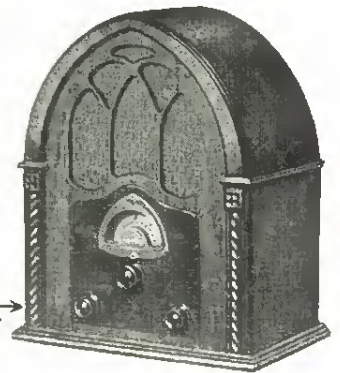
Every one a super-heterodyne—tone control and static reducer . . . AUTOMATIC VOLUME CONTROL, optional, to counteract "fading" . . . variable-mu and pentode tubes . . . screen-grid . . . 10-kilocycle selectivity . . . ADJUSTER FOR ANY LENGTH OF ANTENNA . . . Quick-Vision dial . . . velvet-action station selector—the smoothest, easiest control in the world . . . volume control and on-and-off switch combined . . . Golden Voice electro-dynamic speaker . . . special Atwater Kent single-spot circuit, eliminating distortion . . . weight-saving armored chassis . . . cabinet of grace, beauty and good taste—a further refinement of the characteristic Atwater Kent design, approved by famous interior decorators as the kind of radio one likes to live with . . . every model complete with tubes.



Model 89

← **CONSOLE MODEL 89**—Hand-rubbed walnut highboy with sliding doors. With automatic volume control and antenna adjuster. Tubes include variable-mu's and two pentodes. The finest radio that can be built. \$132.00, complete with tubes.

COMPACT MODEL 82—Automatic volume control and other big-set features. Gothic arch of zebra wood. \$69.80, complete with tubes.



Model 82

GOLDEN VALUES with

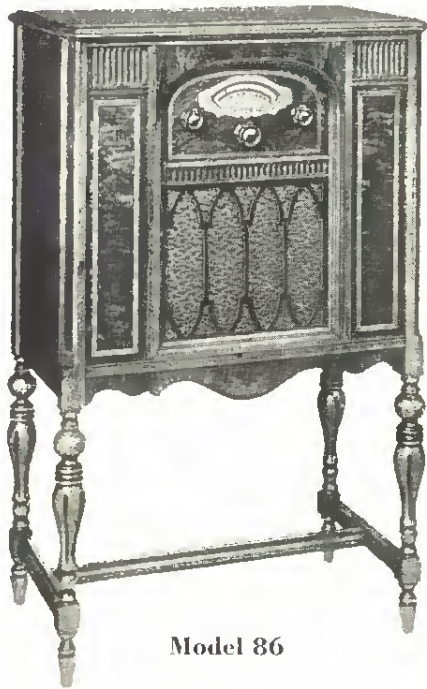
ATWATER KENT RADIO

NOW, as you come toward the holiday season, the sales peak of the year, do justice to your business and yourself—sell the line that nets a real profit and builds an aftermath of year-round good-will—Atwater Kent Radio.

This is the season when the spending public is *asking* for extra value. And you've *got it* to sell in the new Atwater Kent line. There's extra value in Automatic Volume Control, in the Atwater Kent Antenna Adjuster, in the powerful Pentode output, in the new Golden Voiced speaker—in every one of the 17 striking features. And a generous, clean, full-size *net profit for you*. Three million salesmen—all satisfied Atwater Kent owners—are out to help you get it!

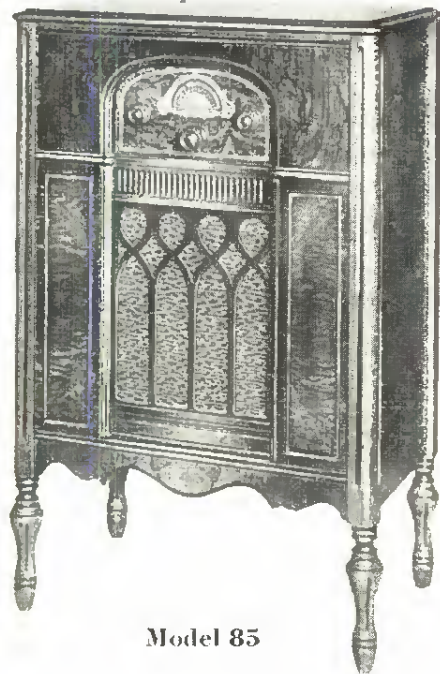
ATWATER KENT MANUFACTURING CO.

4700 Wissahickon Avenue • A. Atwater Kent, President • Philadelphia, Pa.



Model 86

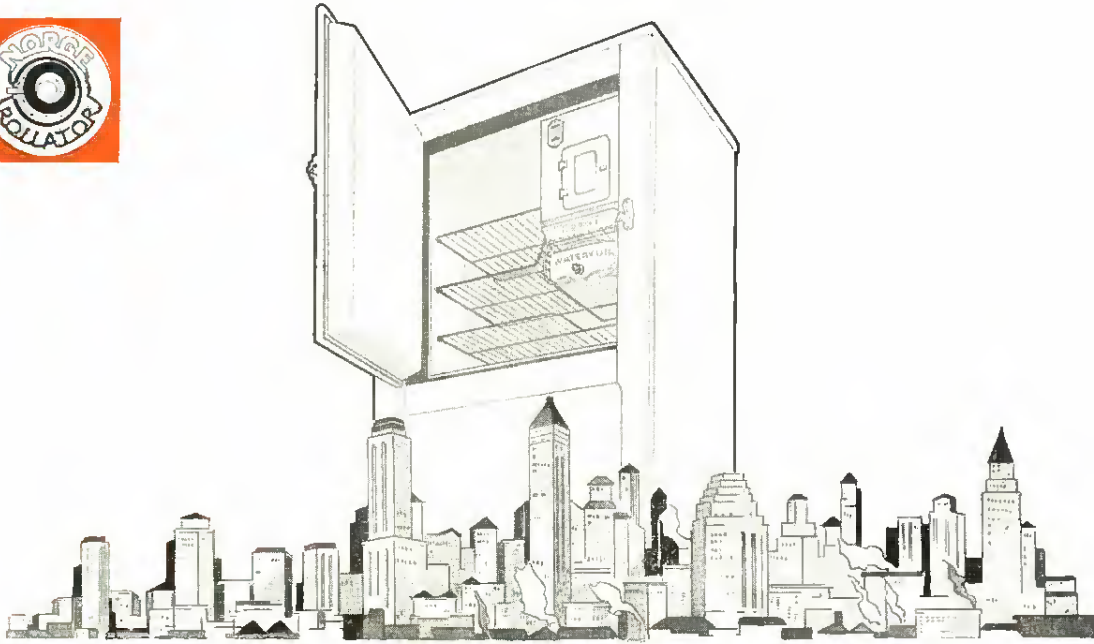
← **CONSOLE MODEL 86**
Exquisite hand-rubbed
low highboy with auto-
matic volume control
and antenna adjuster.
\$99.00, complete
with tubes.



Model 85

CONSOLE MODEL 85 →
Exquisite American
walnut lowboy with au-
tomatic volume control
and antenna adjuster.
\$96.00, complete
with tubes.

the **GOLDEN VOICE**



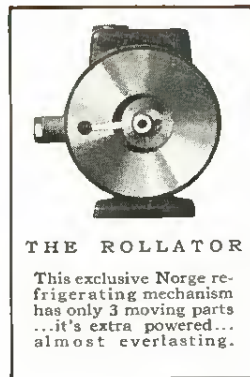
What NORGE Success in the *Toughest Market* means in your locality

WISE and wary New York bought more than one million dollars worth of Norge Electric Refrigerators during the first six months that Norge was on sale there.

Twenty-eight of the finest apartment houses built in the metropolitan area during the first half of 1931 are Norge equipped throughout.

Twenty thousand visitors at a showing of Long Island model homes, where various leading makes of refrigerators were installed, unanimously voted Norge their first choice. Now, that builder installs Norge exclusively.

The features that won big success for Norge Rollator Refrigeration in New York (the toughest market in America for utilitarian products) are the features that make Norge the easiest to sell in your locality.



THE ROLLATOR

This exclusive Norge refrigerating mechanism has only 3 moving parts...it's extra powered...almost everlasting.

There is extra cooling power in the Rollator. The Norge user gets the benefit of this extra cooling power in better day to day results and more years of dependable refrigeration.

More sales, easier sales, better profits and minimum service requirements make Norge an attractive product for progressive dealers.

Norge is package merchandise...a short line...service free. For full details of the Norge dealer plan, write, wire or 'phone.

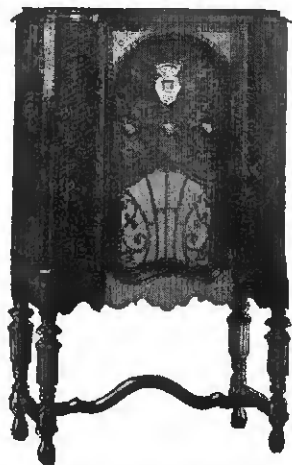
NORGE CORPORATION
654 E. WOODBRIDGE ST.....DETROIT, MICHIGAN

Norge Corporation is a division of Borg-Warner Corporation, one of the world's largest makers of automotive parts, including free wheeling.

NORGE
ROLLATOR REFRIGERATION

PERFORMANCE COUNTS!

That's why Sentinels surpass. Their performance is beyond wordy claims. You really must hear them to appreciate the fidelity of reception, the purity of tone. You'll marvel, too, how easily coast-to-coast stations are brought in without distortion or overlapping. Sentinels incorporate exclusive refinements in superheterodyne design as well as special application of variable-mu and pentode tubes



Sentinel No. 118 Ten-Tube Superheterodyne Console, with Automatic Volume Control and Tuning Meter—The utmost in radio performance. Exclusive refinements in superheterodyne design as well as the most modern engineering developments. Tone control. Oversize electrodynamic speaker. Cabinet with matched burl walnut instrument panel, overlays of maple, and side pilasters of flaked oriental wood; measures 44½ in. high, 36 in. wide and 14½ in. deep.

LIST PRICE
9950

Complete with Tubes



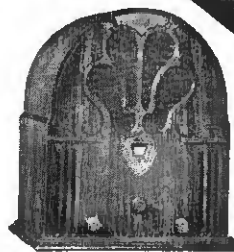
Sentinel No. 114 Nine-Tube Superheterodyne Console, with Automatic Volume Control—A superb combination of Sentinel performance and cabinet beauty. Tone control. Tapped-field electrodynamic speaker. Cabinet main panel of center-matched American stump walnut, with pilasters of flaked oriental wood; 39 in. high, 24 in. wide, 13 in. deep. Complete with tubes

8950



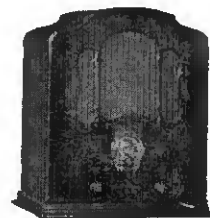
Sentinel No. 108A Seven-Tube Superheterodyne Lowboy—Full-toned performance in a small cabinet of the most modern design. Measures 37 in. high and 21 in. wide. Tone control. Dynamic speaker. List price, complete with tubes

6950



Sentinel No. 108A Seven-Tube Superheterodyne Table Model—Here is Sentinel 108A performance in an attractive table model made of striped walnut with maple overlays. Measures 17 in. high and 15 in. wide. Dynamic speaker. Tone control. List price, complete with tubes

5950



Sentinel No. 116 Five-Tube Superheterodyne Table Model—The most recent development. Establishes new standards of performance and value in small sets. Tone control. Dynamic speaker. Walnut cabinet, 16 in. high and 13 in. wide.

3995

Complete with Tubes

LICENSED BY R. C. A. AND ASSOCIATED COMPANIES

Sentinel performance is making substantial profits for distributors and dealers. Full discounts on all models. You can demonstrate and sell these models with absolute confidence. Furnished as complete sets, or chassis only. Wire or write for sample sets and for detailed information.

SENTINEL RADIO DIVISION
UNITED AIR CLEANER CORP.
9705 Cottage Grove Ave., Chicago, Ill.

Sentinel

SURPASSING RADIO PERFORMANCE

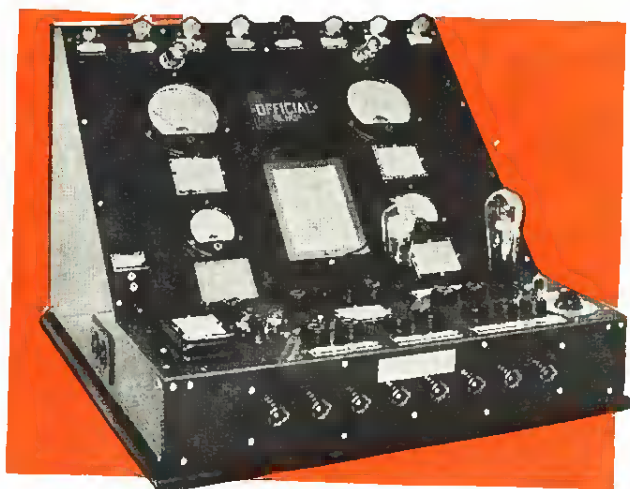
All Superheterodynes — The Very Latest in Radio Development. Equipped with Pentode and Variable - Mu Tubes.

TONE QUALITY~SELECTIVITY~SENSITIVITY~CONSTRUCTION

DRAWS 'EM INTO THE SHOP... TURNS LOOKERS INTO BUYERS

a \$750.⁰⁰ tube tester
other sales pushers

free!



HICKOK SPECIAL A. C. 4301 (List Value \$750.00) and WHAT IT DOES

1—Reads dynamic mutual conductance directly on meter. 2—Reads plate current directly on meter. 3—Reads grid current or gas directly on meter. 4—Checks for cathode-filament leakage. 5—Indicates shorts between all elements of tubes on series of colored lamps. 6—Supplies up to 250 volts DC for plate circuit, thus making possible a dependable and accurate test. 7—Checks all type tubes. 8—Meters cannot be burned out or injured. 9—Operates from 60 cycle 110 volt AC line—requires no batteries of any kind. 10—Compensates for all line fluctuations.

Become a Tung-Sol Preferential Dealer and own this material free. For full information write at once to our nearest branch.

Subscribers to the new Tung-Sol Preferential Dealer Plan already look upon it as the one sure means of selling tubes.

This plan has proven an excellent profit maker. Not only does it get more people into the stores but it turns ordinary "lookers around"—people who until now have cluttered shops and impeded business—into real honest-to-goodness customers.

Here is some of the material you get FREE under this plan:

1. HICKOK A. C. 4031 TUBE TESTING EQUIPMENT (List Value \$750.00)

In your window or on the counter this tester is a great attraction and a fine salesman. It brings them in—then sells them tubes.

HICKOK A. C. 47 (List Value \$125.00)

A smaller and Portable tester complete with serviceman's carrying case.

2. **Tube Carrying Kit.** A safe and easy way for people to take tubes to and from your shop. (Dealer's imprint charge of \$2.50.)

3. **Mailing Folder.** Two colors, imprinted with dealer's name and giving latest list prices of all Tung-Sol Tubes.

4. **Mats for Newspaper Advertising** announcing free tube testing service by the dealer. Various types and sizes. Space for dealer's imprint.

5. **Window Displays.** Streamers, Pyramid displays, Festoons, Transparencies and Hangers, in striking colors and designs.

6. **Counter Displays.** Counter cards, list price cards, Replacement Guides.

TUNG-SOL RADIO TUBES

One of the Famous Tung-Sol Products

Made by TUNG-SOL RADIO TUBES, Inc., Newark, N. J.

Licensed under patents of the Radio Corporation of America

Sales Divisions:

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

Refrigeration and Radio

THE success of the electric-refrigerator people in moving their boxes into the hands of the public continues to be the envy of all other groups of merchandisers. In the face of depression, unsuitable weather, and every other obstacle the sale of electric refrigerators drives ahead.

What is the secret that enables this to be done? Could it be applied to radio sales? Here is the answer:



REFRIGERATOR manufacturers *train* their salespeople intensively *to sell intensively*. From manufacturer to distributor, distributor to dealer, dealer to individual salesman, one is everywhere confronted with carefully designed and established plans for selling. Canvassing, which turns up two-thirds of the sales, has been glorified and made a desirable and honorable calling. Men are stimulated to keep eternally at making calls—and more calls. And no man is sent out until he is thoroughly trained.

Forty-five calls a day is frequently set as the minimum. Some men make sixty or seventy. One man reaches 90 calls a day, and has sold a refrigerator a day for the past two years. "Dammit, you can't sell anything unless you expose yourself!" says Rex Cole, one of America's master salesmen, who has made a fortune out of this method of selling.

Every salesman has a quota and a territory. That territory is his, and he gets credit, no matter who makes the sale. So the salesman feels proprietorship in his business. And he feels pride in his calling, for his 1931 technique is to sell health values, not mere merchandise.



EVERY principle, every method, every argument that has worked so notably in refrigerator selling has its counterpart that could be applied to radio. But it means leadership and intensive planning on the part of radio manufacturer and distributor; leadership in creating the set-up for the dealer and salesman. It means intensive planning, intensive training, and intensive selling—starting at the head of the line.

The BUYERS'

VISION



Improves

WITH the early part of the summer witnessing \$45 midgets outselling consoles two-to-one, concern was felt throughout the industry as to the probable character of fall and winter business. To what extent could an upturn be expected? Would mantel models dominate the situation or would consoles again find favor in the public eye?

Your editors have been in the field for the past month in an effort to answer these questions. Conditions, as we go to press, are definitely hopeful. In only a few instances were discouraged dealers encountered. Prospects are asking about better sets. Dealers who survived the easy selling days of '29 and the 1930 slump now know what it's all about, they are settling down to the serious business of developing real merchandising technique, and are discovering that aggressive selling still produces results.

Averaging the estimates of dealers who have been selling sets for five years or more it appears unlikely that sales will go more than ten per cent below last year. Average unit sales will probably rise to about \$70. It was noticeable that the small, cheap receiver almost invariably occupies a subordinate position in today's store and window displays.

Our conviction that the ratio between console and midget sales is improving is further borne out by the following telegrams.

From Peoria, Ill.

EDITOR, RADIO RETAILING:
AVERAGE RETAIL PRICE OF MERCHANDISE FOR SEPTEMBER EIGHTY DOLLARS. HIGHER PRICED SETS GRADUALLY SELLING IN HIGHER PERCENT-

AGES ESPECIALLY THIS MONTH. AVERAGE RETAIL PRICE OF MERCHANDISE FOR OCTOBER TO DATE ONE HUNDRED FIFTEEN DOLLARS.

CONRON DIST. CORP.

Hartford, Connecticut, is also feeling the trend, if the experience of this wholesaler who has kept an eagle eye on his books mirrors the general condition—

RADIO RETAILING MAGAZINE:

SEPTEMBER SALES MAJESTIC SETS WERE MIDGETS ONE HUNDRED PER CENT CONSOLES EIGHTY SEVEN PER CENT. OCTOBER SALES SHOW MIDGETS ONE HUNDRED PER CENT CONSOLES ONE HUNDRED TEN PER CENT, FIFTY NINE FIFTY CONSOLETTES NOW RUNNING TWENTY FIVE PER CENT AHEAD MIDGET AND NECK AND NECK WITH NINETY NINE FIFTY LOWBOY. TENDENCY ON PART OF RURAL DEALERS PARTICULARLY TO SELL UP. FURNITURE STORES AND CITY INSTALLMENT HOUSE STILL FEATURING CHEAP SETS.

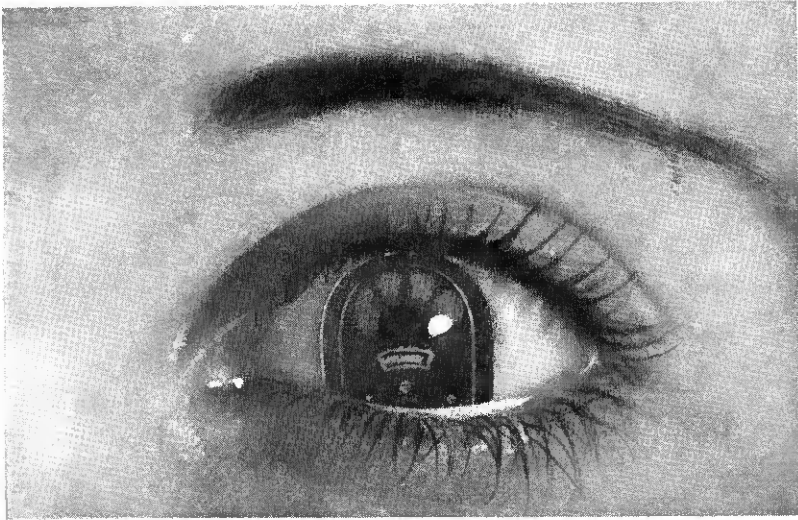
STERN & CO., INC.

Des Moines, Iowa, has been similarly affected—

SUTLIFFE, RADIO RETAILING:

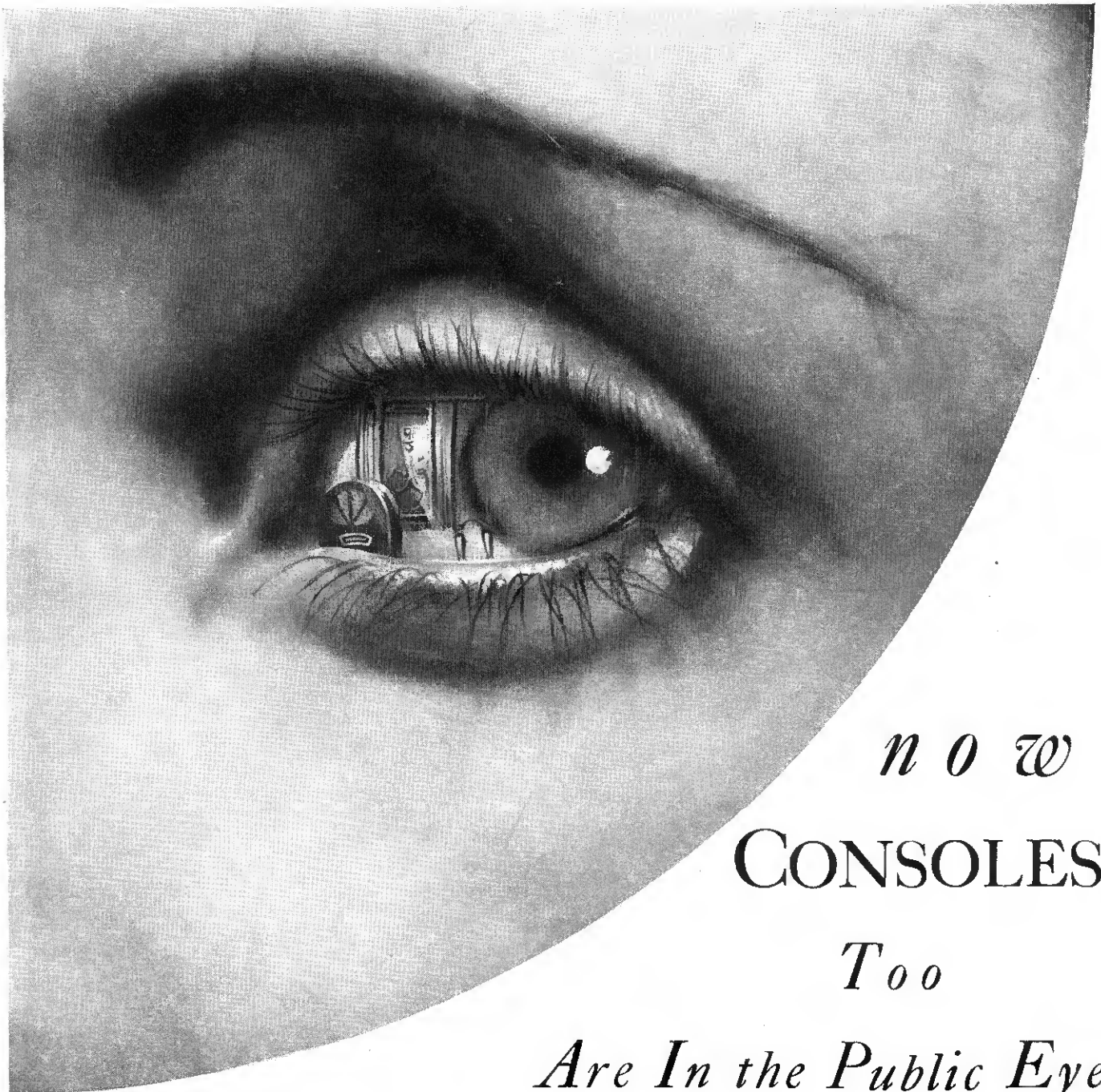
MIDGET SALES DROPPED SIX AND SEVEN TENTHS PER CENT IN SEPTEMBER AS COMPARED TO AUGUST. BELIEVE THIS IS TURN TOWARD FURNITURE SALES AT LEAST ON PART OF OUR LARGER DEALERS. AVERAGE DOLLAR INCREASE PER UNIT

(Please turn to page 22)



*In the Spring
they could see*

**ONLY
MIDGETS**



n o w

CONSOLES

T o o

Are In the Public Eye

IS ABOUT TEN PER CENT IN SEPTEMBER OVER AUGUST. LOOK FOR INCREASINGLY LARGER PERCENTAGE OF SALES OF FURNITURE MODELS THROUGHOUT REMAINDER OF YEAR.

HARGER AND BLISH CO.

An Atlanta, Georgia, jobber checked with his best dealers by phone on October 14. This is what he reports—

EDITOR, RADIO RETAILING:

OUR SURVEY SHOWS THAT MIDGET SALES DECLINING RAPIDLY IN FAVOR REASONABLY PRICED CONSOLES IN THE LARGER CITIES WHEREAS IN SMALLER COMMUNITIES THE SALE OF MIDGETS STILL PREDOMINATES. REASON TO BELIEVE THEY WILL GENERALLY SUCCUMB TO LOW PRICED CONSOLES IN VERY NEAR FUTURE.

CAPITAL ELECTRIC CO.

Pittsburgh, Pennsylvania—

RADIO RETAILING EDITORIAL:

WE ARE INCLINED TO BELIEVE SALES ON MIDGET SETS ARE SLIPPING CONSIDERABLY IN OUR TERRITORY. DEALERS INCLINED TO PUSH LARGER UNITS. AS GENERAL RULE WE HAVE GOOD MERCHANTS HERE AND THEY CERTAINLY SEE ADVISABILITY OF KILLING MIDGET ENTIRELY IF POSSIBLE. PRICES ON RADIO SETS SHOW TENDENCY TO MOVE UPWARD.

HAMBURG BROTHERS

And from the editors—

TWENTY FIVE DOLLARS HIGHER. OUR BELIEF PRICE LOSING PUBLIC APPEAL NO LONGER MAJOR FACTOR. EVERY POSSIBLE EFFORT SHOULD BE MADE TO RAISE UNIT SALE PRICE

WISCONSIN RADIO TRADE ASSN.

Kansas City, Missouri—

SUTLIFFE, RADIO RETAILING:

IT IS TRUE DEALERS ARE SELLING HIGHER PRICED SETS. MIDGETS ARE SLIPPING. LOW PRICED AND MEDIUM PRICED CONSOLES UNDER ONE HUNDRED DOLLARS LIST COMPLETE GAINING RAPIDLY. CANNOT EASILY GIVE PER CENT GAINED IN UNIT SALES BUT WOULD SAY SOMEWHERE BETWEEN TWENTY AND FORTY DOLLARS INCREASE PER UNIT WOULD BE FAIRLY ACCURATE. WISE DEALERS NO LONGER FEATURING MIDGETS TO GET CUSTOMERS IN. WE ARE RECEIVING SURPRISING NUMBER REQUESTS FOR DELIVERIES ON OUR HIGH PRICED SETS AND ARE DOING REASONABLY WELL WITH OUR NINETY NINE FIFTY CONSOLE.

STERLING RADIO CO.

And from St. Louis, Missouri—

R. V. SUTLIFFE, RADIO RETAILING:

OUR BUSINESS SHOWING INCREASE IN LARGER CONSOLE SALES. LAST WEEKS BUSINESS SHOWED SIXTY PER CENT CONSOLE AGAINST FORTY PER CENT COMPACTS. THIS WAS INCREASE OF FROM TEN TO FIFTEEN PER CENT IN FAVOR CONSOLES OVER PREVIOUS TWO WEEKS. NEIGHBORHOOD DEALERS SHOWING PREFERENCE FOR SELLING HIGHER PRICED UNITS WHERE CONTACT SALES ARE MADE IN HOMES. DOWNTOWN DISTRICTS STILL ADVERTISING AND SELLING LOWER PRICED SETS MOSTLY UNDER FORTY DOLLARS. THEY DO NOT LIKE THIS LOW PRICED BUSINESS BUT HAVEN'T COURAGE TO STOP IT. OUR MERCHANDISE OVER ONE HUNDRED DOLLARS IS SELLING BETTER THAN THAT UNDER ONE HUNDRED BUT STILL NOT IN GREAT ENOUGH VOLUME.

BROWN SUPPLY CO.

Even on the West Coast, stronghold of vest-pocket editions, a desire for better quality is making itself felt.

From Seattle, Washington—

RADIO, McGRAW-HILL

ONE HALF OUR UNIT SALES OVER ONE HUNDRED DOLLARS LIST. PAST TWO MONTHS SHOW MARKED TREND TOWARD SALE BETTER MERCHANDISE. WE HAVE NO MERCHANDISE UNDER SIXTY FIVE DOLLARS BUT SINCE INTRODUCTION NEW KENT LINE SALES CONSOLES CONSTANTLY INCREASING. BETTER DEALERS SEE NECESSITY OF AND ARE SELLING UP.

SUNSET ELECTRIC CO.

Aurora, Illinois comes through with these interesting figures—

EDITOR, RADIO RETAILING:

DURING LAST THREE WEEKS OUR SALES BOTH NINETY AND ONE HUNDRED TWELVE PHILCO HAVE INCREASED MORE THAN TWO HUNDRED PER CENT WHILE LOW PRICED MIDGETS HAVE DROPPED OFF MATERIALLY. AVERAGE DOLLAR

(Please Turn to Page 51)

JOBS ARE SUBMITTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12 WEST 31ST ST. BOSTON, MASS.

WESTERN UNION

1931 OCT 19 PM 8 42

Received at: CE914 NPR COLLECT-FTWAYNE IND 19

RADIO RETAILING-
U 788 NEWYORK NY-

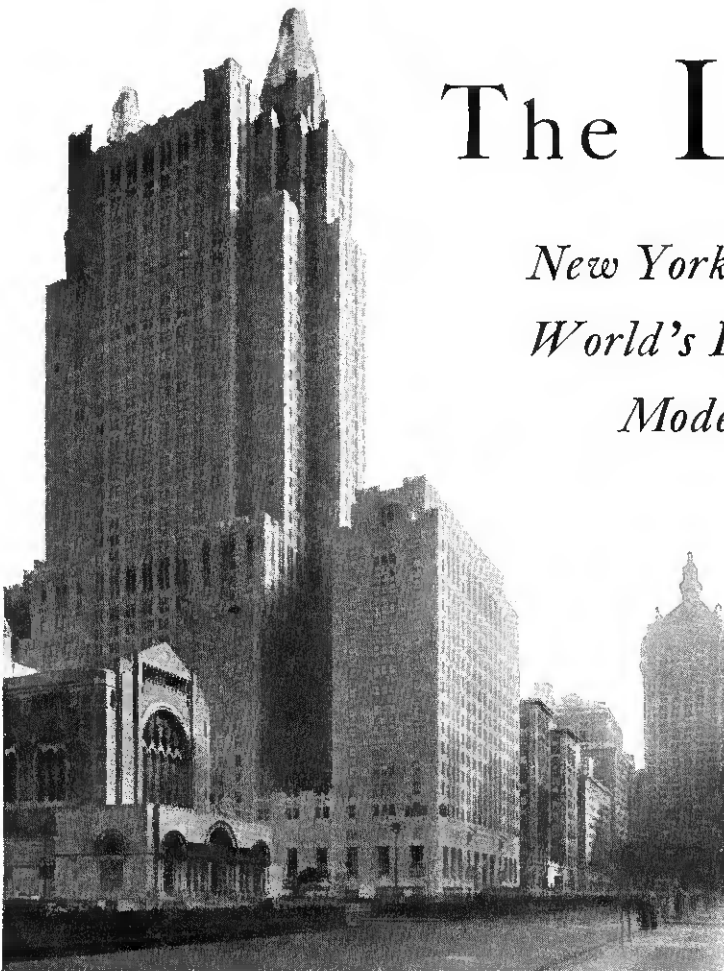
WHILE OPINIONS DIFFER REGARDING STATUS AND FUTURE TREND OF RADIO THE TRADE AGREES THAT AVERAGE UNIT SALE APPROX SEVENTY DOLLAR AND THAT POPULAR PRICED CONSOLES NOW ARE MORE IN THE PUBLIC EYE THAN KIDGETS STOP SERVICE STABILIZED WITH MOST SERVICE DEPARTMENTS SELF SUPPORTING TRADEINS NO LONGER A MAJOR PROBLEM STOP SENTIMENT CHEERFUL CONSIDERING GENERAL CONDITIONS WITH MANY CONSERVATIVE RETAILERS BETTER THAN BREAKING EVEN STOP FALL DEMAND RAPIDLY GROWING IN VOLUME ESTIMATE DOLLARS DROP OVER LAST YEAR THIS TIME TEN PERCENT STOP WORKING CLASSES AND REPLACEMENTS MAIN MARKETS WHILE REFRIGERATORS EVERYWHERE DISPLAYED AND PROVED A LIFESAVER THIS SUMMER STOP AFFILIATION OF RADIO AND REFRIGERATION INTERESTS SEEMS PERMANENT AND BIDS FAIR TO BE SUCCESSFUL DEALER RADIO STOCKS AT MINIMUM-

SUTLIFFE ENROUTE MIDDLEWEST-

In Wisconsin the aid of a trade association was enlisted. This is the association's final telegraphic report—

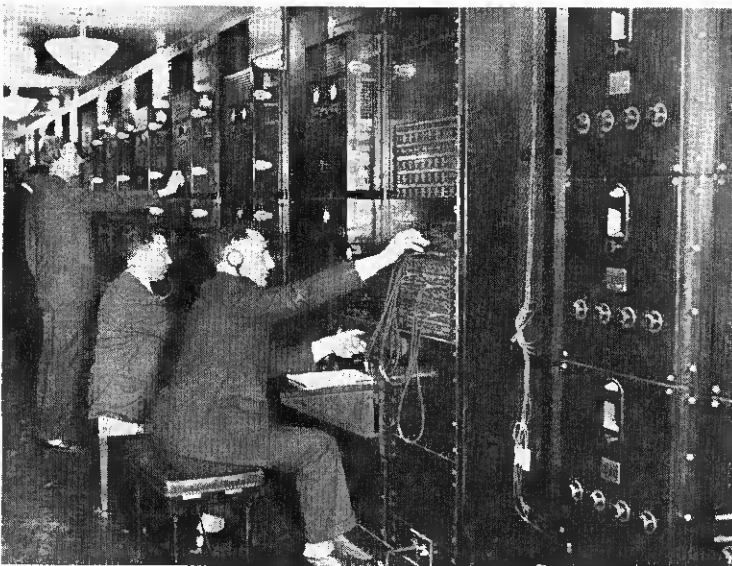
RADIO REAILING:

CANVASS LEADING WISCONSIN DISTRIBUTORS INDICATES MIDGETS SLIPPING. GENERAL OPINION MIDGET SALES NOW APPROXIMATELY THIRTY PER CENT TOTAL VOLUME SOME CASES LESS. AVERAGE UNIT SALE EIGHTY DOLLARS. CONSERVATIVE ESTIMATE AVERAGE UNIT SALE PRICE



The Last Word

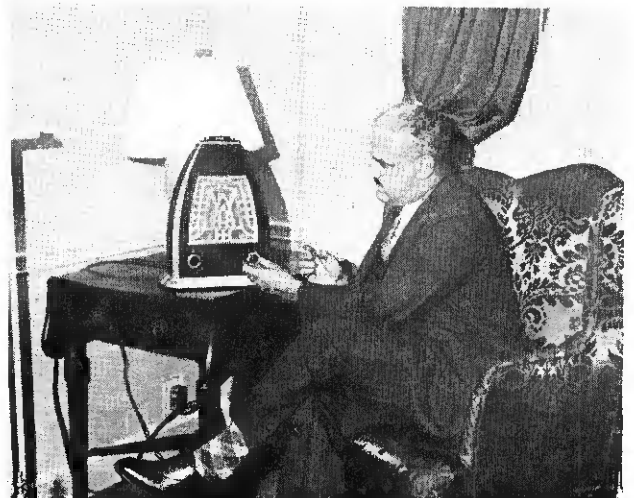
*New York's New Waldorf-Astoria,
World's Largest Hotel, Has Ultra-
Modern Radio Equipment*



ABOVE, This is the main control room, from which radio, recorded music or programs picked up within the building may be "piped" to, 1957 rooms. Equipment throughout is "Western Electric", designed by the Bell Telephone Labs

TOP RIGHT, Music is supplied through ceiling grilles to the already famous "Sert" room, boasting murals depicting scenes from Cervantes "Don Quixote".

RIGHT, Specially designed speakers, incorporating volume control and switch that permits a choice of six programs, are used in guest rooms





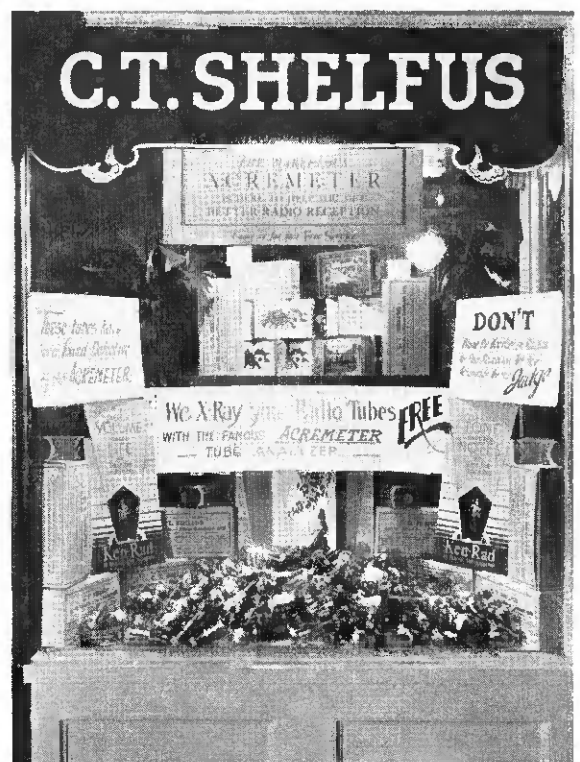
TUBE ANALYZERS

*cannot produce business
without help. So they get
it from*

*Charlie Shelfus and Charles Naddy,
Columbus, Ohio, dealers.*

*And tube replacement
volume results*

Putting Them to WORK



INVESTIGATION discloses that tube testers *are* being advantageously used by many neighborhood stores to increase replacement business.

These instruments naturally cannot do the entire merchandising job by themselves and where too much has been expected, they have failed. On the other hand, any number of instances in which they have (with proper cooperative action on the part of the dealer) materially aided business, may be found.

Take the case of Charlie Shelfus, for example. Charlie runs a typical neighborhood drug store at 947 West Town Street, Columbus, Ohio. He has always had a kindly feeling toward radio, in fact his shingle reads "Drugs and Radio." He averages 100 radio set sales a year. He has no use for midgets. His average list price is \$110. He is not a cut price artist.

This live merchant, whose store is open seven nights a week until well after bedtime, began advertising his special tube testing service three weeks before the tester arrived. Every one who dropped into the store was told that it was coming. Every time he wrapped up a tooth brush or a bottle of iodine he enclosed a circular ex-

plaining the need for efficient tubes.

When the tester showed up it was placed in the front of the store. Once a week he ran a small advertisement in his city's leading newspaper. He now has had his tester seven weeks and has sold 900 tubes, averaging \$1.25 per tube. Think of it! Over \$1,100 worth of tube replacement business in less than two months.

Seventy per cent of Shelfus' tube business is conducted after six o'clock at night. He holds it essential that the dealer who would sell tubes through store traffic must remain open evenings.

But Shelfus runs a drug store. How about the radio specialist, or the music merchant downtown who closes evenings? With these types of retailers supplemental outside selling undoubtedly should be used.

From a music man in Montana comes this worthwhile stunt: The service man, or his salesman, call from house-to-house, as the opportunity presents itself, with a portable tube tester. The regulation approach is used: "Madam, I am here to test your radio set and tubes without cost." After the tubes have been tested the salesman says—and here is where the novel feature enters—



TOP PHOTOS

This dealer equips his servicemen with portable testers but they all stress the greater accuracy of the larger store analyser, urging customers to bring tubes in periodically. This stimulates tube sales and cuts service costs

LEFT PAGE

Shelfus attracts his tube trade with clever windows like this one, then sells it by doing a bang-up job with his analyser. He never misses a chance to tell drug customers about his new free tube testing service



"Madam, three of these tubes do not test as they should. I would recommend that you have them retested in our laboratory instrument.

The next step is to get the woman, or the man, to bring the tubes to the store. The best method is for the salesman to take the tubes with him and arrange for a store "personal inspection" appointment. Thus he is assured that the customer will drop in. Failing this the salesman arranges to handle the entire matter himself and to report to the customer. If the customer desires to bring the tubes in the salesman attaches a sticker to the ones requiring special attention.

This plan has a number of advantages: It inspires confidence—since the customer is not immediately asked to buy. It provides for all the merchandising advantages of "in the home contacting" and at the same time it gets the customer to the store for further acquaintanceship and for an accurate tube check-up. It will be seen also that a comparatively light weight and inexpensive tester can be used for the home canvassing. At the store the customer is impressed by the operation of the big tube tester and is much more ready to buy new tubes.

EVERY owner of a radio set will sooner or later need new tubes. Could there be any more logical, more effective and more direct approach to these prospects for new tubes than through the actual medium of the merchandise itself.

Charles Naddy, also a Columbus dealer, realizing this has purchased announcement time on station WAIU. Since these announcements have been on the air—at a comparative cost of less than 7 per cent of his total tube business—Naddy's gross in tubes has doubled.

The announcements, varying slightly from week to week but always the same in general effect, speak for themselves. Here are two typical examples. Note the clever and effective manner in which Naddy gets the broadcasting station to sponsor his tube testing service:

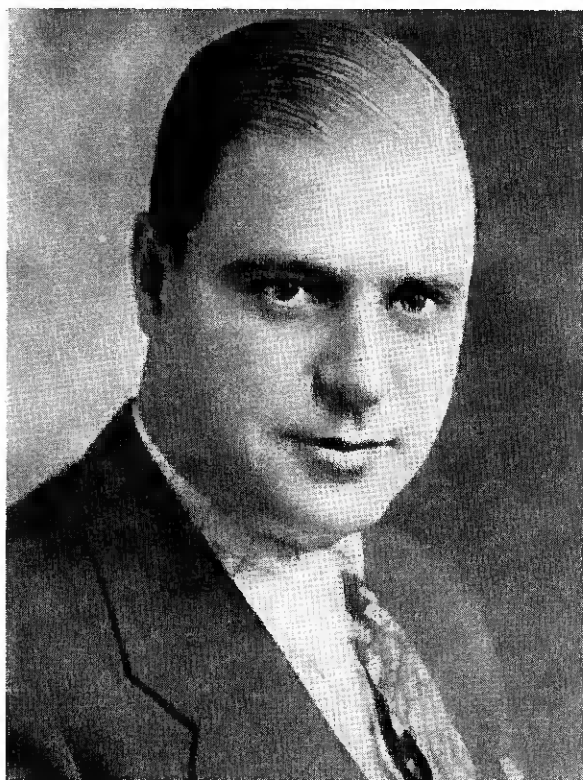
"Thousands of dollars are being spent daily by program sponsors to give you the latest in entertainment. You want the best reception your radio will give. Tubes are the heart of the set and the only part subject to wear. Realizing this, and to help you eliminate any difficulties in your set, station WAIU has made arrangements with the Charles T. Naddy Company for free tube inspection and service to its listeners. The Naddy company has installed a special tube testing analyzer which is almost human in the way it X-rays and reveals tube faults. Avail yourself of this service." Or—

"We occasionally learn that our programs are not coming in distinctly. WAIU wants its listeners to get the best in reception quality. In checking several complaints it has been found that the fault was not in our station apparatus but in the customer's receiver—and usually in the tubes. Therefore WAIU has made arrangements with the Charles T. Naddy Company to balance and analyze your tubes without cost. We recommend that you take your tubes to Naddy's store and have them checked on a modern tube tester, recently installed. Just tell this concern that you are a WAIU listener and you will receive also a special tube-carrying case."

Less Business.....but

LESS

An Interview By



SIDNEY VORZIMER

who has successfully operated his neighborhood store within 15 minutes subway run of the country's most active radio-row—Cortlandt Street, New York—since the early "parts" days, is recognized as one of the city's ablest independent dealers

THIS is a year of lean business. With all buying off and sales resistance high, dealers have found that to keep volume up promotional expenses must be increased all out of proportion to the return. So they are taking the next best course—reducing overhead.

Sidney Vorzimer, president of the Yorkville Radio Company of New York, is just one of those who is getting along with less. The point of this story is that he *slashes costs without cutting off his sources of business.*

Vorzimer first mapped out an operating plan. He divided his business into four groups:

1. Sales Department
2. Service Department
3. Advertising Department
4. Accounting and Bookkeeping Department.

A great majority of Yorkville employees have been with the concern upwards of three years, and he quickly realized that to fire anyone would be to court the loss of customers who bought at the store because of personal contact with a particular salesman or serviceman.

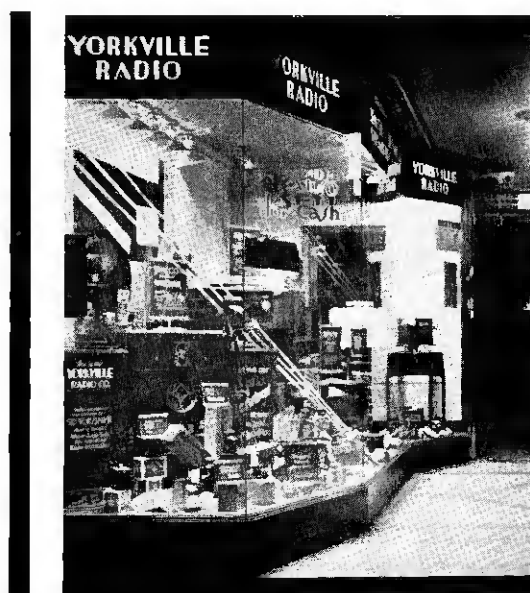
The first step taken was to confer with the sales department in the matter of compensation. In 1929 the sales force had been working on salary and commission. Vorzimer told his salesmen frankly that he did not want to fire anyone but it was absolutely essential that some

readjustment be made. Would the salesmen rather work on straight salary or on a straight commission? Every man in the department showed a splendid spirit of cooperation and today they are working on a straight salary. The savings in commission have been a tremendous help in reducing the store's overhead.

The service department was approached with the same idea in mind but the response was different. The department was composed mostly of high-priced specialists. Rather than accept a salary cut, the service men felt they would prefer to seek other jobs. After two weeks of futile search every man in the department returned to Yorkville at the reduced salary originally suggested.

The third basic way in which overhead was reduced was in expenditures for newspaper advertising. Vorzimer feels strongly that in hard times the effectiveness of radio advertising in newspapers is greatly reduced. Consequently, he made a rather drastic reduction in advertising expenditures. As he pointed out, the store has been in business for over nine years, and there is a lot of past advertising effort and good will to coast along on during the depression.

He has not been foolish enough to cut out all advertis-



Yorkville's well-filled windows

Economies That Have Kept Sid Vorzimer Out of the Red

EXPENSE

WENDELL BUCK

ing. Instead of extensive newspaper advertising, this year the store is concentrating its advertising program during the Christmas buying season. A special direct-mail campaign costing \$3,000 will be used to sell radio as a Christmas present. As other special occasions arise, such as important broadcasts, Yorkville will use these as a basis for timely and newsy advertising.

Yorkville's advertising bills for 1929, 1930 and the first 9 months of 1931 are as follows:

1929	\$100,000
1930	65,000
1931 (9 months)	15,000

Yorkville's gross sales for May, June, July and August of these same years were:

1929	\$200,000
1930	110,000
1931	75,000

HAVING reduced overhead to a minimum Vorzimer next put into effect a number of ideas which have been highly successful in stimulating sales without materially adding to expense. He is frank to admit that he



attract much neighborhood business

Radio Retailing, November, 1931

WHAT

Yorkville Has Done

- 1 Cut out store sales commissions, paying men straight salaries
- 2 Reduced service salaries, retaining entire staff
- 3 Concentrated advertising on Christmas season instead of spreading it over entire year
- 4 Reduced service charge to \$1 per call, thereby getting service-salesmen into more homes
- 5 Rebated full purchase price on midgets sold by the store and later traded in for consoles

does not like the midget set because it retails at too low a unit price. Every effort has been bent to unsell prospective buyers of midgets and to turn them to the purchase of a higher priced set. But the problem has been attacked along even more specific lines than this.

If it is found that a customer will buy nothing but a midget, he is sold a midget, and at any price he wants it above actual cost. After the sale, the customer is followed up by the service department to make sure that he is getting the best possible service. Then the service man attempts to sell the owner of the midget a higher priced set. The full purchase price is credited when a midget is exchanged for a console.

The service department has been developed into an efficient sales force, and there is a definite sales promotion plan behind service. The minimum service charge used to be \$2.50. Now it is \$1. Vorzimer is much more anxious to sell present owners of receivers new sets, electric clocks or accessories than he is to make money on service. He is not losing money at \$1 a call, for the

records show that this figure gives the service department an even break.

For the charge of \$1 the customer's set is inspected and minor adjustments made. Before the service man starts testing and servicing the set, he places in operation a \$10 electric clock. While he is doing his work, the housewife has a chance to inspect the clock, and the store's records show that fully half the demonstrations result in clock sales.

The service department has two important jobs to do in keeping Yorkville sales up:

1. Make a friend of every customer through inexpensive follow-up service.
2. Sell an electric clock, a new set of tubes, or a new radio receiver whenever possible.

It should be pointed out that the company is one of the best organized and best managed independent stores in the city. Only 30 per cent of its business is derived from the immediate neighborhood. Seventy per cent is transient.

Vorzimer makes every effort to constantly build a higher unit of sale. The lowest average daily unit of sale during the week of this interview was \$115. And every man in the organization is working to push the unit figure higher and higher.

THE advantages of the methods employed by Yorkville Radio to meet changed conditions in radio merchandising are many. The program now operating very successfully has the important basic advantage of keeping intact a seasoned and experienced personnel which has a large customer following. Executives who fire trained employees right and left should remember

that each employee represents a definite investment in training, experience, and in the contacts.

To reduce overhead by firing people may make the foundations of any business organization perilously shaky. Further, it is only common sense to say that business will get better, and when it does improve, retail radio stores will need to replace salesmen and service men fired during the depression. Each man taken on when business does get better requires a definite break-in period—and this costs money. Yorkville Radio's attitude of reducing compensation generally and keeping the force intact and efficient is not only highly commendable but extremely good business sense as well. If ever a radio store needed efficient methods, it is today.

The program adopted has a double-barrelled effect:

1. Overhead is reduced roughly in proportion to reduction in sales through the elimination of salesmen's commissions.
2. The sales force, through the sales activities of the service department, is actually larger and more effective in scope than it has ever been.

Vorzimer is not unduly optimistic about his own sales or about the present state of the radio industry as a whole. His is a common sense attitude. He does not believe that another 1929 year is around the corner. On the other hand, he does believe that the dealer who applies common sense and a few original ideas to his business will weather the storm.

With one eye, Vorzimer is looking at the situation as it exists today and is adapting his methods to this condition. With the other eye he is looking at his business five years from now, confident that his concern will again return him a substantial profit.

An Old California Custom

California—the land of eternal sunshine and the home of quaint store fronts. Just to keep up the latter reputation, the California Piano Supply Co., erected a novel addition on their building, "three miles from high prices."

This gigantic grand piano forms a corner of the building. The body of the piano forms the roof of a plate glass show room. Every detail and proportion is carefully carried out, even to the lyre built into the door. Illumination consists of three outside flood lights, vari-colored to make the edifice more striking at night.

Music really comes from this piano, in fact, radio, trombone, saxophone and nearly any other kind of music can be obtained from this novel music store located on one of the busy boulevards of Los Angeles.



International News Photo



"She threatened to return her set because it was 'noisy.' I convinced her in my car that a pole transformer out in the street was responsible and reported this trouble to the electric company. The set stayed sold"

AUTO RADIO
*installed in the service
 car is as indispensable in
 keeping sets sold as a set
 analyzer, according to*

DEWITT C. SUPLEE, JR.
*Technician for
 Wanamaker's, Philadelphia*

It's Part of His

K I T

"A CUSTOMER of ours who lives out in the suburbs bought a console some weeks ago," writes DeWitt C. Suplee, Jr. "Three days later she telephoned, threatening to return the set because it was too 'noisy.'

"I drove out to her house, listening to WJZ enroute via auto-radio. All through the downtown streets and out into the residential section of the city, reception was as clear as a bell. But when I turned off the main highway and neared her house noise became so terrific that even the largest local station was badly 'cut-up.'

"Upon talking to the woman I found that she had already tried three sets from other stores but had been forced to return them all because of the racket. I asked her to come out to the car, turned on the auto set (Philco) and convinced her by driving slowly away from the house with the set in operation that the fault was not in her console.

"Interference seemed greatest when the car was directly beneath a pole supporting a huge electric light transformer. Upon my return to the store this was reported to the suburban branch of the electric company. Two days later they discovered that the transformer was defective, replaced it with a new one, and the set stayed sold.

"Man-made static is responsible for more of the

complaints from customers than any other trouble we encounter. Interference-locating instruments have been available for some time but these have helped little in the solution of the serviceman's everyday problem. Already over-burdened with a set-analyzer, oscillator and repair tools, he can rarely carry such special equipment with him and as a result finds it difficult to convince customers who contend that their set is noisy that the fault is really outside the home.

"Auto-radio solves the problem, and does it without great expense. It not only permits me to 'monitor' reception right on the job but also makes it possible to actually run down the interference source in many simple cases.

"I now consider auto-radio an indispensable part of my service kit."

He'll Work for You Without Pay—

The NEWSPAPER

Clippings from the local paper are fertile sources of live leads

EDDIE CANTOR observed over the radio the other night that newspapers are great things. "Today's paper," said Eddie, sagaciously, "prints the same news as yesterday's, only it happens to different people." Although Eddie doubtlessly is unaware of the contribution, he put his finger on the great value of newspaper reading to the radio dealer. Every day things are happening to people that make them prime prospects for a set, if only you know how to spot these "leads" when you see them innocently tucked away in the daily gist of the news. Your newspaper reporter, therefore, can be made a great sales ally—without cost—if you will but clip, and follow up, the leads he so freely provides.

Here are eighteen different kinds of business-producing items, taken from a single issue of a typical newspaper; the *Bergen Evening Record*, of Hackensack, New Jersey:

Dr. and Mrs. J. A. Killian and family of Leonia, have purchased a home on Robin Road, Englewood, and expect to move there this month.

FAMILIES MOVING. Every new family in the community deserves a call—a radio, refrigerator or an electric clock sale, and radio service work, may develop. Don't forget to find out where the folks who move out are going, so that you won't lose a customer or a prospect.

The marriage of Miss Dorothy Claire Higgins, daughter of Mr. and Mrs. John Gilmore Higgins, of 33 Grand avenue, Ridgefield Park, to Henry Matthieu Canal, son of Mr. M. Canal of Larch

ENGAGEMENTS, WEDDINGS AND ANNIVERSARIES. All three mean gifts. Follow the fiancé, the groom, the parents of the happy couple, and the children (if it's a wedding anniversary). Follow the friends and relatives, also the office or factory friends of the pair.

Mrs. H. Odenwald, of Saddle River road is recuperating from an operation for appendicitis at the Hackensack Hospital.

ILLNESS. Sickness and accidents usually mean time hanging heavily on someone's hands. That means a prospect for a new radio, repair work or labor-saving electrical appliances to lighten the housework of those who must attend the patient or the convalescent.

He is survived by his wife, Mrs. Mary Holahan; three sons, William J. Edward and Frank; and two daughters, Mary and Elizabeth.

MONEY RECEIVED IN A LUMP. You never can tell, until you read the paper, when some of your prospects who've put you off with the can't-afford-it-now excuse will receive a windfall. Inheritors of money through wills, lawyers who have just won

their cases and fat fees, doctors who perform operations on their patients and their patients' pocketbooks—you'll find them all cataloged in the newspaper when the windfall occurs.

—Frederick H. Krech is attending Emerson school at Exeter, N. H.

YOUNG FOLKS AT SCHOOL. Indulgent parents are swell prospects. Why wait until the radio dealer in the college town sells a midget radio and an electric alarm clock? Both items are portable—sell them to the students or the parents yourself.

Mr. and Mrs. Frederick Snare, of Booth avenue, have closed their cottage at Averill, Vermont, where they spent the summer and returned to their home here.

FAMILIES BACK HOME. Before set owners leave home for a summer or winter vacation they may put off necessary repairs to the radio. When they get back is the time to sell new tubes or service.

Clifton Demarest, a local builder, of Summit street, has been awarded the contract to erect the new Masonic temple, which is to be located on White street, between High street and Demarest avenue in Closter.

NEW BUILDINGS. New churches, apartment houses, clubs, theaters are always being built. Follow them up for radio sales, public address systems, refrigerator installations. Study news of election of new club officers—perhaps you can make greater progress with a new bunch than you did with the old regime.

The Ladies Aid Society of the First Presbyterian Church will hold its annual Harvest Home sale, Oct. 18, in the parish hall of the church be-

FAIRS, CARNIVALS AND OTHER CROWDS. Wherever your prospects herd together, you have an excellent opportunity to sell them as a group. Many a fair and carnival will gladly accept your offer to lend a radio, with your name prominently displayed on it. Cheap publicity that pays.

FRANKLIN—1931 Speedster sedan, beautiful model. A new car costs \$3,150. Substantial saving. Phone Delaware 3-2575.

NAESH—1932 sedan, Model 970, brand new; am returning abroad; will sacrifice; no trade. Phone Teaneck 6-2350-J.

OAKLAND—8-cylinder sedan, 1931; delivered June this year; practically new; cost \$1200; price \$790. After 6:30, phone Teaneck 6-9338-W.

CAR SALES. Is someone selling his car? Perhaps he's buying a new one that ought to have an auto radio installed in it. Perhaps you can convince your auto dealers that an auto radio will help them move some of their used car "lemons."

Mr. and Mrs. Wilfred Kurth of Heights are on a motor trip.

REPORTER

By Arthur P. Hirose

AUTO TOURISTS. When people are about to set out on an auto tour or have returned home, it's your best chance to tell them about and demonstrate to them the pleasure that a radio in the car will bring.

Miss Marjorie Tuite, of 19 Hilliard avenue, had as her house guest recently Miss Mary Hendrickson of Great Neck.

HOUSE GUESTS. They say we're a nation devoted to the religion of keeping up with the Jones'. When house guests arrive, when bridge parties are held, when "company" comes, the family is more apt to want the radio in perfect order, or even a new radio, than in normal times.

The Rev. Victor Simons, new pastor of the Community church was the guest of honor at a congregational reception which was held last night.

GIFTS. Every so often some club, organization or church feels coming over it the need of giving a gift. Perhaps the president is retiring, perhaps a new pastor has arrived, perhaps a golf, tennis, bowling or bridge tournament with prizes is to be held. Why shouldn't those gifts, those prizes, be bought from your stock of radios, refrigerators, electric clocks, or other merchandise? It's worth a try, isn't it?

**CHURCH GROUP TO HOLD
RUMMAGE SALE OCT. 23**
About sixty women attended the first all day meeting of the Women's society

OUTLETS FOR TRADED-IN SETS. Those traded-in sets are a problem, aren't they? Many of them are good sets, but sets that never can be sold out of your store. Why junk them, though? Wait for a rummage sale or a white-elephant booth at a church fair. Donate the old sets. You'll get enthusiastic thanks and sales or service leads if you ask for the names of the people who buy the sets. Splendid advertising at little cost.

A son, Harry Arthur, Jr., was born Wednesday at Englewood hospital to Mr. and Mrs. Harry A. Brummer of Kensington avenue.

BIRTHS. Here are splendid leads for electric refrigerator sales since—"An electric refrigerator will guarantee fresh milk for the baby." A chance for a radio sale, too, since young mothers usually complain that they're tied pretty closely to home.

AUGUSTA'S BEAUTY SHOPPE, 28 Bergen st., Hackensack 3-2289. Special permanent waves \$2.50; complete; experienced operators; waves 35c. All week specials, three items for \$1.00.

OTHER MERCHANTS' ADS. Keep your eyes on the advertisements of the other merchants in your town. Here's a beauty shop which could probably use a radio.

The upper grade students will occupy the new building while the old school will be turned over to the lower grades.

SCHOOLS. To be sure it isn't often that a new school is erected, with resulting openings for the sale of radio sets, centralized radio, and a public address system. But keeping in touch with school authorities at existing institutions rarely fails to pay dividends.

ANTLERS—44 Passaic st Large and single rooms with or without board Shower bath Phone Hack. 2-2047

HACKENSACK—Room and board; desirable for couple; all conveniences; private family. Tel Hackensack 2-9551-J.

HACKENSACK—One or two rooms to rent, with board. Phone Hackensack 2-0837-R.

LARGE double room, with congenial adult family. Gentleman or couple. Meals optional. Hack. 2-5715-R.

ROOMS FOR RENT. Does some one want to find a tenant for furnished room, apartment or house? Point out that rental will be made much easier if there's a radio, refrigerator or electric clock on the premises to greet prospective tenants.

GIRL—Wishes part time work. 291 Second st., Hackensack. Phone Hackensack 2-5562.

EMPLOYMENT LEADS. Even the "Jobs Wanted" columns will yield sales help leads. These are days when many men and women with friends, acquaintances and even sales ability can be hired on a commission basis to help the radio dealer sell his wares.

SO much for the sales leads from this one day's issue of my local newspaper. The reporters for your newspaper have doubtlessly discovered as much for you today. For as Eddie Cantor claims, "It's all the same news, only it happens to different people."

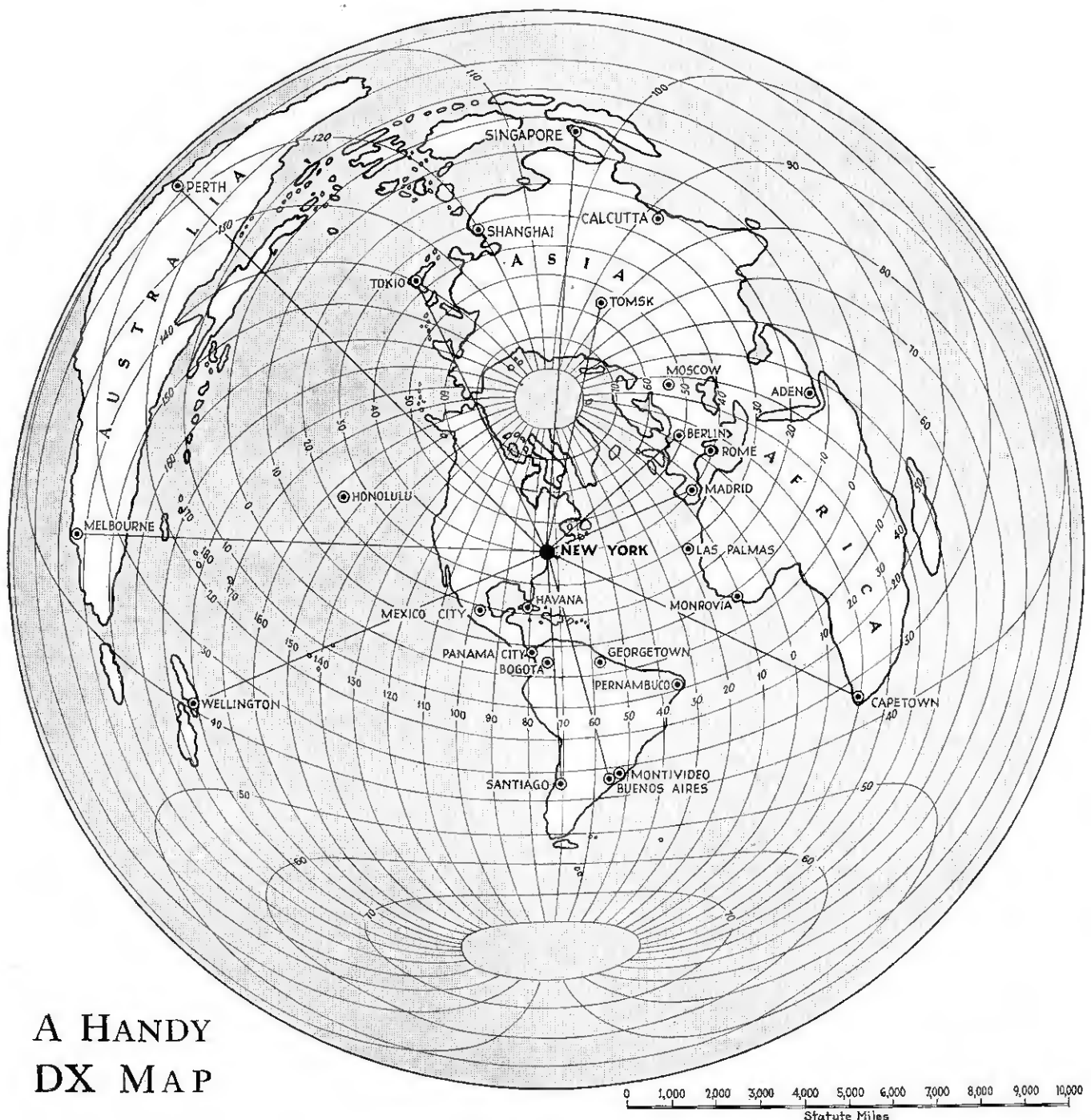
What's the best and quickest way to put these leads to work? Here's a suggestion: Set aside a regular time each day to run through your local newspaper. Get two copies, because sales-lead clippings may be printed on both sides of the sheet. Paste pot and scissors are the necessary implements. As you clip each item, paste it on a card or sheet of paper. Jot down your suggested line of attack and as soon as possible follow through each lead.

In many cases it's a good plan to give your prospect the newspaper clipping about himself or herself. Most of us have a streak of vanity—we like to see our names in print. A clipping of a wedding, engagement or birth announcement, pasted on your letterhead makes an effective opening for a sales letter to the prospect.

The dealer who forms his own newspaper clipping bureau will find that he and his salesmen will rarely need to exclaim, "What! no leads?"

BELOW 200

*Two Pages of Data Which
Will Interest Shortwave Fans*



A HANDY DX MAP

The distance between New York and any other point may be quickly approximated with the aid of this "azimuthal" map and a ruler. Other cities can be used as a reference point by apply-

ing the approximate distance to New York as a correction factor. Due to the distortion of distant continents foreign points are usually best identified by first locating adjacent cities on the map.

FOREIGN SHORTWAVE "PHONE" BROADCASTERS

CALL	LOCATION	FREQ.	CALL	LOCATION	FREQ.	CALL	LOCATION	FREQ.	CALL	LOCATION	FREQ.	
ALGERIA			DANZIG			HONDURAS			PHILIPPINE ISLANDS			
FM8KR	Constantine	3,750	EK4ZZZ	Danzig	7,500	HRB	Tegucigalpa	6,170	KZRM	Manila	6,140	
FM8KR	Constantine	7,009	DENMARK			HUNGARY			KZRM	Manila	9,570	
ARGENTINA			OXZ	Skamlabaek	9,520	HAT	Szekfehervar	9,125	KZRM	Manila	11,830	
LSX	Buenos Aires	10,352	DOMINICAN REPUBLIC			INDIA			KZRM	Manila	12,245	
LSG	Buenos Aires	19,900	HIX	Santo Domingo	4,610	VUB	Bombay	6,110	KZRM	Manila	12,245	
LSN	Buenos Aires	21,200	FIJI ISLANDS			VUC	Calcutta	11,870	PORTUGAL			
AUSTRALIA			VPD	Suva	14,430	INDO-CHINA			PT1AA	Lisbon	7,143	
VK3ME	Melbourne	9,510	FRANCE			F31CD	Chi-hoa	6,122	SHIP PHONE STATIONS			
VK6AG	Perth	7,194	F8AV	Nogent	3,750	FZR	Salgon	16,315	WSBN	SS. Leviathan	3,429	
VK2ME	Sydney	10,526	F8GC	Paris	4,918	FZR	Salgon	12,043	GFVW	S.S. Majestic	4,180	
VLK	Sydney	10,526	FYR	Lyons	5,172	12RO	Rome	3,750	WSBN	SS. Leviathan	4,392	
AUSTRIA			F8BP	Rugles	5,455	12RO	Rome	3,750	GFVW	SS. Majestic	4,430	
UOR2	Vienna	11,801	F8LH	Paris	7,317	HVJ	Vatican City	3,970	GDJL	SS. Homeric	4,754	
OUIH	Vienna	8,060	FYR	Lyons	7,463	1MA	Rome	6,897	GMJQ	SS. Belgenland	4,782	
UOR2	Vienna	6,072	PTB	St. Assise	7,490	12RO	Rome	11,811	SS. Leviathan	6,637		
OHK2	Vienna	4,274	PTF	St. Assise	7,770	HVJ	Vatican City	15,120	SS. Bremen	7,560		
BERMUDA			PLJ	Paris	9,230	JAPAN			SS. Belgenland	8,570	SS. Leviathan	8,330
TJW	Hamilton	9,500	FTL	St. Assise	9,950	JIAA	Kemikawa	8,009	SS. Olympie	8,840	SS. Electra	11,240
BRAZIL			FQO	St. Assise	12,161	JIAA	Kemikawa	17,391	1BDX	SS. Bremen	13,380	
PPU	Rio de Janeiro	6,122	FQE	St. Assise	12,161	JAVA			GMJQ	SS. Olympie	13,380	
PPU	Rio de Janeiro	10,270	PTN	St. Assise	12,265	PK2AG	Semerang	2,009	SS. Belgenland	13,040	SS. Majestic	13,228
CANADA			PSE	St. Assise	13,441	PK1AA	Wetevreden	4,000	GFVW	SS. Olympie	16,456	
VE9GW	Bowmanville, Que.	6,098	PTO	St. Assise	18,248	PK2AF	Djojocarta	6,000	GMJQ	SS. Majestic	17,500	
VAS	Glace Bay, N. S.	10,714	PTE	St. Assise	18,248	PK3AN	Surabaya	6,036	GFVW	SS. Majestic	17,500	
CJRX	Middle Church	11,720	PTM	St. Assise	19,355	PLG	Bandoeng	15,957	GMJQ	SS. Belgenland	17,650	
VE9CL	Winnipeg, Man.	6,061	PRO	St. Assise	19,417	PLE	Bandoeng	18,830	SIAM			
CANARY ISLANDS			PRE	St. Assise	19,417	PMB	Bandoeng	20,620	HSP2	Bangkok	7,300	
EAR58	Las Palmas	7,210	PTD	St. Assise	19,840	KENYA			HSP2	Bangkok	9,500	
CELEBES ISLANDS			GERMANY			VQ7LO	Nairobi	6,100	HS2PJ	Bangkok	10,169	
PK6KZ	Makassar	11,765	D4AFF	Kothen	7,042	MADEIRA			SPAIN			
CURACAO			DHA	Nauen	11,760	CT3AG	Funchal	6,383	EAJ25	Madrid	3,000	
PJZ	Curacao	11,718	DHC	Nauen	15,200	MEXICO			EAR25	Barcelona	6,000	
CZECHOSLOVAKIA			DGW	Nauen	17,760	XFD	Mexico City	6,667	EAR96	Barcelona	6,522	
OKIMPT	Prague	4,412	GREAT BRITAIN			XDA	Mexico City	6,815	EAR113	Viscaya	6,522	
OKIMPT	Prague	5,119	GBS	Rugby	6,993	XFA	Mexico City	6,977	EAR110	Madrid	7,026	
CHINA			GBS	Rugby	9,020	XFA	Mexico City	7,143	EAR125	Madrid	7,026	
XCTE	Shanghai	5,000	GBK	Bodmin	9,260	XFD	Mexico City	9,091	EAJ1	Barcelona	15,789	
COLOMBIA			G5SW	Chelmsford	11,750	XDA	Mexico City	9,380	STRAITS SETTLEMENT			
HKA	Barranquilla	5,837	GBX	Bury	12,195	XFA	Mexico City	9,380	VS6WX	Singapore	7,190	
HKD	Barranquilla	6,093	GRU	Rugby	12,195	XFD	Mexico City	9,380	SWITZERLAND			
HKF	Bogota	7,194	Q2MN	Sonning-on-Thames	14,320	XFA	Mexico City	9,380	HB9XD	Zurich	3,488	
HKF	Bogota	7,194	GBW	Rugby	16,184	XDA	Mexico City	11,111	HB9XD	Zurich	7,229	
HKC	Bogota	6,250	GBW	Rugby	18,138	XFD	Mexico City	14,634	HB90C	Berne	9,130	
HKC	Bogota	6,977	GBS	Rugby	18,310	XDA	Mexico City	21,249	HB9XD	Zurich	9,380	
HKX	Bogota	6,977	BRITISH GUINEA			MOROCCO			U.S.S.R.			
HKX	Bogota	7,143	VRY	Georgetown	6,720	CN8MC	Casablanca	5,882	RW15	Khabarovsk	4,274	
COSTA RICA			HOLLAND			CN8MC	Casablanca	6,881	RW38	Moscow	5,314	
TIH	Heredia	9,734	PBF5	Hague	6,438	NEWFOUNDLAND			RW69	Moscow	6,000	
CUBA			PCJ	Hilversum	9,590	VO8A	St. Johns	6,800	RW62	Minsk	6,420	
CM2LA	Havana	10,007	PHI	Hilversum	15,220	NEW ZEALAND			RW19	Tomsk	8,111	
CM2MK	Havana	9,360	PCV	Hilversum	17,775	ZL2XX	Wellington	9,550	RW3KAA	Leningrad	8,333	
CM6XJ	Tuinueu	15,008	PCK	Kootwijk	18,400	UNION OF SOUTH AFRICA			RW38	Moscow	51,724	

WORLD TIME CHART

Sweden, Germany, Switzerland, Italy	Petrograd, Constantinople, Capetown	Bogota, Perla	India	Borneo, Java, Dutch E. I.	P. I., China, Western Australia	Tokio, Central Australia	Sidney, Melbourne, Eastern Australia	Auckland, New Zealand	Sasoo	Hawaiian Islands	Pacific	Mountain	Central	Eastern	Holland, Buenos Aires	Rio de Janeiro, Brazil	London, Paris, Madrid	G. M. T. or G. C. T.
1.00	2.00	3.00	5.00	6.00	8.00	9.00	10.00	11.30	Noon	1.30	4.00	5.00	6.00	7.00	8.00	9.00	Midnight	0000
2.00	3.00	4.00	6.00	7.00	9.00	10.00	11.00	12.30	1.00	2.30	5.00	6.00	7.00	8.00	9.00	10.00	1.00	0100
3.00	4.00	5.00	7.00	8.00	10.00	11.00	Noon	1.30	2.00	3.30	6.00	7.00	8.00	9.00	10.00	11.00	2.00	0200
4.00	5.00	6.00	8.00	9.00	11.00	Noon	1.00	2.30	3.00	4.30	7.00	8.00	9.00	10.30	11.00	Midnight	3.00	0300
5.00	6.00	7.00	9.00	10.00	Noon	1.00	2.00	3.30	4.00	5.30	8.00	9.00	10.00	11.00	Midnight	1.00	4.00	0400
6.00	7.00	8.00	10.00	11.00	1.00	2.00	3.00	4.30	5.00	6.30	9.00	10.00	11.00	Midnight	1.00	2.00	5.00	0500
7.00	8.00	9.00	11.00	Noon	2.00	3.00	4.00	5.30	6.00	7.30	10.00	11.00	Midnight	1.00	2.00	3.00	6.00	0600
8.00	9.00	10.00	Noon	1.00	3.00	4.00	5.00	6.30	7.00	8.30	11.00	Midnight	1.00	2.00	3.00	4.00	7.00	0700
9.00	10.00	11.00	1.00	2.00	4.00	5.00	6.00	7.30	8.00	9.30	Midnight	1.00	2.00	3.00	4.00	5.00	8.00	0800
10.00	11.00	Noon	2.00	3.00	5.00	6.00	7.00	8.30	9.00	10.30	1.00	2.00	3.00	4.00	5.00	6.00	9.00	0900
11.00	Noon	1.00	3.00	4.00	6.00	7.00	8.00	9.30	10.00	11.30	2.00	3.00	4.00	5.00	6.00	7.00	10.00	1000
Noon	1.00	2.00	4.00	5.00	7.00	8.00	9.00	10.30	11.00	12.30	3.00	4.00	5.00	6.00	7.00	8.00	11.00	1100
1.00	2.00	3.00	5.00	6.00	8.00	9.00	10.00	11.30	Midnight	1.30	4.00	5.00	6.00	7.00	8.00	9.00	Noon	1200
2.00	3.00	4.00	6.00	7.00	9.00	10.00	11.00	12.30	1.00	2.30	5.00	6.00	7.00	8.00	9.00	10.00	1.00	1300
3.00	4.00	5.00	7.00	8.00	10.00	11.00	Midnight	1.30	2.00	3.30	6.00	7.00	8.00	9.00	10.00	11.00	2.00	1400
4.00	5.00	6.00	8.00	9.00	11.00	Midnight	1.00	2.30	3.00	4.30	7.00	8.00	9.00	10.00	11.00	Noon	3.00	1500
5.00	6.00	7.00	9.00	10.00	Midnight	1.00	2.00	3.30	4.00	5.30	8.00	9.00	10.00	11.00	Noon	1.00	4.00	1600
6.00	7.00	8.00	10.00	11.00	1.00	2.00	3.00	4.30	5.00	6.30	9.00	10.00	11.00	Noon	1.00	2.00	5.00	1700
7.00	8.00	9.00	11.00	Midnight	2.00	3.00	4.00	5.30	6.00	7.30	10.00	11.00	Noon	1.00	2.00	3.00	6.00	1800
8.00	9.00	10.00	Midnight	1.00	3.00	4.00	5.00	6.30	7.00	8.30	11.00	Noon	1.00	2.00	3.00	4.00	7.00	1900
9.00	10.00	11.00	1.00	2.00	4.00	5.00	6.00	7.30	8.00	9.30	Noon	1.00	2.00	3.00	4.00	5.00	8.00	2000
10.00	11.00	Midnight	2.00	3.00	5.00	6.00	7.00	8.30	9.00	10.30	1.00	2.00	3.00	4.00	5.00	6.00	9.00	2100
11.00	Midnight	1.00	3.00	4.00	6.00	7.00	8.00	9.30	10.00	11.30	2.00	3.00	4.00	5.00	6.00	7.00	10.00	2200
Midnight	1.00	2.00	4.00	5.00	7.00	8.00	9.00	10.30	11.00	12.30	3.00	4.00	5.00	6.00	7.00	8.00	11.00	2300

STANDARD BROADCAST BAND	KC.
SHIP TO SHORE	1,500
AIR, ETC.	1,600
AMATEUR	1,715
TELEVISION	2,000
FOREIGN	2,200
POLICE, FIRE, ETC.	2,500
SHIP, AIR, TELEVISION	2,500
TELEV. FOREIGN GOV'T	3,100
FOREIGN, AIR, ETC.	3,500
AMATEUR	4,000
SHIP, GOV'T, FOREIGN	4,535
POINT TO POINT, FOREIGN, ETC.	5,000
FOREIGN, AIR, GOV'T, ETC.	5,365
RELAY, BROADCAST, AIR	6,160
SHIP - POINT TO POINT	6,425
AMATEUR	7,000
POINT TO POINT	7,500
GOV'T, SHIP TO SHORE	8,000
PT. TO PT., RELAY B'DCAST	8,300
POINT TO POINT	9,610
POINT TO POINT, GOVERNMENT, SHIP	11,000
POINT TO POINT	13,300
POINT TO POINT	14,000
POINT TO POINT	14,400
SHIP, GOVERNMENT, POINT TO POINT, MISC.	16,080
POINT TO POINT	16,100
POINT TO POINT, SHIP, ETC.	21,420
EXPERIMENTAL AMATEUR	25,000
10 Meters	30,000
EXPERIMENTAL REGION	KC.

SHORTWAVE SPECTRUM

To convert kilocycles to meters, or meters to kilocycles, divide either into 300,000 to get the other

RECOMMENDED AMPLIFIERS

CUBICAL CONTENT OF ROOM	TYPICAL CIRCUITS	VOLTAGE GAIN AT 1,000 CY.	UNDISTORTED POWER OUTPUT
25,000 cu.ft. or less	2 stage transformer coupled with 250 output	42DB	2.5 watts
25,000-50,000 cu.ft.	2 stage coupled 245 push-pull output.	31 DB.	4.3 watts
50,000-125,000 cu.ft.	2 stage transformer coupled 210 output in combination with one push-pull stage 250 output	48 DB.	11.5 watts
125,000-175,000 cu.ft.	3 stage with 250 push-pull output	53 DB.	13.5 watts
175,000 cu.ft. and up	3 stage with 250 push-pull output in combination with one push-pull output stage	68 DB.	25.6 watts

Estimating

Public Address

HOW to determine equipment requirements and PROBABLE installation costs

By George J. Saliba

THERE are two major factors to be considered when estimating the cost of public address equipment installation: *first*, the type of service desired by the customer and, *second*, the character of the area to be served. The dealer or contractor called upon to submit a figure must thus determine the following details:

1. Is the installation for the purpose of reaching:
 - (a) Indoor audiences?
 - (b) Outdoor audiences?
 - (c) Both indoor and outdoor audiences?
2. If it is an outdoor installation, what are the dimensions, and what is the cubical content (width \times length \times height) of the space to be served?

3. What are the acoustic properties of the room or space to be served?
 - (a) Are the walls bare?
 - (b) Of what material is the wall made? (Wood, plaster, stone, brick, beaver-board, etc.)
 - (c) Are there many draperies in the room? Where are they located?
 - (d) Has the room been treated for acoustical defect?
 - (e) Is there normally apt to be a good deal of space around the audience? Does the seating capacity take up all the available space outside of the aisles?
 - (f) Is the height of the room greater than its width or length?
 - (g) Is there a balcony seating an audience?
4. Are the loudspeakers desired at one end of the hall or must they be located in the center of the room?
5. Are additional speakers required to serve sound to other rooms or out-of-doors? If so, how many, and are they to be indoor or outdoor? (If indoor, obtain same information for this room as under question 3. If outdoor, note area to be served and if there is an unusual amount of noise in the vicinity.)
6. If an outdoor installation, record the area to be covered by sound.

7. Is the location of the outdoor installation noisy? Are there any of the following nearby: car lines, heavy automobile traffic, noisy machinery? If so, note the effect of this extraneous noise upon the location to be served with sound.
8. Is the installation desired for speech only, or will it be used for the following as well:
 - (a) Reproduction of original music?
 - (b) Reproduction from phonograph records?
 - (c) Radio reproduction?
9. What type of electric current is available:
 - (a) A.C. or D.C.?
 - (b) Voltage?
 - (c) Frequency, if alternating current?
10. Note in detail the location of sound pick-up with respect to loudspeakers:
 - (a) Voice.
 - (b) Music from orchestra.
 - (c) Phonograph reproduction.
 - (d) Radio broadcast program reproduction.

These questions might well be printed on a specially prepared form, providing blank lines for the recording of required data. Such a form is an excellent accessory for the estimator, in fact similar sheets are commonly used by estimators in other trades to promote accuracy and save time.

When this basic information has been secured, the next step is to determine from it: (a) Amplifier requirements, (b) Speaker requirements, (c) Pick-up requirements.

The accompanying table indicates suitable amplifiers to supply sound to rooms of given cubical content. Amplifiers having other circuit design but approximately the same gain characteristics and power output are, of course, equally suitable. This table has been prepared for an average room. Such a room would be one similar to a typical school room.

Certain peculiarities may make it necessary to use a larger or smaller amplifier. The acoustic properties of the room are important. Unusual acoustic properties have, in most cases, been the principal contributing factors to unsatisfactory sound service.

The coverings of the room must be carefully considered. If it is heavily draped there will be considerable sound absorption, and since the table has been prepared for rooms having average sound absorption, greater power will be needed to serve this particular room.

If the room is one in which the seating capacity covers the entire floor area with the exception of narrow aisles, as is the case in many small halls where temporary seating arrangements often extend from one end of the room to the other and from side to side, the sound absorption due to the clothing worn by the audience will be con-

siderably greater than that provided for in the table, which was made for a hall equipped with spaced aisles and a generous space between audience and rear of hall. Thus, if there is any indication that the seating capacity covers the complete floor area, it will be necessary to choose an amplifier of slightly greater power.

If the height of a room is considerably greater than its width an amplifier of considerably less power than that recommended in the table may often be used. This is due to the fact that the higher the room of a given cubical content the smaller the floor area and, consequently, the smaller the audience. This knowledge will often enable a dealer to reduce his estimate considerably by including a small amplifier in the specifications. In such an installation directional baffle speakers can be set so that the reproduced sound is directed solely to the audience and not broadcast equally to all parts of the room.

For indoor installations, dynamic speakers with either flat or directional baffles are recommended. It is not

usually advisable to use horn speakers except out of doors where the conservation of sound through the highly directional properties of the horn is desirable. However, in figuring certain jobs where quality is not so important a consideration as price, horn speakers may be employed. This will insure a lower figure not only because of the difference in price between horn and dynamic speakers but because the directional properties of horns permit the use of smaller amplifiers.

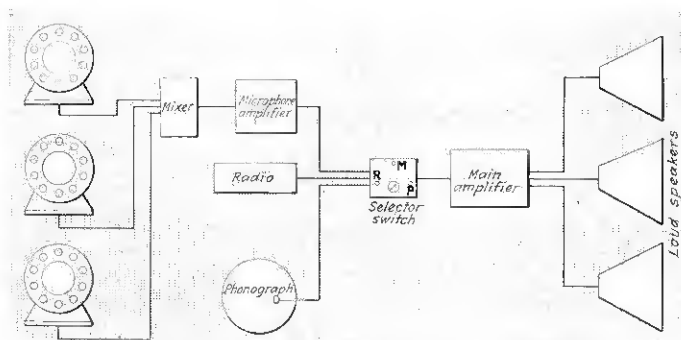
It is next necessary to determine how many speakers are needed for the installation. The number of speakers to be used is governed by these conditions:

- (a) Area and shape of the room.
- (b) Additional rooms or spaces to be served.
- (c) Location of the loudspeakers.
- (d) Output power of the amplifier.
- (e) Power rating of the speaker employed.

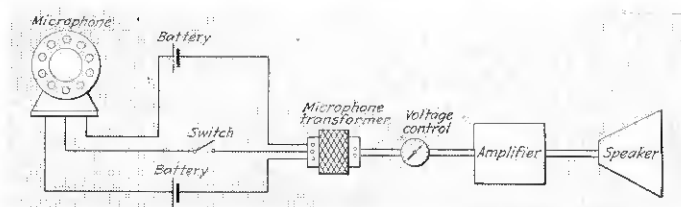
It is obvious, if the space to be served is a long narrow room and the position of the speakers is at the far end of this room, a single speaker will often be sufficient. However, if the space to be covered is wider than its depth, more speakers will be needed. Generally speaking, it has been found that one dynamic speaker on a directional baffle is needed for each 40 feet width of the room to be served.

Directional baffle savings cannot usually be effected if the room contains a balcony seating an audience. In this case it would not be possible to use just enough speakers to serve the room width, directing them toward the main floor audience.

If additional rooms are to be served, more speakers naturally are required. If the rooms are large, one or



TYPICAL P. A. SYSTEM



SIMPLE P. A. SYSTEM

more dynamic speakers may be required. If they are small, magnetic speakers can be used. Magnetic speakers may ordinarily be installed to serve rooms not exceeding 1,500 cubic feet.

There is a very direct relation between the location of the loudspeakers and the number required to serve the space satisfactorily. For instance, if the installation is to be made in an arena with sound emanating from the center of the room, it will be necessary to employ four or more speakers so that all sides of the room may be covered. These decisions, of course, must be left to the judgment of the individual planning the installation.

In planning speaker requirements, it should be always borne in mind that the number and type of speakers which may be used successfully is regulated by the power output of the amplifier. It would be unsatisfactory, for instance, to employ two 3 watt speakers in connection with an amplifier having a power rating of only 4½ watts. As far as possible, the total power consumption of the speakers employed should approximately match the power output of the amplifier.

If the size of the room in which the installation is to be made dictates that a 4½ watt amplifier be used, but its shape is such that two speakers are necessary, the wisest choice would be a 2 watt and a 3 watt speaker rather than two 3 watt speakers. The choice of two 2 watt speakers would not be advisable since overloading may result.

If only speech amplification is required then an ordinary 2 button carbon microphone with its appropriate transformer is all that is required. The microphone need not be of the highest quality since one with a range of from 100-3,500 cycles is all that is necessary for voice reproduction. If orchestral music is to be picked up then it is advisable to use a microphone that will pass at least 6,000 cycles in order to insure good quality. Some times it is necessary to use more than one microphone to properly pick up a large orchestra. In that case a

"mixer" is necessary. These mixers can either be purchased ready built or they may be built to suit the needs of the installation.

The microphone or microphones may be located at a considerable distance from the main amplifier. In such cases a microphone amplifier is needed and it should be located near the microphone.

If phonograph music is to be amplified it is necessary to have a good turntable, and it is usually good policy to have a double turntable equipped with a "fader" so that uninterrupted programs may be furnished. The added cost of a double turntable is more than offset by the advantages to be obtained in giving such a realistic musical program that it is hard to distinguish from a direct pick-up program.

A rugged radio tuner is necessary if good radio reproduction is desired. This tuner need not necessarily be equipped with an audio amplifier since the detector can be connected directly to the amplifier of the public address system. Tuners are available for rack mounting so that the whole rack assembly (if a large installation) is uniform in appearance.

CONDUIT LAYOUTS

FOR permanency and insured good results it is advisable that all wiring on large jobs be put in pipe. Pipe affords protection to the wires and acts as a shield, preventing the pick-up of extraneous noises.

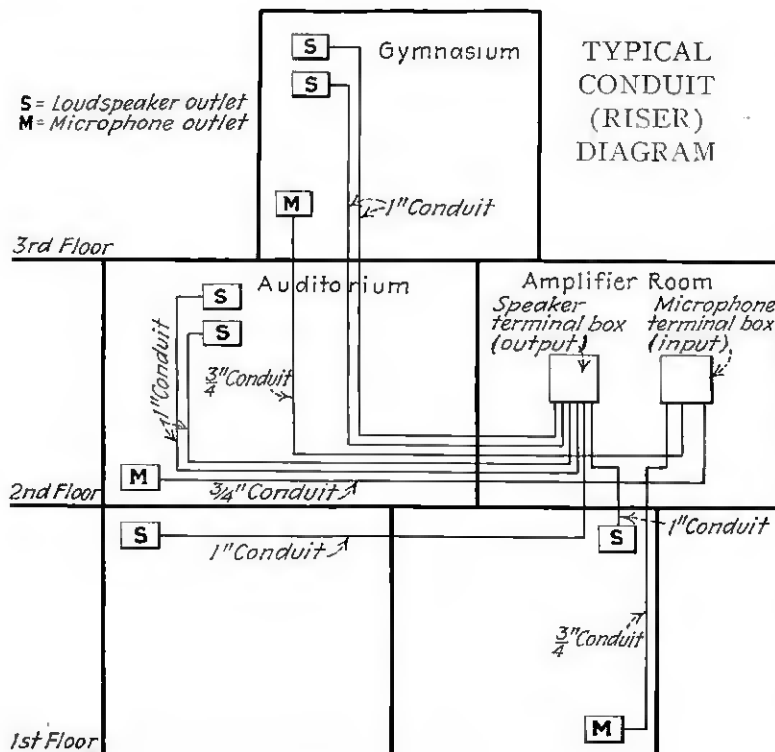
To intelligently plan the installation, conduit should be laid out on paper before any work is done. Work can usually be laid out from architectural plans and all risers and outlets should be plainly indicated so as to facilitate the work of the electrical sub-contractor.

The amplifier room should be located in a central location with respect to the pick-up points and speaker outlets to minimize long lines. Extremely high impedance or low impedance lines should be avoided. The ideal transmitting line impedance is about 500 ohms.

Public address systems are coming into more use than ever before, and the field is large enough and profitable enough to make it worth while for many dealers to form a separate installation and sales department. Portable public address systems also offer lucrative return. With the latter the field of application seems to be almost unlimited; public auctions, club meetings, political meetings—in short wherever there is a public meeting, the use of a sound amplification system is indispensable.

Experienced operators should be used at all times with these portable systems. The scale of prices to charge varies with locality, and in New York City these prices vary from \$5 an hour where a simple system is to be used to \$25 an hour where a more elaborate hook-up is required.

The information contained in this article will serve as a guide of particular value to dealers who are contemplating entering the public address field and who have had little or no occasion to do business heretofore on an estimate basis. The finer points of estimating must be picked up through actual experience, the estimator becoming more skillful as his practical knowledge of the business increases.



Records

By
Richard
Gilbert

Pushing the Christmas Trade . . . Records as Gifts

WITH the passing of each Yuletide season dealers become more alert to the merchandising possibilities of phonograph records as gifts. *Most of all the large album set.* Engaging displays should be made of such sets as the Bach Mass in B Minor (Victor Musical Masterpiece Albums Nos. 104 A and 104 B, \$25.50), Beethoven's Symphony No. 3 (The "Eroica") in E Flat (Brunswick Album Set No. 20, \$9.00) and records by Toscanini and Stokowski, both conductors radio favorites. Also display, with Christmas touches, operatic albums and single Red Seal and Celebrity discs. While the above listings appeal to the lover of classical music do not forget that Victor has several semi-classical sets devoted to Victor Herbert and Stephen Foster—music of universal appeal. It would be an excellent thing to go over your customer files, ascertain musical tastes from your notes, and send them a form letter urging the gift of album sets of records to a musical friend. I have known record sales to rise tremendously during the holiday shopping season. The business is there if the dealer will make the effort.

TAUBER, THE "GERMAN CARUSO"

FOR the past five years Richard Tauber's name has been associated with a tenor voice of magnificent proportions, and in Europe, where his reputation is justly celebrated, he is known as the "German Caruso." Tauber, who makes Columbia records, appeared in his American debut recital in New York, October 28. He was hailed by press and public as a new vocal sensation. Tauber is scheduled to appear in many cities throughout the country. I have no hesitancy in prophesying the same tremendous acclaim as that which this brilliant tenor has achieved in New York and every country in Europe. He finds current representation in Columbia listings. There are two selections from "The Land of Smiles" (Columbia G-9042 M). The orchestral accompaniment is under the direction of the composer, Franz Lehár who is famous as a creator of operetta music. Other Tauber recordings are listed on this page. Outstanding are twelve selected songs from Schubert's *Die Winterreise*. You can cash in on Tauber records and attract many discriminating people to your shop by ascertaining the date of his appearance in your city and by advertising in the program of the concert. Tauber is bound to be heard on the air too. Tie in the records with that broadcast.

THE MONTH'S HOT NUMBERS

VICTOR: "Singin' the Blues" and "It's the Darndest Thing," both fox-trots from the musical comedy by the name of the first lyric, are played in snappy fashion by The High Hatters (22809). "I'm With You," from the Zeigfeld Follies, coupled with "Sing Another Chorus Please," is a peppy dance tune. This disc (22816) features the versatile Ted Black and

his orchestra. Also Wayne King does the smooth "I Don't Know Why," a radio favorite, and "Guilty" (22817).

BRUNSWICK: The Boswell Sisters, recently a big feature at The Palace, are at it again in "Heebie Jeebie" and a new adaptation of "Shine on Harvest Moon" (featured in the new Follies). Play this disc for demonstration (6173). The fast and furious "Bugle Call Rag" is resurrected and rejuvenated by Cab Calloway and his orchestra. This piece has plenty of old friends and with the coupling, "You Rascal You," should create a "best seller" disc (6196). And don't forget to push Bing Crosby, as if anyone had to be told about him. The crooning radio sensation's latest husky warbling is continued on disc 6203: "Now That You're Gone" and "A Faded Summer Love."

COLUMBIA: They come and go but Guy Lombardo, back at the Hotel Roosevelt, seems a permanent fixture in New York's night life. Every one likes him and his insinuating slow tempo—put to good cause again in the hit of the day, "Good Night Sweetheart." Another demonstration disc—2547 D. Ted Wallace and His Campus Boys have caught the slow fever too. "Who Am I," popular for some time, and, "Waitin' for a Call from You," seem destined for great popularity. The accented beats and contagious rhythms make 2549 D take a prominent place in the month's releases.



Richard Tauber's Records

Die Winterreise (Schubert, op. 89) Selected Songs. Set No. 90, Tales of Hoffmann: Ha wie in meiner Seele entbrennet. Tales of Hoffmann: Es war einmal ein Hofe. No. G-9039M. Zigeunerweisen (Gypsy Life) (Borganoff). Au Der Wolga (On the Volga) (Sab). No. G-9040M. Ay—Ay—Ay! Schaf ein, mein Blond-Engelchen (Freire-Beda) Song of India (Sadko) (Rimsky-Korsakov) No. G-9041M. See Columbia Catalogue and Supplements for Other Listings.

Should CHICAGO Have

Other Comment

Will a Mid-West Radio Exposition at That Time Help or Harm—Opinion Divided and Controversy Waxes Warm

POSTPONING the date of the "Tenth Annual Chicago Radio Show and Electrical Exposition" from October, 1931, to January, 1932—a matter of expediency—has opened wide the doors of controversy. When, in September, the show management was informed by an imposing number of manufacturers that an October dating for Chicago this year would crowd the mourners a bit, Clayton Irwin obliged by canceling all contracts and advancing the date to the week beginning Jan. 18. At the time this appeared the logical thing to do.

But two weeks ago a majority, it is claimed, of representative dealers and jobbers in the Windy City, after concerted and mature deliberations, came out against a show as now planned. The main contention being that a combined trade and public exposition, following so closely after Christmas, would kill the holiday radio business—especially if "new, 1932 models" were to be featured as a show publicity slogan . . . And, second, that January is no time to introduce new sets or hold a show anyhow.

From the other side of the fence Mr. Irwin states his case: "In the first place," he informs your editors, "I give my word that no show publicity, detrimental to the December demand of local prospects, will be released. But above the consideration of the Chicago interests is that of the need for a National radio show to give impetus to the start of what should be radio's 'secondary' selling season, from January to April. While the introduction of an entirely new line of

merchandise certainly would be an unwise move on the part of any set maker in January, yet many new items unquestionably will make their appearance on or about that date. Would it not be better to feature some *one* new model, as a late season stimulus, in this open manner?"

In other words the argument boils down to the question: Is it "good merchandising" to hold a show around the first of the year.

Manufacturing opinion is divided. *Radio Retailing* knows a number of leading concerns who favor the idea; and at least two who oppose it vigorously.

But regardless of the dissenters, we are reliably informed that the "show will go on." The entire industry will watch with interest, therefore, the outcome of this experiment in mid-season sales promotion via the public exposition route.

The "All-Wave Set"

SOMETHING akin to the enthusiasm and thrill of the early days of radio, is with us again in the coming of "all-wave receivers" with which listeners can stray, at will, all over the radio lot, from long waves to short waves. An increasing number of commercial all-wave receivers is being offered the trade and buying public this fall, so that no longer need the enthusiast build his own apparatus.

A radio set that can tune in on all the nations of the earth is an attractive article of merchandise with which to go after past purchasers who might like a taste of world-wide adventuring.

Who Will Sell Auto-Radios?

MANUFACTURERS have found it possible to greatly reduce the price of auto-radio sets. These are now within the means of millions of car owners and are ready for quantity exploitation. But one thing stumps the makers of

a January SHOW?

by the Editors

this equipment; holds back distribution. Who, they want to know, is best equipped to do a real selling job—the radio dealer, the new car agency or the battery service station?

This is the picture as we see it: In general, none of these groups is in a position to do the whole job at this time. Few radio dealers have facilities to install any great number of sets, car agencies can sell receivers for installation only in new automobiles and battery service stations are not experienced in the sale of \$100 to \$150 entertainment units. All three groups, perhaps, can work together to good advantage. Let radio dealers, who know how to merchandise entertainment equipment, do the heavy selling. Let centrally located battery stations, ignition specialists, make flat-rate installations for these dealers. And let auto agencies, that have easy access to new car buyers, secure this necessary business for the radio dealer on a straight commission basis.

This plan will serve to put more auto-radios in use, the one thing a new product needs most to give it impetus. Later when the ball starts rolling specialty selling organizations will probably grow out of the successful operations in these three groups—and manufacturers will do well to utilize such auto-radio outlets when they develop.

The Public Wants Glock Switches

PROBABLY at no time in the radio art's history have radio sets so needed some additional features which would justify a higher price. The built-in electric clock with a time switch which enables the listener to have his set automatically turned off at some predetermined hour, is a radio refinement which has been long overlooked or avoided by manufacturers.

The convenience and luxury of leaving one's set playing soft, while one drops off to sleep to the tune of sweet melodies, will be quickly appreciated by the lay public, even if the radio trade is slow to sense the customer's interest in making them handier to use.



The Many-Sided Edison

A GREAT inventor also should be a great salesman—for unless he has the power to *persuade* a skeptical public to *buy* his radical new ideas, he shortly will have to return to his garret, unfed, unhonored and unsung.

Edison's greatness as a business man, salesman, and dramatizer, were almost as remarkable as was his electrical and mechanical inventiveness. It was this extraordinary ability to win the confidence of the public, that has given the readers of *Radio Retailing* some of their most important lines of merchandise.

The phonograph, the moving picture and the incandescent lamp were his brain-children, as every school-boy knows. But few of the public realize that Edison's invention of the microphone made the telephone practical, and provided the starting point of future broadcasting.

And practically none of the recent obituaries recognize that it was an obscure phenomenon discovered by Edison in 1883, the "Edison Effect" or flow of electrons from a hot lamp filament, which years later was utilized to give us our rectifiers and radio tubes of to-day. Edison put the whole world in his debt, but particularly does the radio industry owe him much for the fundamental contributions he was making, a generation ago, to our present broadcasting art.

MANY SUCCESSFUL SHOWS HELD

St. Louis Attendance Breaks Former Records—Minneapolis Reports Lively Buying Demand

Again, as in the past six years, the 1931 Southwest National Radio Show closed with a record for actual success. The floor was packed to capacity every night, and a total of 6,252 more persons actually paid their admission at the door, than during the 1930 Show week. The total paid attendance was 44,652. Out of town dealers registration was splendid. The only disappointing feature of the Show was the poor local dealer interest. People were there to buy the merchandise, but not enough city dealers were in attendance to take care of them.

Pittsburgh, Pa.

"Old Man Depression" took an awful trimming at Pittsburgh's Sixth Annual Radio-Electrical Show which closed after smashing every radio show record. Among the radio celebrities present were Graham McNamee, George Frame Browne, Frank Luther and Milton Cross. Director James A. Simpson estimated that 42,000 persons passed through the doors the second night.

Portland, Maine

Portland held a combination radio and refrigeration exhibition, drawing over 30,000 people. Actual sales are reported to have outrun the two previous years. A large part of the good results are attributable to early planning. An orchestra, radio artists and RKO vaudeville stars provided the entertainment.

Minneapolis, Minn.

The Tenth Annual Northwest Radio and Electrical Show held in Minneapolis doubled the attendance of both dealers and public alike, over last year. There was a unanimous expression of exhibitors that it was the best selling show they had ever exhibited in. Surprising, too, is the report that practically all sales made were for consoles. This is attributed to the low prevailing prices and many new features on the latest models. Electrical refrigerators, oil burners and washing machines were included in the show.

Philadelphia, Pa.

An increase of over 20,000 over last year's attendance, made the number that passed through the turnstiles in the six days of the show, more than 100,000. Virtually every branch of the radio and electrical industry was represented in the 216 booths at the Philadelphia affair. Probably the outstanding feature that

drew the crowds was the widely-advertised demonstration of television.

This was the first great commercial exposition to be held in the new Philadelphia Convention Hall, and George R. Conover, managing director of the Electrical Association of Philadelphia, and manager of the show, declared that the success of this show is a further proof of the old principle that the "only way to get business is to go after it."

Los Angeles, Calif.

After two attempts to put on a radio and electric show, the third endeavor proved successful. The exhibitors in the 136 booths included 11 radio dealers, 3 manufacturer-distributors, 7 manufacturers, 11 local distributors, 11 local manufacturers, 3 electric product distributors, and 3 tube manufacturers. The appearance of the show, which had uniform signs suspended from the ceiling, was exceptionally attractive and won expressions of approval on all sides.

Kansas City, Mo.

Admission was free to the Kansas City Show, and although there was some concern about people coming downtown to see silent radio sets and electric refrigerators without the lure of prizes, souvenirs or special features, everyone was gratified with the attendance of 23,150, and at the keen interest displayed in exhibits, and the splendid results obtained.

Shumaker Resigns as RCA-Victor Head

The resignation of Edward E. Shumaker as president of RCA-Victor Company was accepted by the board to become effective January 1, 1932.

It has been Mr. Shumaker's desire to retire from active business ever since the Victor Talking Machine Co., of which he was president, was purchased by the Radio Corp. of America. At the request of David Sarnoff, however, Mr. Shumaker agreed to accept the presidency of the subsidiary and to serve in that capacity until the problems incident to unification had been solved, and the reorganization completed. This has now been done.

Mr. Shumaker's resignation brings to an end 18 years' of service in the home entertainment industry.

International Contest Ends December 1

Due to the interest shown in the \$175 prize contest sponsored by the International Resistance Company for servicemen, the closing date will be extended from Nov. 1 to Dec. 1.

Six cash prizes will be awarded for the six best letters on the subject: "How can the International Resistance Company be of more service to the serviceman?"

GOSSIP FROM THE MID-WEST

Shows Go Over With Bang In Columbus, Evansville—Norge Refrigeration Convention Draws Radio Jobbers—Dayton Dealers Developing Replacement Business

By "DETECTOR"

COLUMBUS (OHIO) pulled its most successful radio show a couple of weeks ago. Funny thing, that show—the jobbers didn't want it . . . swore it would flop. But Ralph McFeely, of the Columbus Dispatch, sold them the idea. "If we don't let the public know that sets are better than ever and full of new features, they'll forget about radio this fall," said Ralph. Fifteen jobbers got behind it, on an economy cost basis. The big feature was a style show—when the gals paraded the exhibitors got as much attention as a clam drowning in a kettle of pumpkin butter. Earned enough to give a 28 per cent rebate and business has been good ever since.

TOMORROW'S big opportunity will be in the replacement market. An example: R. C. Bohannon, Columbus distributor, reported that on a recent house-to-house survey one short street

reported six battery sets, four of which were inoperative.

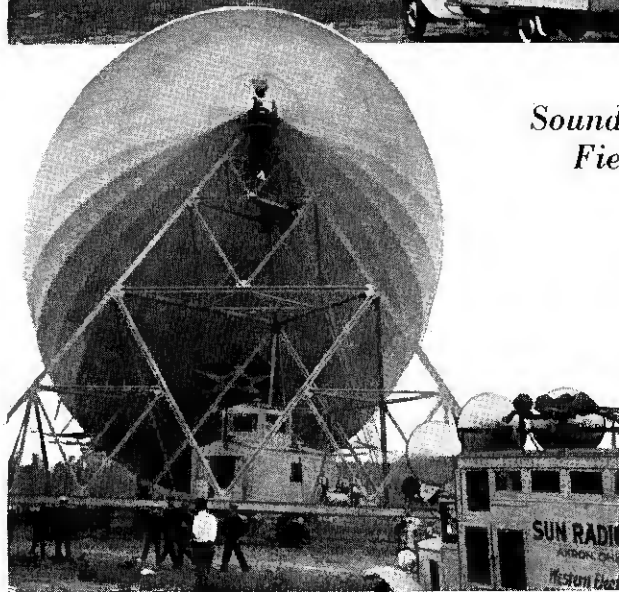
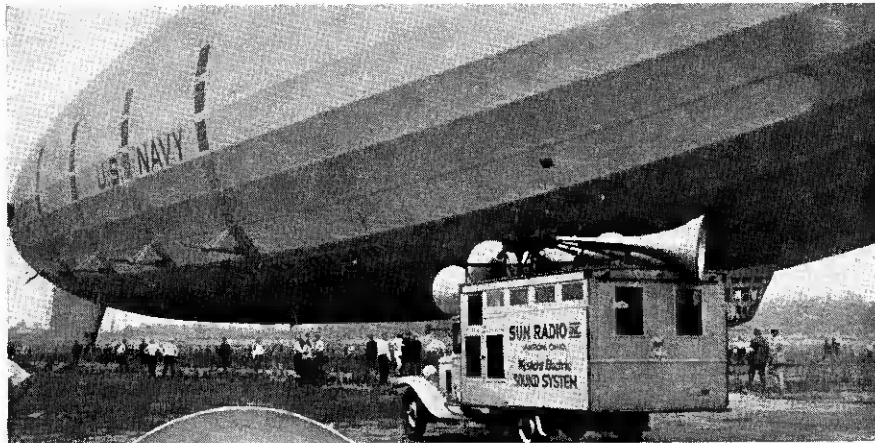
AND BILL BIDDLE, of the Anderson Soward Company, Dayton, Ohio, comes through with the observation that the replacement market, 50 per cent of his business, has now passed the battery stage and that the early electrics are being thrown on the back yard junk pile. The dealers aren't worrying so much about the trade-in problem. They're talking right up in meetin' and allowing only what the old set is worth, or telling the customer to give it to the blind girl down the street.

FACED WITH the ultimatum of having its fourteen year relationship with an exceedingly well known maker of sets terminated if it took on a line of electric refrigerators, equally well known, (Please turn to page 42)

Firing Line

the News Bombardments

New York, N. Y.



Sound Truck Clears Field for Akron

When the Akron, just delivered to the Navy for active service, was about to be launched on its trial flight tremendous crowds swarming on the field endangered their own lives and the ship. A hurry call was put through to Sun Radio by airport officials and this truck arrived on the scene and dispersed the jam.

Frisco Trade to Stop Advertising Cheap Sets

The California Radio Retailer's Council, affiliated with the Pacific Radio Trade Association of San Francisco, has passed by unanimous vote a resolution establishing \$49.50 as the lowest price midget to be included in advertising copy, with \$69.50 as the console minimum. Prominent department stores and most of the music-radio dealers in town are among the "signees."

Opinions differed as to the minimum price at which to fix the ruling but most were agreed that it was inadvisable to fix the limit beyond what in reason the larger stores could be expected to adhere to. The opinion was expressed by many dealers that there was not enough profit in any sale below \$50 to warrant any advertising expenditure.

A second resolution was also passed appealing to national advertisers to join in the movement. It was pointed out that cheap sets had already been practically excluded from the San Francisco papers and that a marked effect had been noticed on general unit sales throughout the city.

Sparks to Make Refrigerator at Michigan City Plant

The Sparks-Withington Company has announced its intention of manufacturing an electric refrigerator in plant four, Michigan City near Jackson. Capt. William Sparks has acquired covering patents on refinements to be incorporated in the new box which has been under test for nearly four years and plans to distribute it through regular Sparton radio jobbers.

The addition of this appliance will give the company and its associated outlets a balanced, year 'round line. The unit, we understand, will bear the usual "Sparton" trademark.

"MAY" SAYS RMA

In the merry month of May, during the week of the 23rd to be exact, the Seventh Annual Convention and Trade Show of the Radio Manufacturers Association is to be held in Chicago. Details will be announced later

STILL ANOTHER TUBE PRICE CUT

Champion Beats Radiotron's Recent Reductions 25 Per Cent But Narrows Discount Schedule

More than meeting Radiotron's middle-of-last-month drastic price reductions on tubes, Champion Radio Works, Danvers, Mass., came out, Oct. 24, with a new "grouped" schedule approximately 25 per cent below those of RCA. Incidentally, most of the independents are publishing new lists in line with those issued from Harrison, N. J.

In a nut shell, Champion has grouped all its tubes into five price classes—ranging from 50 cents to \$3. Its dealer discount now is 40 per cent, standard packages, as against its former figure, still prevailing with many other tube concerns, of approximately 55 per cent.

The following specimen table shows part of the present price picture:

Tube No.	RCA AND MANY INDEPENDENTS		CHAMPION
	Former	New	New
226	\$1.25	\$.80	\$.50
227	1.25	1.00	.75
245	1.40	1.10	.75
224A	2.00	1.60	1.00
247	1.90	1.55	1.00
210	7.00	7.00	3.00

Thrown into the pot to make it boil the faster, is Radiotron's tube bonus plan whereby the dealer and jobber, by ordering certain quantities of tubes, receive a further quantity free—approximately 20 per cent more. The jobber gets 20 more for every 100 purchased.

Commenting on its lower discounts and new prices Champion says: "Chaos reigns in the tube industry. All kinds of prices, claims, bonuses, free meters, etc., have confused the dealer and the public. Many dealers will welcome a solution by standardizing prices with reasonable, legitimate discounts."

Radio Retailing was further given to understand that this move is in no sense intended as a price war or retaliation or for the purpose of dumping excess stock—rather as a necessary constructive or standardization move. The object is to so place the list prices and discount that there would be no further incentive to quote the user special prices or no margin for making special discount concessions.

It is the opinion of many dealers that these various price cuts will not serve to increase public demand sufficient to offset gross sales losses.

With respect to what further price repercussions will occur, and what will be the trade and user acceptance of these new set ups, no one can prophesy. Further developments will be reported fully in our next issue.

The Norge Convenion

Detector spent Tuesday, October 13, as "editorial observer" and head Pluto water consumer, of the Norge distributors' conclave, French Lick Springs, Ind. The convention, brought into sharp focus the rapidly changing complexion of this man's industry. Sixty per cent of those in attendance were well known radio jobbers. Almost over night men of this type have brought into close and harmonious relationship radio and refrigeration interests. And why not? Radio dealers and distributors need something else to sell. The electric "box" is a logical answer. Radio jobbers are taking to this new field like ducks to water—and those radio dealers, music stores, etc., who really deserve the title also are ringing the bell.

Norge had a good get-together. Seemed funny though to hear men like French Nestor, Dave Trilling and H. D. Vestal spouting refrigeration shop talk like veterans.

Dykstra Returns to Clarion

E. J. Dykstra is back with the Transformer Corp. of America, Chicago, as general sales manager. Mr. Dykstra resigned due to ill health prior to the June Show. Rex C. Atwood continues as assistant sales manager in charge of field sales organization.

Other changes in the Clarion set-up include a change in position for B. E. Klank, formerly director of publicity, who is now advertising and sales promotion manager.

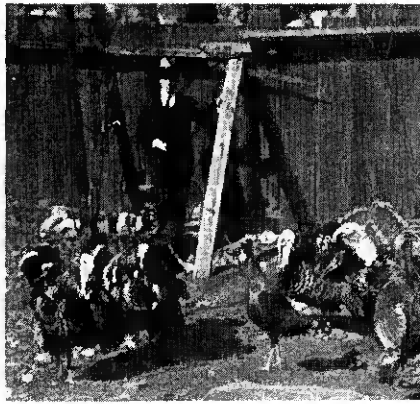
Lacey President of Revere

Arthur Lacey has assumed the presidency of the Revere Radio Corp. of Ashland, Ohio, after severing connections with the Perryman Electric Co. Mr. Lacey has just appointed eighteen distributors for the Middle West, as well as district representatives in Minneapolis, Kansas City, Schenectady, St. Louis, Philadelphia, Chicago, Brooklyn and Pittsburgh.

In "Good Ole Lunnon"



This combined wireless receiving set, radiogram, talkie apparatus and Cine projecting apparatus, as the Britons call it, was one of the wonders of the exhibition in London recently. The projector takes standard size film and will synchronize 100 ft. with a 12-in. record. They are priced at from 38 to 125 guineas—\$160 to \$475 to you.



Tobe's Turkeys

Depicting a fond but sad farewell between Tobe Deutschmann, president of the Canton, Mass., firm of that name, and his barnyard pets. There is one glad note, however—he's one radio manufacturer who will eat turkey this year

Detector Steps Out

(Continued from Page 40)

a large radio wholesale firm — name withheld — chose the refrigerator franchise. Justifying this drastic step a member of the firm remarked: "The time has come when we radio wholesalers must broaden our activities. Much as we regretted this parting of the ways we refuse longer to be bound exclusively to one line."

"IT IS THE department and furniture stores with their *low-down* (italics and hyphen are mine) terms that are forcing we poor chain store fellows to cut prices" . . . "Chain store tactics are cutting the heart out of profits" . . . "The little dealer who doesn't know costs, and pats himself on the back when he makes a \$30 sale is responsible" . . . "It is the manufacturers, they ought'er get together an' raise prices."

"All out of step but me." These are random remarks culled from conversations with dealers and jobbers throughout the Middle West. How the pot does love to call the kettle black.

HIT EVANSVILLE, IND., just in time for its radio show. This one being run by and for the dealers. Big crowd, style show an' everything.

BALDWIN PIANO CO., Cincinnati, reports surprising number of advance inquiries concerning new 15-minute record—and not even one yet on display.

It was also in Cincinnati that GM's dealers pulled a "neediest case" contest. Gave away sets to six cripples. Not a bad idea. Maybe RR will run a story about this in December.

BIG CHIEF WILLIAMS, Conron-Williams, of Aurora, and Peoria, Ill., says he's organized a new outfit: Williams Philco, Inc. This is in celebration of his appointment as Philco distributor for some eight odd (and how!) counties in Northern Illinois.

HERB WALL, dean of Fort Wayne radio men, is all hepped up about auto-radio—maybe because he's now a district manager for Motorola. Declares '32 will be auto-radio year, with at least 150,000

Hoover Addresses Broadcasters Meeting

President Hoover addressed the opening session of the ninth annual convention of the National Association of Broadcasters held at Detroit October 26, 27 and 28. The President's address was carried by special wire from the White House to the convention hall, and at the same time was broadcast to the public over the nationwide networks of the National and Columbia systems.

The meeting was called to order by President Damm, who introduced Frank Murphy, Mayor of Detroit. Following President Damm's address, Major General Charles McK. Saltzman, chairman of the Federal Radio Commission, spoke briefly.

Attendance at this convention greatly exceeded that of any year in the past.

installations. Advantages, from dealer viewpoint: no trade-in worries, little competition, less saturation, and good security back of each time payment contract. Herb is going good in territory which embraces Cleveland, Toledo, Indianapolis and Cincinnati.

"RADIO," says dealer White, Fort Wayne, "should be the 'hub of the home,' the focal point of the family circle. Instead, too many people, manufacturers, dealers, and users have treated it as a joke. The time has arrived," continues White, "for saving us from ourselves. Here in Fort Wayne we propose to work out our own salvation."

This sentiment was confirmed by the fact that, in most Fort Wayne stores the cheaper, smaller sets occupied a subordinate position in the rear.

Service Organizations

Are the service boys getting organization-minded?

In Evansville, Ind., they've banded together for social and educational purposes, also to "raise the standing of the radio service man in the eyes of his employer and of the set owner." Organized in August, they had a booth at the Evansville Radio Show and things seemed to be working out per original intentions.

With ambitions national in scope, the Institute of Radio Service Men, 720 South Dearborn Street, Chicago, announces its first New York meeting, scheduled for Nov. 16—at the Pennsylvania Hotel. Ken Hathaway, executive secretary, wants Detector to pass along the word that all servicers in the Metropolitan area are heartily invited to be there: subject, "Radio Circuits Around Pentode and Variable Mu Tubes." H. W. Kadell, engineer with the National Carbon Company, will be the speaker.

The Institute is organized along the lines of the Institute of Radio Engineers except that it is "engaged in practical service educational endeavor instead of scientific research." Its objectives parallel, in a national sense, the local ones of the Evansville bunch in that they seek to elevate the prestige of the service man, protect the ethical against the unethical and give them leadership and cohesion.

\$40,000 EXTRA

C. R. HOOP of PITTSBURGH

sells radio service to

FUNERAL DIRECTORS

THE number of extra dollars that are waiting for the radio dealer who makes it his hobby to cultivate a special market, overlooked by competitors, is amazing. *Radio Retailing* has called attention to many instances of this character, renting radios to hospital patients (October issue), public address for outdoor opera (September) and de luxe installations (August).

Now comes the case of C. R. Hoop, Frederick Piano Company, Pittsburg. Hoop devotes much of his time contacting undertakers; equipping their parlors with complete radio service, consisting of an automatic feed phonograph, amplification and microphones for use by the officiating clergyman and the director of ceremonies.

To date, Hoop has annexed the neat little sum of \$40,000, as a result of his work with the frock-coated fraternity. Orders seldom run below \$240. The average price is \$450. A \$1,000 contract is no novelty. One job figured \$2,300.

"Not one dealer in a hundred realizes," states Mr. Hoop, "the amount of radio sound equipment that a progressive mortuary can use. In the first place, there is the musical instrument for reproducing in the chapel, pipe organ, instrumental and vocal selections. The pulpit should be equipped with a microphone, and one or more loudspeakers placed at suitable points in the chapel. When the funeral is in the home, a high-grade portable sound amplification system is quite essential. Without sound amplification and specially located speakers, it is impossible for the minister's voice to be heard properly by more than half the audience. Furthermore, a microphone at the elbow of the funeral director is of great value in announcing the carriages."

Frederick Piano handles two portable sound amplification systems and one record-playing instrument, the

latter equipped with power amplifier, microphone, remote control and capacity for four extra speakers, (Western "Cathedral").

Undertakers—beg pardon, morticians—are not easy to sell. Their friendship and confidence must first be obtained. It took Hoop four months to land one prospect, but the order amounted to \$1,700. In this

instance, as with most of his other sales, a demonstration at an actual service was necessary. Not only must the undertaker be "sold," but, frequently, the officiating clergyman as well.

Two effective sales arguments are as follows:

(1) By enabling a funeral director and minister to conduct a service noticeably superior to those ordinarily rendered, amplifying equipment creates a favorable impression. This invariably results in other demands for the services of the director.

(2) Frequently radio music will enable the undertaker to quote lower on the cost of a service—sometimes saving the bereaved \$50—which otherwise would have to be paid to an organist and professional quartet.

According to official figures, there are 32,000 undertakers in the United States. At least 20,000 have some sort of a funeral parlor or chapel, and not less than 25,000 should be prospects for radio equipment in connection with their profession. Here, then, despite

its sombre character, is an "overlooked" market which is certainly worth investigating.

This field is singularly free of competition. Furthermore, the relatively high price at which equipment sells makes this sort of business particularly profitable. And, last but not least, dealers engaging in this business are handling a sideline which is not so far afield as to blur their identity.

RECORDS

Suitable for Services

ORGAN	RECORD NO.
Safe in the Arms of Jesus	Victor 20790-A
The Old Rugged Cross	
Ave Maria	Victor 21616-B
Beautiful Isle of Somewhere	Victor 19883-A
Christ Arose!	Victor 19883-B
Jesus, Lover of My Soul	Victor 21459-A
My Jesus, As Thou Wilt!	Victor 21459-B
Oh Love, That Wilt Not Let Me Go	
Lead Kindly Light	Victor 20780-A
Now the Day is Over	Victor 20780-B
Peace, Perfect Peace	
Nearer My God to Thee	Victor 20129-A
Abide With Me	Victor 20129-B
Rock of Ages	Victor 21322-B
Jesus, Savior Pilot Me	
VOCAL	
Some Blessed Day	Brunswick 3296
Sweeter as the Years	
The Old Rugged Cross	Brunswick 190
Rock of Ages	
Ave. Maria	Brunswick 15139
Stabat Mater	
God Be With You Until We Meet	
	Brunswick 3294
Lead Kindly Light	
Nearer My God to Thee	Victor 35957-A
Lead Kindly Light	

"SLICK UP" for Christmas

*Dealers everywhere
dust off their pet
sales-building ideas
for a whirl at*

HOLIDAY BUSINESS

CHRISTMAS, it has been pointed out, makes money for the retailer only in the same sense that the moon makes marriages. It brings two parties together in the most favorable light.

The rest is up to the dealer. In proportion to the way he enters into the spirit of the holiday he reaps a reward. For example: D. L. Ansley of the Loren Miller department store, Chicago, attracts holiday trade by the simple expedient of making his window displays *move*. Animated windows, rarely resorted to throughout the rest of the year due to their comparatively high cost, are invariably installed in November and December. "Holiday window-shoppers are especially susceptible to action displays," says Ansley.

Mandel's, also of Chicago, displays radios packed in gigantic gift boxes wrapped in ribbon. Nothing else is necessary. P. K. Romey, buyer, claims that this one idea alone produces satisfactory Christmas business.

A direct-mail piece that won considerable success several years back consisted of a radiogram blank mailed to a list with the following message:

"This is Station T-O-Y-S. We are broadcasting messages to Santa Claus on his secret wavelength. Write in what you want for Christmas and return this radiogram to us. If you are in the store on such-and-such a day at 4 p.m. you will hear your message being sent."

Over loudspeakers, placed at strategic positions in the



D. L. Ansley of Loren Miller's, Chicago, gets to work on his December window

store, numbers of these messages were read at the stated time. The thrill to little folks upon hearing their names all through the store more than compensated parents for the special trip "downtown."

"Story-hour" girls, introduced originally by chatauquas to entertain children, have proved their effectiveness in many department stores. A woman, usually a school teacher, is hired to entertain youngsters with Christmas stories. The interest of the children quickly attracts that of purchasing parents.

A pair of live reindeer was obtained to jog around the city streets a fortnight before Christmas in a western state two years ago. The companies cooperating to stage this stunt advertised that Santa Claus was checking up on good boys and girls, and suggested that they listen for the sleigh-bells in the early evening

hours, thereby attracting attention to their stores. These ideas, while not applicable in all cases, will nevertheless suggest others of a similar nature to readers.



Net Profit, \$48.47

J. P. KENNEDY, South Bend, Indiana, serviceman, recommends the following method of bolstering up business: "Make up a list of old customers from old service records and account books. Zone these by sections throughout the city. Mail a postcard bearing your picture and an announcement that you will call to test and check the radio FREE, in order to advertise your service to ten people each day. Two or three days after the cards are mailed make the calls and keep your eyes open for business."

Kennedy tried the plan out himself, working five afternoons per week for two weeks. This was the result:

Number of cards mailed . . . 100 . . . Cost . . .	\$ 2.00
Number of people not home (left business card)	34
Number of people who refused entrance	11
Number of sets tested averaging 20 minutes each	55
Number to whom one or more items were sold	31
Average amount of sale, gross	\$ 4.21
Total amount of business developed	\$130.51
Gross profit	\$ 53.77
Cost of cards and transportation at 3 cents per mile	\$ 5.30
Net profit	\$ 48.47

An adequate stock of all types of tubes and a few tone-controls, lightning arrestors, a.c. line filters and similar items were carried. After testing each set Kennedy recommended new equipment where it was desirable or necessary and offered to supply it without extra charge for installation or connection. Type 45 tubes were the best selling item. Type 80 ran a close second and tone controls selling at \$3.85 were the most profitable, 14 being sold in the course of two weeks. Pilot lights costing a dime and selling for a quarter were also money-makers. A record of all inspections was kept



A scheme which proves especially useful during the Christmas season, when business is largely proportional to the number of window-shoppers attracted, is employed all year 'round by C. L. Felt of Salt Lake City. He rents small space, such as this store-corner, from other retailers and installs radio-refrigeration "sub-displays." Each one has its own saleswoman who turns in leads

for future follow up with short-wave converters and new gadgets which may be developed.

The photograph on the introductory card served as identification.

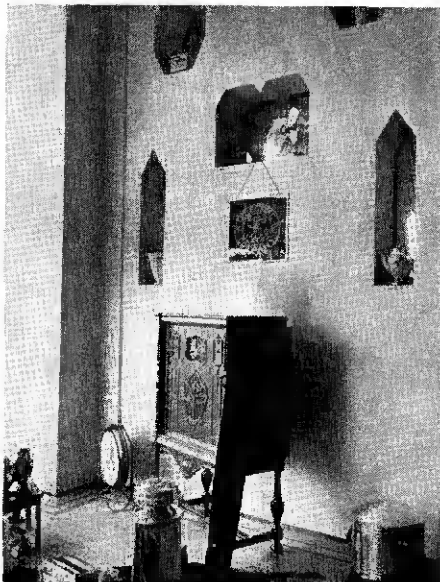


Bang Goes the Gavel

MURL ED. DE BEAUCHAMP, radio department manager of Montgomery-Ward & Company's store No. 86 in Muskogee, Oklahoma, writes: "Here is a plan which has proved to be the very best I have ever tried as a sales stimulant. It works especially well in department stores.

"Set aside a number of gifts to be auctioned to the highest bidder. Then for a definite time, say, about two weeks, give with each cash purchase or cash payment on account a stage money voucher for the amount of cash received. At the close of the advertised period auction the gifts to the highest bidder in the store, payment to be made in stage money vouchers only.

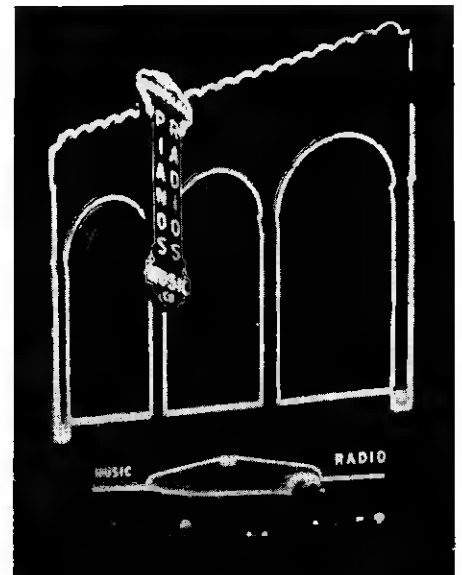
"The results of such a stunt are certain to be pleasing to the retailer if it is properly conducted."



Mirror-backed niches in the walls of the G & L Electric Company's display window at Beverly Hills, California, attract and hold the attention of Yuletide shoppers. Small electrical appliances are placed in them



Neon light, outlining the façade of the Dreibleibis Music store in Butte, Montana, brings in more than enough business to warrant its \$5,000 installation cost, according to H. A. Doyer

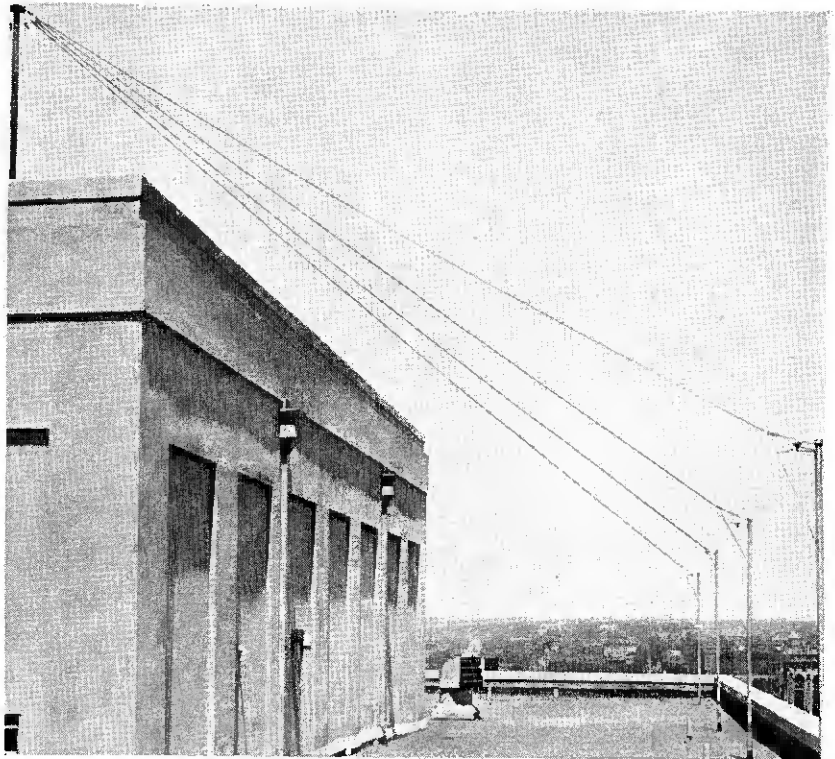


The Multicoupler

How outside and conduit types are installed. Planning risers for typical buildings. Making final tests

By
Fred A.
Klingenschmitt

EDITOR'S NOTE: This the third, and last, article of a series about Master Antenna Systems. The first appeared in the July and the second in the September, 1931 issues of "Radio Retailing."



This is part of an outside job recently installed in a new multi-story building and designed to feed 200 apartments

THE "Multicoupler" antenna system, developed by E. V. Amy, J. G. Aceves and Frank King of New York to permit operation of a plurality of radio receivers from a common antenna, employs coupling units in the downloads, one for each apartment to be served. Receivers are coupled to the antenna through these units, the radio-frequency distribution line thus being maintained at practically constant attenuation irrespective of the number of sets in use.

In addition to their function of preserving uniform line impedance the couplers serve two other useful purposes. They are designed to provide equal signal distribution through suitable coupling action and to prevent interaction between the various sets obtaining energy from the one collector system.

Two types of installation are possible, the "outside" type, for use in existing buildings where downloads must be carried on exterior walls or through shafts and the "conduit" type with concealed risers and built-in flush plates for installation in buildings in the process of erection.

The outside system will first be described.

The Outside Type

The ideal antenna consists of a single wire 50 to 75 ft. long, made of No. 14 stranded copper wire and supported 20 ft. or more above the roof. It should be well clear of projections such as chimneys, metal smoke stacks and guy wires. The

support to which the lower part of the antenna or download is fastened, where it "breaks" over the coping, should be at least 8 ft. high, to prevent tampering. An approved lightning arrestor must be connected to the system at this point and properly grounded.

Where the roof space is limited and it is not possible to erect such an antenna, satisfactory results may be obtained by using one made up of two or more sections, connected at one end and fanned out at the other. If several individual aerials are required on the same roof, which occurs when the number of apartments to be served exceeds the maximum recommended number of couplers per antenna, no two wires should be parallel unless separated by at least 6 feet.

When roof conditions permit the erection of an efficient aerial as described above, as many as thirty sets may be operated from this one collector, using one coupler for each set. This may be accomplished in any one of the following methods:

(a) By connecting all couplers in series in one download

(b) By connecting two downloads to the one antenna, each supplying energy to 15 couplers

(c) By connecting three downloads to the one antenna, installing from 3 to 6 couplers in each riser (3 downloads is the maximum recommended for one antenna.

(d) By connecting one or two horizontal risers to one antenna for two or three story buildings

Several typical riser plans are shown on the third page of this article. Variations are, of course, possible for special layouts.

Downloads may be carried on exterior walls, in airshafts, dumbwaiter shafts or ventilating flues. Number 14 stranded copper wire is recommended and should be laid out so that it passes as closely as possible to living rooms in its descent. It must be held at least 3 inches away from the building in order to minimize capacity effects. This may be accomplished by locating 3 in. porcelain-bushed screw eyes just below each coupler. Such insulators can be fastened securely in a brick wall by using a Rawl plug in a $\frac{1}{4}$ in. hole star-drilled $\frac{3}{8}$ in. deep. Holes should be drilled in solid bricks and not in the mortar between them.

The most common method of carrying lead-ins from the external coupler to the set is by running well insulated and impregnated wire through a $\frac{1}{8}$ in. hole drilled in the window sill. A simple terminal block may be placed beneath the sill, inside the room. From this point, antenna and ground connections are handled as in the ordinary home installation.

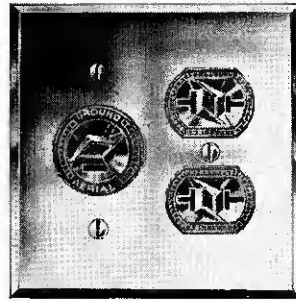
The lead-in between coupler and set, should not exceed 75 ft. in length.

For each download a terminal resistor is required and this is connected between the end of the lead and a good water-pipe ground. A non-inductive, weather-proof resistor rated at 1,000 ohms, 30 watts is recommended. According to the designers, this terminal unit prevents the existence of "standing waves" in the an-

Antenna System



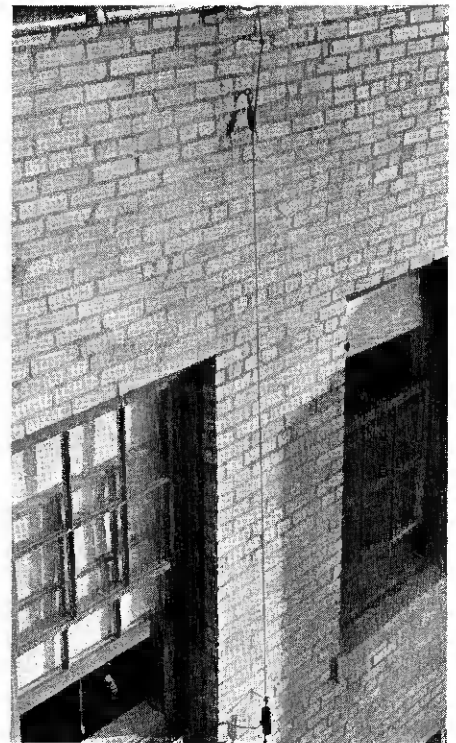
External downleads are usually held away from the coping in this manner



In new buildings, special flush plates provide convenient terminals for antenna, ground and power



Outside installations normally employ couplers of this type, designed to withstand weather



One method of securing outside risers to exterior walls of existing buildings. A coupler may be seen near the window

tenna system and makes the line much quieter.

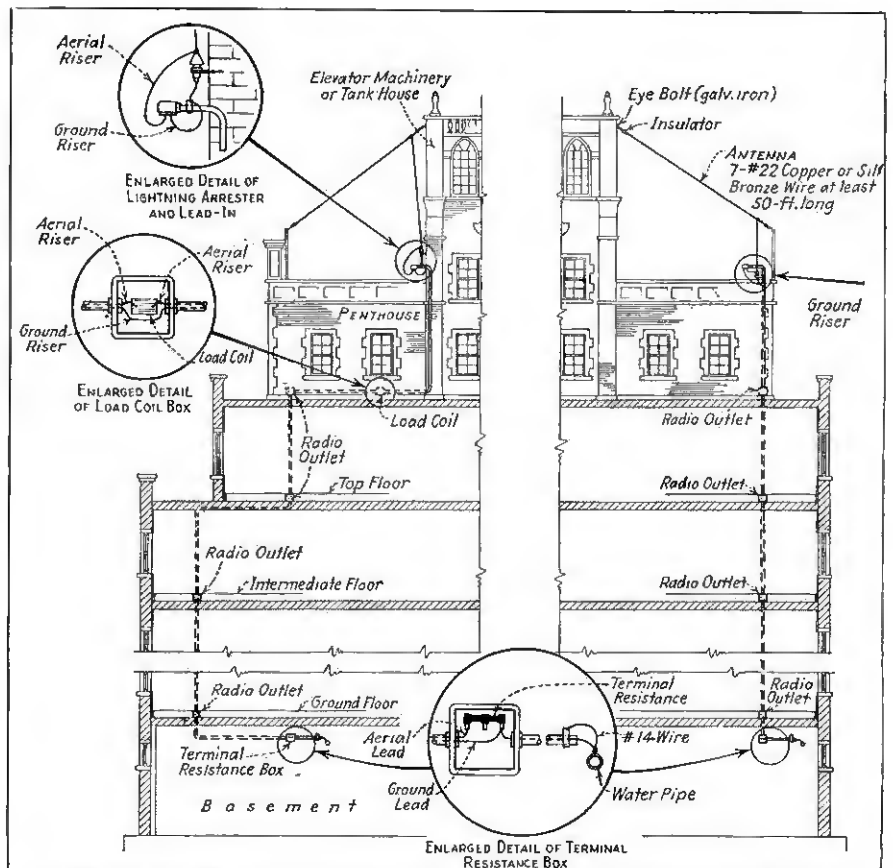
After the installation has been completed a continuity test should be run. The resistance of each downlead to ground will naturally be 1,000 ohms, two in parallel 500 ohms and three in parallel 333 ohms if the system has been properly connected and insulated.

The Conduit Type

Aside from the fact that on a conduit job all work must be fully concealed, the principal difference between this type of installation and the outside variety is in the introduction of riser shielding. Due to the increase in distributed capacity caused by the proximity of metal conduit to the conductor additional precautions must be taken to insure maintenance of constant line attenuation.

Number 22, seven-strand copper wire is recommended for the antenna proper. Otherwise, the specifications applying to outside job antennas apply equally to the conduit job roof work. Fewer apartments may be supplied from one antenna when risers are shielded. A maximum of 25 sets per antenna is recommended, unless an exceptionally good and high antenna is available.

It is recommended that risers in the conduit type of job be carried in standard $\frac{1}{2}$ in. rigid conduit. Two conductors are carried in this conduit, consisting of two straight No. 18 copper wires with $\frac{1}{2}$ in.

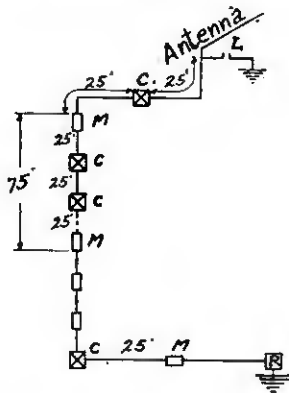


Elevation and section of apartment building showing a typical conduit layout

TYPICAL RISER DIAGRAMS

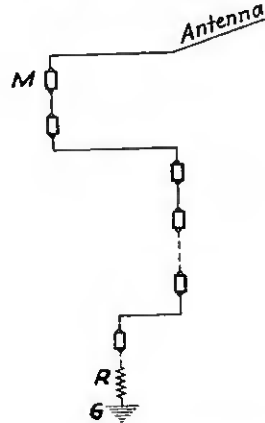
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CONDUIT JOBS

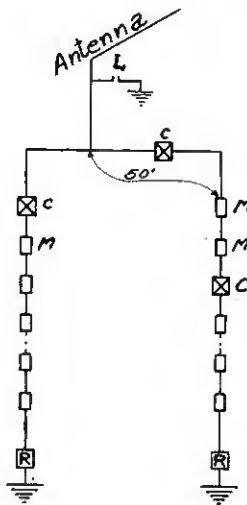


A common method in new buildings from 3 to 30 stories. Maximum outlets 30 to each 75 ft. antenna. Loading coils (C) are required wherever antenna runs without coupler (M) exceed 50 feet

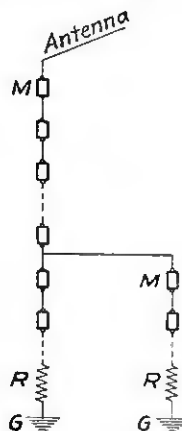
OUTSIDE JOBS



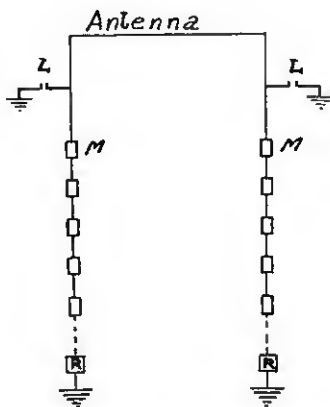
Where downloads are unshielded by conduit, as in the case of an installation in an existing building, more couplers can be worked from each antenna. Loading coils are not required. This plan handled buildings of the "set-back" type, 3 to 30 stories



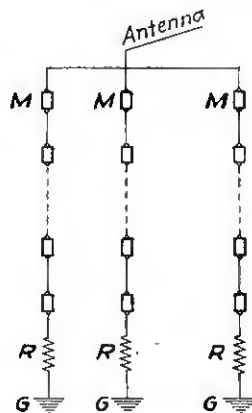
Where two branch risers are desirable, in 6 to 10 story structures, this plan is sometimes used. 20 outlets per antenna is about the maximum in this case



Fifteen stories or less, maximum of 25 couplers. Where parallel branch circuits are employed the difference in the number of outlets per branch should never exceed four



This is a variation of the branch riser scheme, tapping the antenna at both ends. For 3 to 10 story apartments



Three-branch riser systems of this type are common in structures of less than 6 stories, handling 18 couplers per antenna. The antenna may be connected to the center, or either end of any branch feeder

rubber insulation and impregnated braid covering. One wire is used as the downlead feeder from the antenna, in which couplers are connected in series and the other as a common ground for all outlet plates. The ground conductor should be connected to a cold water pipe in the basement.

Many riser layouts are possible and some of these are shown diagrammatically at the left. Much less liberty can be taken in connection with the designer's instructions in connection with a conduit system, however, and schemes not shown in literature accompanying equipment should be submitted for approval.

In non-fireproof buildings it is possible to use lead covered cable instead of $\frac{1}{2}$ in. conduit. This cable, if used, should be No. 18 straight twin conductor lead covered. One wire is used for the feed line and the other as a common ground, just as in the case of conduit jobs. Each riser is terminated in the basement through 1,000 ohm resistance to ground. This resistance is placed in a 4 in. by 4 in. outlet box with a blank plate.

In certain cases, to compensate for capacity losses in the circuit, loading coils are required. When the length of conduit between the radio outlets, or the distance between the top of the conduit on the roof of the building and the first outlet is more than 50 feet, loading coils are required in the conduit type of installation while unnecessary with outside jobs. A loading coil should be installed about every 25 ft. in series with the downlead if a coupler is not used. The coil may best be mounted within a 4 in. by 4 in. outlet box with a cover and blank plate.

Special flush-plates and boxes are obtainable for the termination of antenna and ground leads within the apartments. (The Arrow-Hart & Hegeman Electric Co., Hartford, Conn.). Three types are made:

- (a) A 2-gang unit, 1 gang of which is a duplex power outlet and the other a single outlet for aerial and ground.
- (2) A single-gang unit consisting of a duplex receptacle, one outlet of which is for power and the other for antenna and ground.
- (3) A single receptacle unit for aerial and ground connections only.

The first two types are complete with box, cover, receptacle, duplex outlet, cap, plate and special multicoupler which fits within the box. The third item can be installed in a standard switch box 2 in. by 3 in. by $2\frac{1}{2}$ in. deep and a coupler which will fit within the box obtained separately.

The system is tested for continuity and accidental grounds in exactly the same manner as has been recommended for testing outside riser jobs.

Properly installed, either system will give results which will more than satisfy any owner and his tenants. All sets will be supplied with signals of sufficient strength to override electrical disturbances which would normally affect reception where an individual antenna was used. Commercial as well as special types of receivers will operate at peak efficiency. The operation of one or more sets will not affect other receivers connected to the same system enough to be detected by any listener. Installation costs will be found low and both initial and subsequent mechanical difficulties few.

The Buyers' Vision

(Continued from Page 22)

INCREASE PER UNIT MORE THAN TWENTY FIVE PER CENT. EXPECT FURTHER GAIN REMAINDER OF SEASON. RETAILERS ARE BUYING HIGHER PRICED SETS. THIS IS GOOD INDICATION MIDGET LOSING GROUND.

WILLIAMS PHILCO, INC.

Baltimore, Maryland has this to say—

McGRAW-HILL PUB. CO.

ALTHOUGH WE ARE RETAILERS FEEL OUR EXPERIENCE GENERAL IN BALTIMORE. MORE THAN BREAKING EVEN IN CONSOLES SELLING TWO TO EACH MANTEL MODEL NOW. GETTING EIGHTY FIVE DOLLARS PER UNIT AVERAGE.

JOHNSON BROS.

From a Dayton, Ohio dealer—

RADIO RETAILING MAGAZINE:

SELLING SLIGHTLY MORE CONSOLES THAN MIDGETS AVERAGING EIGHTY DOLLARS. HAVE TAKEN ON FULL LINE MAJOR AND SMALLER ELECTRICAL APPLIANCES TO SUPPLEMENT MUSIC BUSINESS AND FIND INCREASED VOLUME AND PROFIT ENCOURAGING

ANDERSON SOWARD MUSIC CO.

A report from Columbus, Ohio—

RADIO RETAILING:

DO NOT THINK RADIO BUSINESS OFF MORE THAN TEN PER CENT. MANY ARE ASKING FOR BETTER MODELS. RADIO MIDGETS TO CONSOLES ONE TO ONE AND ONE HALF. AVERAGE PRICE EIGHTY DOLLARS. PEOPLE ARE REALIZING TONE IS WHAT THEY REALLY WANT AND THAT THEY MUST PAY FAIR PRICE FOR IT.

R. C. BOHANNON

Terre Haute, Indiana, trade is apparently looking at better sets too—

SUTLIFFE, RADIO EDITORIAL:

FALL DEMAND FOR SETS REMARKABLY GOOD WITH CONSOLES AS LEADERS. AVERAGE PRICE SIXTY DOLLARS. SATURATION NOT YET A FACTOR HERE. AT PRESENT RATE VOLUME WILL NOT BE OFF MORE THAN FIFTEEN PER CENT AS AGAINST LAST YEAR.

ROOT DRY GOODS CO.

Danville, Illinois—

EDITOR, RADIO RETAILING:

RADIO BUSINESS SETTLING DOWN BUT STEADY DEMAND OF SUFFICIENT SIZE TO INSURE MODERATE PROFIT FOR EFFICIENTLY OPERATED STORE. PAYMENTS COMING IN BETTER. AVERAGE SALE SEVENTY FIVE DOLLARS. CONSOLES RETURNING TO FAVOR.

ALLEN ELECTRIC CO.

The foregoing reports, obtained by wiring representative distributors and dealers in the various territories (to whom we extend our thanks) afford sufficient proof that things are looking up.

But not every jobber reported that console sales are

improving. A distributor in Toledo, Ohio, sees no change in his business to date—

RADIO RETAILING:

MIDGET SETS SELLING TEN PER CENT MORE THAN LAST YEAR OVER CONSOLES. GENERAL RADIO BUSINESS IMPROVED OVER LAST YEAR. LOOK FOR GOOD VOLUME BOTH CONSOLES AND MIDGETS. BELIEVE GENERAL PROSPERITY MUST RETURN BEFORE CONSOLES OUTSELL MIDGETS. NO INCREASE IN UNIT SALES. BEST WISHES IN YOUR HELP TO INCREASE UNIT SALES.

AITKEN RADIO CO.

Situation unchanged in Omaha, Nebraska, according to this distributor—

SUTLIFFE, RADIO RETAILING:

OUR RECENT SALES SHOW THIRTY FIVE AND ONE HALF PER CENT CONSOLES AND SIXTY FOUR AND ONE HALF PER CENT MIDGETS. CONSOLE SALES ARE LARGELY CONFINED TO METROPOLITAN CENTERS. MIDGET SALES ABOUT FORTY PER CENT METROPOLITAN AND SIXTY PER CENT TERRITORY.

H. C. NOLL CO.

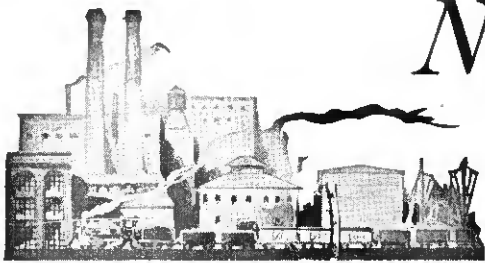
Another fact, disclosed by our editorial survey and not reflected in the preceding telegrams, was this: The character of tomorrow's market new lies largely in the hands of the man on the firing line. It is for him to say what shall be purchased from the manufacturer and sold to the public. Individual initiative can make or break the industry from now on. Many dealers now realize this. They know that they hold the whip hand—and they intend to exercise this power in the future to protect themselves.

Local Interference Causes

DURING the past year 3,648 complaints were investigated by the radio interference branch of the Pacific Radio Trade Association, according to its report. Expense of operations for the year totaled \$9,600, or \$2.65 per complaint. Of this amount, the Pacific Gas and Electric Company, Great Western Power Company, Key System, Ltd., Southern Pacific Company, Market Street Railway Company, and the Sacramento Short Line subscribed to a total of \$6,780 and the balance was paid out of association funds.

Following is a segregation of radio interference causes for the San Francisco Bay area:

Utilities	1844
Trouble found in the set	350
Cleared by itself	324
Defective wiring in buildings	271
Defective aerials and grounds	233
Heating pads	223
Miscellaneous	191
Wrong address or moved	104
Flashing signs	81
Oil burners	72
Amateurs	46
Motors	30
Violet rays	22
Elevators	22
Diathermy	20
Battery chargers	15



New Products for

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



RCA-Victor R-13

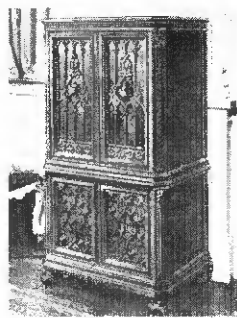
RCA-Victor Line

RCA-Victor Co., Inc., Camden, N. J., has brought out two combinations (RAE-79 and RE-73) which play the new longer-playing records.

Model RAE-79, the de luxe model of the entire new line, is a 13-tube super combination with two speakers operating as a unit. This set also has remote control, automatic record changer (ten 10 in. records, two sides), home recorder with 2-button full studio mike. \$995, complete.

Model RE-73, an 8-tube, t.r.f. combination is also provided with the 33½ r.p.m. clutch for playing the new records. The cabinet is walnut veneer in the lowboy style.

Model R-11 is a 9-tube super



RCA-Victor RAE-79

with automatic volume control. The cabinet is a highboy. \$119, complete.

Model R-59 houses a 10-tube de luxe super radio-phonograph combination which plays the new records, has home recording with studio microphone and automatic record changing. \$350 complete.

R-43 is a self-powered radio receiver for unelectrified areas and districts served by d.c.

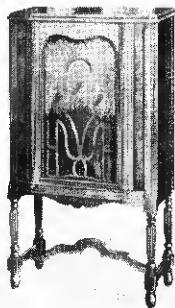
A low-drain 2-volt tube has been developed for use in conjunction with the new air cell battery. Two important contributions to this set are a new circuit which provides four times the audio output of an ordinary circuit using the same tubes and batteries, and the development of a fixed-magnet dynamic speaker which provides true tone, according to the release. \$99.50, less battery.—*Radio Retailing*, November, 1931.

Apex and Gloritone Sets

WITH the addition of four new sets, the Apex and Gloritone lines of the United States Radio & Television Corporation, Marion, Ind., now range from 5- to 10-tube superheterodynes.

Two of the sets are members of the "Apex" line. They are Models 7-A and 7-B. Both are 7-tube models, one a table model and the other a console. They feature automatic volume control, tone blender, spotlight dial, and the mu and pentode tubes. Model 7-A, the midget, is \$47.50, and 7-B is \$59.95.

Models 99-A and 99-B are part of the "Gloritone" line, being 5-tube sets, including all the features of the 7-A and B. Model 99-A, the midget, is \$39.95, and Model 99-B is \$49.95.—*Radio Retailing*, November, 1931.



Apex Model 7-B

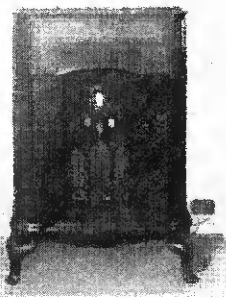
Zenith Sets

ZENITH Radio Corp., 3620 Z Iron St., Chicago, Ill., has two new sets in addition to the recent presentations. One is a 14-tube "Ultra" Model 103, with automatic tuning, automatic volume control, and automatic voltage regulator. It comes in a Louis XVI cabinet, 50½ in. high, and has a list price of \$290 complete.

Model 90 is a highboy with doors, enclosing an 8-tube superheterodyne chassis. This set has Magnavision dial, automatic volume control, and lists at \$135 complete.—*Radio Retailing*, November, 1931.



Zenith Model 90



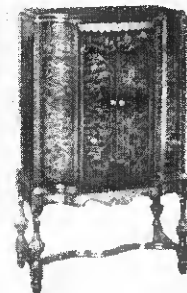
GE De Luxe Combination

G-E Sets

THE de luxe automatic radio-phonograph combination recently introduced by the General Electric Company, Bridgeport, Conn., comes in a Queen Anne Cabinet. It plays 10 in. records for approximately 30 minutes without repeating. Twelve in. records may be played manually. It is equipped with a gear shift for changing the speed from 78 to 33½ r.p.m. This makes possible the use of the new type long playing records. In the home recording unit a new type of microphone is employed, powerful enough to record both 6 and 10 in. records. The radio is a ten tube superheterodyne using two pentodes in push-pull. \$345.

"Popular" console is in the senior console class, housing a nine tube superhet set with two pentodes. Automatic volume control is incorporated. \$124.75.

DeLuxe Lowboy follows the trend of the classical Italian period. The chassis is a ten tube super with double pentodes. \$164.50.—*Radio Retailing*, November, 1931.



Clarion Model 94

Clarion Sets

THREE new Clarion superheterodyne models are now in production by the Transformer Corp. of America, Ogden & Keeler Ave., Chicago, Ill. They are designed in 7- and 8-tube types, with variable tone control and full vision dial.

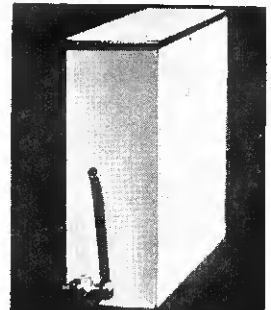
Model 94 comes in a high-lighted, two-tone effect cabinet, and has automatic volume control. \$89.50 complete.

Model 84 is a lowboy, listing at \$69.50 complete.

Model 85 is a midget model, priced at \$49.95 complete.—*Radio Retailing*, November, 1931.

Coldrink Cooler

A NOVEL but practical and useful modern kitchen convenience is offered in the "Coldrink Cooler" which can be placed in any electric or ice refrigerator. It fits all standard makes, and is easy to use—just fill with water and place on refrigerator shelf. It is made of steel, heavily coated with vitreous enamel, and has a chromium-plated rust-proof faucet. It holds more than a gallon of water. There is nothing to attach to the refrigerator. Price, \$4.50. Hamburg Bros., 963 Liberty Ave., Pittsburgh, Pa.—*Radio Retailing*, November, 1931.

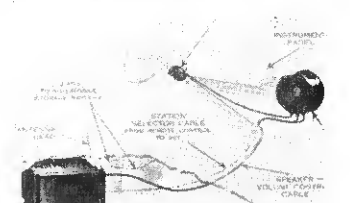


AK Auto Radio

MODEL 81 automotive set, ready for delivery by the A. Atwater Kent Manufacturing Co., Philadelphia, uses a specially-developed tuned radio frequency circuit employing three 236's, two 237's, and two 238's, with push-pull amplification. This set has automatic volume control, illuminated remote control and large size electro-dynamic speaker.

The entire assembly consists of but three units—the combined set and battery container, which goes under the floor boards; the dynamic speaker, usually mounted under the cowl, and the remote control, clamped to the steering column. As only four small holes are drilled to install, it is possible to move from one car to another easily.

The price is \$89.50 complete with tubes and B-batteries—installation and antenna extra.—*Radio Retailing*, November, 1931.

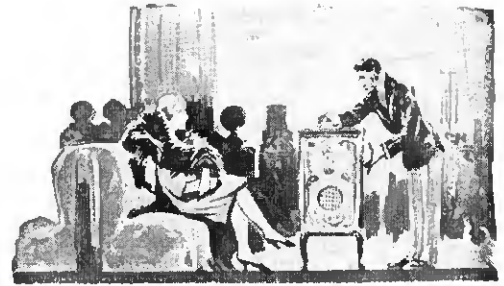


Correction

THE price of the Peter Pan midget made by the Jackson Bell Co. Ltd., Los Angeles, and described in the September issue, is \$29.95, complete, and not \$24.95.—*Radio Retailing*, November, 1931.

Dealers to SELL

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



Woodrow Washer

WOODROW Washing Machine Co., Pella, Iowa, offers three models, Nos. 30, 40 and 50, in both the gas engine and the electrically-driven types. The tubs are made of rustless steel in some models, and in chromium in others.

Both the gas and electric motors are detachable in a minute's time.

Some of the features of these washers are: handy drain hose; large clothes capacity; lid which can be used as sorting tray; swinging wringer with balloon rolls.—*Radio Retailing*, November, 1931.

Operadio Dynamic Speaker

AN EXTREMELY compact dynamic speaker for use with the very small midget sets, has just been added to the line built by the Operadio Mfg. Co., St. Charles, Ill. It is but 6 in. in diameter, and $\frac{3}{8}$ in. overall, including the speaker transformer. Operadio's inverted construction that places the field coil within the conical diaphragm allows the use of a larger field coil than customary in these small speakers.—*Radio Retailing*, November, 1931.

Dayrad Tester and Analyzer

A DIRECT reading tube tester and a direct reading tube analyzer have been brought out by the Radio Products Company, Dayton, Ohio.

Type 375 tube analyzer uses the mutual conductance of radio tubes as a quality measurement. The large meter dial is scaled in three classifications: good, weak, poor. No switching arrangement is used. A self-enclosed power pack furnishes the correct voltages to the tube sockets. The dealer's price is \$171 net, complete.

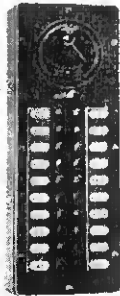
Type 360 direct reading tube tester, illustrated, is ideal for stores where space is limited. A separate tube socket is provided for each type of tube and the large meter scale is divided into three sections; good, weak and poor. Tests are made for quality, shorts and opens. The dealer's price is \$75 net.—*Radio Retailing*, November, 1931.



Stromberg Remote Control System

A RESIDENCE type electrical remote control system which gives complete control of both radio and records, is now made by the Stromberg-Carlson Tel. & Mfg. Co., Rochester, N. Y. By means of push buttons in a small control box one may start or stop the radio, start or stop a multi-record phonograph at the same time switching from radio to phonograph and vice versa, tune in eight stations automatically, tune to other stations, adjust volume or control any one of four speakers.

Control boxes for mounting flush in walls can also be had.—*Radio Retailing*, November, 1931.



Pre-Pay Meter for Refrigerators

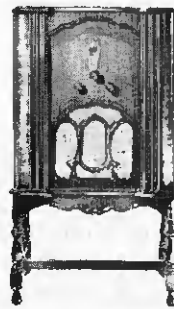
METERMATIC—an ingenious meter to be connected to electric refrigerators when they are sold—is being made by the Automatic Refrigerator Corp., 221 N. LaSalle St., Chicago, Ill. The idea of the meter is to collect the monthly payment by having the customer deposit a certain sum each day to get the service—say 25c—just as if they were buying ice.

In this way, it makes the monthly payment easier, and eliminates the credit hazard, as the 25c. must be deposited in advance to have refrigeration.

These meters can be timed at 10, 20, 24 and 28-hour intervals, to collect \$1.50, \$4, \$7.50 or \$9 per month. At the rate of 25c. per day, the amount is \$7.50. As each quarter is inserted, it registers on the front of the meter. The quantity price is \$25, f.o.b. factory.—*Radio Retailing*, November, 1931.

Bosch Model 31H

MODEL 31H, a new popular priced set is now ready for distribution by the United American Bosch Corp., Springfield, Mass. This set is a 6-tube superhet with tone control and Line-O-Lite tuning. The price is \$67.50 complete.—*Radio Retailing*, November, 1931.

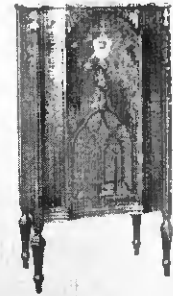


Van Sicklen Auto-Radio

TWO screen grid, one variable-mu, a '27, two 171-A's, three "B" and two "C" batteries, eight spark plug suppressors, one distributor suppressor, two condensers, battery box, shielded connector cables and aerial equipment, all are included in the price of \$89.50 for the Van Sicklen "Motoradio", the product of the Van Sicklen Corp., Elgin, Ill. This set has automatic volume control, remote control attached to the steering column and electro-dynamic speaker. It measures but 7 1/2 in. in its largest dimensions, so there is room for it behind the instrument board.—*Radio Retailing*, November, 1931.

"Eternatime" Electric Clocks

A GROUP of clocks in marble and onyx have recently been added to the line of "Sunbeam Eternatime" electric clocks made by the Chicago Flexible Shaft Co., Roosevelt Road and Central Ave., Chicago, Ill. The prices range from \$30 to \$15, and include types for all decorative schemes.—*Radio Retailing*, November, 1931.



Columbia Model C-32

Columbia Sets

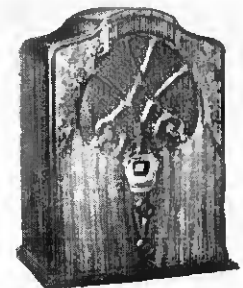
FOR the present radio season, the Columbia Phonograph Corp., 55 Fifth Avenue New York City, has announced its "Tele-focal" radio sets at a price range below \$90, including tubes.

One lowboy and one midget set have the superheterodyne chassis, and the other lowboy and midget are equipped with t.r.f. circuits.

The superhet chassis has a pentode, three multi-mu's, one '24, a '27 and an '80. Full vision dial with flash-light tuning, a static suppressor, combined with the tone control, are included.

The t.r.f. models are equipped with a five tube circuit—two multi-mu's, a pentode, a '24 and an '80. The combination static suppressor and tone control is also used.

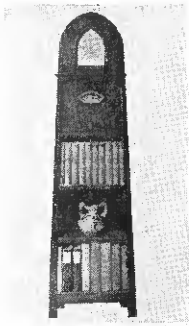
Columbia is also making a home dry cleaner, which will be of interest to radio dealers looking for an inexpensive side line. It has a capacity of 3 1/2 gal. A special non-explosive cleaning fluid is also available. The cleaner is \$7.95 and the Columbia cleaning fluid is \$1.95 a gallon.—*Radio Retailing*, November, 1931.



Columbia Model C-31

Rola F-5 Speaker

IN KEEPING with the trend toward smaller midget radios, the Rola Company, 2570 Superior Ave., Cleveland, Ohio, announces model F-5 speaker with an over-all diameter of 1 1/2 in., depth 3 1/2 in.; Weight 3 1/2 lbs., effective cone diameter, 5 in.—*Radio Retailing*, November, 1931.



Rada-Chron Receivers

THERE is an electric clock in every set made by the Radio-Chron Co., Kansas City, Mo. The "Rada-Chron" line is made up of the regulation midget and console models as well as two unique cabinet types, one a book case style and the other a Queen Anne console. Both t.r.f. and superhet circuits are available, the nine tube models having automatic volume control.

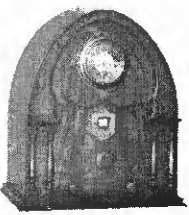
Model A-1 is a 5 tube t.r.f. midget priced at \$39.95. Model A-2, the console model with the same chassis, is \$49.95.

Model G-7 has the 7 tube superhet chassis. It is a midget, priced at \$59.90. Model G-17, the console model in this size chassis, is \$74.90.

K-10, equipped with the 9-tube superhet circuit, is \$69.90 in the midget type and \$84.90 in the lowboy model.

Special furniture Model K-20, the console built along Queen Anne lines, is \$94.90. The book case model which is a most attractive and unusual model with three book or bric-a-brac shelves, topped by the set and clock is \$99.50. All above models are priced complete with clock and tubes.

An auto-radio set is also available. It is a 6-tube screen grid job with super dynamic speaker. The control panel attaches to the steering gear. The price complete with tubes, batteries, suppressors, generator condenser, is \$69.90. A running board aerial is \$5 extra.—*Radio Retailing*, November, 1931.

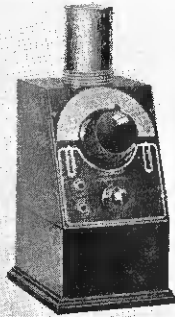


Peko Portable Talkie Unit

"MAESTRO" is the trade-name of the new portable talking unit with amplifier made by Peko, Inc., 2400 West Madison St., Chicago, Ill. It has 33½ and 78 r.p.m. speed on turntable, and disconnecting clutches for projector and turntable. Other features are fader volume control for both microphone and pick-up, tone control and direct illumination with cut down for still pictures. It will take any 16 mm. film or any record up to 16 in. diameter. For 110-volt, 60 cycle a.c. operation only. The price of projector and turntable unit is \$195. The two-stage, 2½-watt amplifier is \$60.—*Radio Retailing*, November, 1931.

Acrocyle Oscillator

A MINIATURE broadcast station easily adjusted to produce a signal of any desired frequency and power, in either broadcast or superheterodyne intermediate ranges, for use in testing, comparing and adjusting radio receivers, either in whole or by stage, is made by the J-M-P Mfg. Co., Inc., Milwaukee, Wis. This instrument has several advantages, including direct true reading scale, no calibration curve to bother with, full vision dial, and plenty of power for accurate reading. The price \$17.50, net to dealers.—*Radio Retailing*, November, 1931.



Western Airway Auto Radio Set

THREE tuned stages, two stages of audio, using two 336 screen grids, three 337 amplifiers and two pentodes for output are employed in the "Western Airway" auto-radio set made by the Pioneer Radio Mfg. Co., 2500 Market St., San Francisco, Calif. This set has duo-automatic volume control, steering wheel tuning, and electro-dynamic speaker. The price of the set installed (in San Francisco), is \$79.50 complete.

Pioneer also makes a Grandfather clock-radio listing at \$79.50 complete; a console at \$59.50, a midget at \$39.50; a "Pee-Wee" midget at \$29.50; and a d.c. model at \$49.50.—*Radio Retailing*, November, 1931.

Fink Imperial Radios

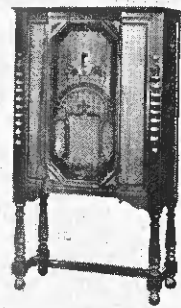
FINK Industries, 706 Sheridan St., Lansing, Mich., offers a 4-tube set at \$24.95, a 5-tube model at \$34.95 and a 7-tube at \$49.95, each in a compact style cabinet.

In the console style cabinet, a 7 tube is available at \$59.95 and a 9 tube at \$84.95. This company also makes battery and automobile receivers.—*Radio Retailing*, November, 1931.

Fada Sets

F. A. D. ANDREA, Inc., Long Island City, N. Y., has announced the introduction of a new double-wave receiver for European use, available in both the compact table Model 61 and lowboy Model 63. They use a special high efficiency five tube circuit including 2-235, a 224, a 247 and a 280. They are made to operate on 110-volt, 60-cycle a.c.

Fada also has three new 10-tube superhet consoles, Models 65, 48, and 49. Each has automatic Flashograph tuning, automatic volume control, pentodes in push-pull and tuning silencer.—*Radio Retailing*, November, 1931.



Two New G-M Sets

A 6-TUBE superhet, priced at \$39.50, has just been announced by the General Motors Radio Corp., Dayton, Ohio. This set, known as the "Little Corporal," is of the midget type and uses two '24's, and one each of the 47, 27, 35 and 80 types.

The "Salem" console is a 7-tube receiver equipped with automatic volume control. \$69.50.—*Radio Retailing*, November, 1931.

Freed Eisemann Midget

IN ADDITION to the television receivers, tubes and other parts, the Freed Television and Radio Corp., 2219 Wilbur Ave., Long Island City, N. Y., announces a 4 tube, t.r.f. receiver, employing a variable-mu, screen grid, pentode and a 280. The set comes in a midget cabinet.—*Radio Retailing*, November, 1931.



Sentinel Superhet Midget

A detector - oscillator system which operates equally well over the entire broadcast band, according to the announcement of the United Air Cleaner Corp., 9705 Cottage Grove Ave., Chicago, Ill., is incorporated in its new Model 116 table model. Five tubes are employed, some of which are double-purpose, giving the effect of a 7-tube receiver.—*Radio Retailing*, November, 1931.

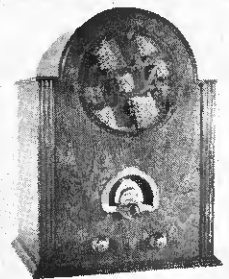
New Motorola Auto-Radio Sets

A FIVE tube "Motorola" auto-radio is now made by the Galvin Mfg. Corp. 847 W. Harrison St., Chicago, Ill., retailing at \$59.50, less installation, as well as a 7-tube model, selling for \$79.50. The latter has automatic volume control.—*Radio Retailing*, November, 1931.

Telechime with Decorative Grille

TELECHIME Division of General Kontrolor Co., 200 E. First St., Dayton, Ohio, has added to its line a new "Aristocrat" model with tubular chimes, C F A C., the notes of the major chord, in addition to its well known Westminster model. These chimes are designed for service in lieu of ordinary door bells in discriminating homes. Pressure of the regular button at the front door starts the chimes playing, while other single-note signals can be arranged from side doors or other push buttons.

Telechime models can be provided with an exclusive Telechime patented ornamental grille for decorative installation. Such a Telechime grille was shown at the top of page 33 of the October issue, where it was erroneously captioned with the name of another manufacturer.—*Radio Retailing*, November, 1931.



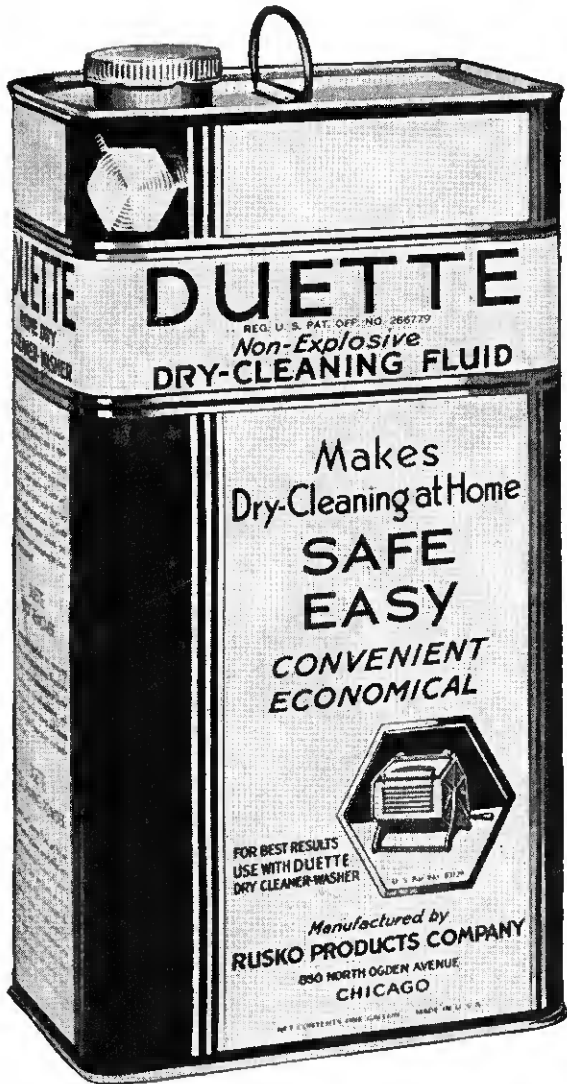
Jenkins "All-Purpose" Receiver

INCORPORATING an interchangeable tuning system permitting of covering television, short-wave and broadcast bands, an all-purpose receiver is now offered by the Jenkins Television Corp., Passaic, N. J.

Type JD-30 receiver consists of a chassis and dynamic speaker, housed in compact cabinet. The plug-in tuning coils are ganged in matched sets. The r.f. system handles the widest band required for television reception, while the audio system provides a uniformly flat curve from 20 cycles up to the highest frequencies used in picture transmission. The receiver operates as a self-contained broadcast or short-wave receiver, and, in combination with a companion radio-visor, as a television receiver.—*Radio Retailing*, November, 1931.

Television Tube

IN VIEW of the fact that the scanning disc system will, they claim, remain the one most used by amateur television experimenters for the next few years, the Cable Radio Tube Corp., 230 N. 9th St., Brooklyn, N. Y., has developed a new type of flat-plate Neon tube for use in the reception of television signals. It comes in one size only, i.e. with a plate area 1 in. square, which permits the use of any size disc up to 20 in. in diameter. The tube is standard also for those types of commercial scanners, employing the scanning drum.—*Radio Retailing*, November, 1931.



HERE IS A CASH LINE

WITH EVER INCREASING
REPEAT BUSINESS

← Every Duette Machine Sale
Means a Permanent, Ever Increasing
Fluid Business. All Cash!

DUETTE Is an Easy and Fast Seller

The fact that the prominent houses mentioned below and SCORES of other pre-eminent stores throughout the country are daily using, selling and re-ordering DUETTE products proves their superior salability and quality.

MARSHALL FIELD
JOHN WANAMAKER
B. ALTMAN
LORD & TAYLOR
FRANKLIN SIMON
L. BAMBERGER & CO.
ABRAHAM & STRAUS
LOESERS
BLOOMINGDALE BROS.
STERN BROS.
McCREERY
RUSSEKS

GIMBEL BROS.
FILENES
JORDAN MARSH
KAUFMANN'S
LEWIS & CONGER
HAMMACHER, SCHLEMMER
WEED & CO.
THE FAIR
L. S. AYERS
EASTERN HARDWARE CO.
STEWART & CO.
GRIFFITH VICTOR DIST. CO.

Demand for D U E T T E Fluid
GROWS and GROWS and GROWS!

**NO RISKS
NO SERVICING—
NO DULL SEASONS**

With DUETTE products you make money, while finding prospects for other merchandise.

DUETTE QUICK DRY CLEANING FLUID is all CASH business, which is continuous and ever growing. It is to the Radio retailer what the Record business used to be to the Talking Machine dealer in the good old days.

When you sell a DUETTE, you are helping your customer to SAVE MONEY. Dry cleaning bills are a serious item in many a home. With the DUETTE HOME DRY CLEANER a garment can be thoroughly dry cleaned—IN FIVE MINUTES FOR AS LITTLE AS FIFTEEN CENTS.

**DUETTE FLUID CLEANS IN 5
AND DRIES IN 15 MINUTES**

**It Will Pay You
To Fill Out and Mail This Coupon
I M M E D I A T E L Y**

Send me full particulars about DUETTE PRODUCTS.

NameStreet

CityState

Mail this to

SCHREYER, HAMILTON COMPANY
SALES DIVISION, RUSKO PRODUCTS CO.
221 FOURTH AVENUE, NEW YORK CITY
Phone ALgonquin 4-3553

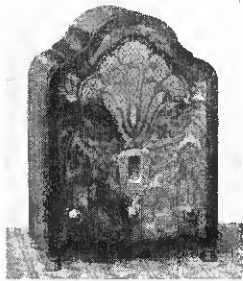
Ret. _____



Lyric Clock Model

A COLONIAL Clock model radio has been placed on the market by the All-American Mohawk Corp., N. Tonawanda, N. Y. It will fit in with practically any furniture scheme and occupies only a square foot of floor space. The set is a superheterodyne and the clock a Hammond. This radio stands 69½ in. high by 14 in. wide and is encased in a walnut cabinet.

Lyric has also added a Model S-10 ten-tube superhet in a console cabinet to its line. It is a "six leg" model of Gothic design.—*Radio Retailing*, November, 1931.



Mission Bell Midget

A SIX-TUBE superhet midget, using the pentode and mu tubes, with electro-dynamic speaker, may be obtained from the Consolidated Radio Mfg. Co., 1455 Venice Blvd., Los Angeles, Calif., for \$44.50 complete. This set has tone control. Consolidated also makes a 4-tube t.r.f. set with the high mu and pentode tubes, retailing at \$29.50 complete.—*Radio Retailing*, November, 1931.

Oxford Speakers

WITH the formation of the Oxford Products Co., Inc., North Chicago, as a subsidiary of the Potter Company of the same city, a new line of Oxford speakers is announced. This line includes the popular 6 in., 8 in. and 10 in. speakers, for use with midget and console radios, and 6 and 8 in. automobile speakers in pressed steel cases. In addition, there is included 12 and 14 in. speakers, and a number of models for theaters and public address systems.—*Radio Retailing*, November, 1931.

Western Electric Microphone

WESTERN Electric Company, 50 Church Street, New York City, offers a line of moving coil microphones, mounted on floor and table pedestals or in the suspended model.—*Radio Retailing*, November, 1931.

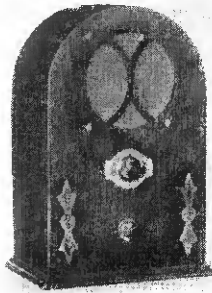
Kennedy Line

A SHORT wave adaptor operating on the superheterodyne principle is being made by the Collin B. Kennedy Corp., South Bend, Ind. It is known as the Globe Trotter.

Baronet is a 7-tube superhet mantel radio.

Premier is a lowboy in dark walnut using the same 7-tube chassis.

Sovereign is an 8-tube model with two pentodes in push-pull.—*Radio Retailing*, November, 1931.



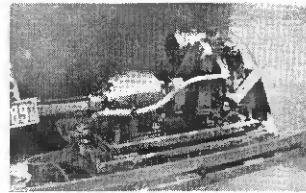
Minerva Combination A.C. and D.C. Set

A "UNIVERSAL," midget style radio set, which can be used either on a.c. or d.c. and requiring a standard aerial and no ground is offered by the Minerva Radio Co., 10 N. Clark St., Chicago, Ill. This set has four tubes; two 236's, one 233, and a 237 or 171A. The speaker is a 6-in. magnetic. While the set was originally made for offices and for local reception, it has been found that satisfactory distance reception is also available. The retail price is \$26.25, complete.—*Radio Retailing*, November, 1931.

S-C Program Service System

TWO types of program service systems, known as Nos. 2 and 3, are being produced by the Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. System No. 2 was described in the July issue. A description of System No. 3 follows:

It includes a radio receiver, microphone, two control panels, power amplifiers, terminal panels, set of blank panels and phonograph unit. This system is entirely a.c. operated. Record program can be played on the phonograph unit, which can be detached from the frame and used at a remote point. Three types of electric phonographs are available,—automatic, record-changing unit in a cabinet, manual changing unit with cabinet, and manual changing unit for mounting in the program service panel.—*Radio Retailing*, November, 1931.

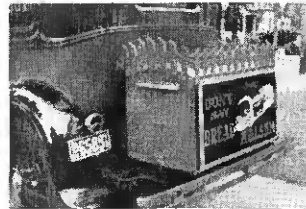


Power Supply for Sound Cars

THE large demand for current to be used in cars and trucks for portable amplifying and public address systems, has resulted in the development of a light-weight machine, 500-watt capacity, a.c., which will fill the need of those who equip sound cars. D. W. Onan & Sons, Royalston Ave., Minneapolis, Minn., are the manufacturers of this equipment. With the introduction of this 110-volt, 60 cycle a.c. plant, it now becomes easy to use all amplification units the same as where city service current is used, making the installation interchangeable.

The engine of 1 h.p. operates a 110-volt, 50 cycle a.c. generator and supplies current for the turn-table, amplifiers and horns. This plant is produced in a weight steel base 10x28 in., and sound car model with light is supplied with spring and rubber mounting which makes the installation a matter of bolting the plant in place and putting it in operation. There are several models with 6 volt starting system, also.

The illustrations show, at top, the plant installed on a car, and below, the way one user disguised it.—*Radio Retailing*, November, 1931.



Moulded Gang Resistor

SIMPLICITY, convenience and low cost, together with compactness, mark the rather novel type of gang resistor just introduced by the International Resistance Co., 2006 Chestnut St., Philadelphia, Pa. The resistor is provided with a special cast metal center support, so that the resistor may be mounted, along with any other combination of resistors, to form a gang resistor. Each unit is separate. The units are placed side by side and a rod is slipped through the aligned holes. Any desired combination of resistors may be assembled.—*Radio Retailing*, November, 1931.

Electric Clocks in Color

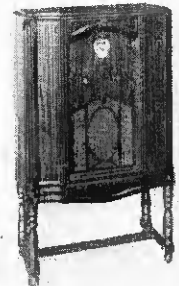
ELECTRIC clocks in color are offered by the Belmont Clock Company, 2222 Diversey Blvd., Chicago, Ill. One model is made of moulded Beetle and comes in Chinese vermilion, French blue, orchid, green, yellow or ivory. The price is \$6; \$7 with alarm. The same clock in Bakelite in walnut and jet black is \$4.75; \$5.75 with alarm.—*Radio Retailing*, November, 1931.

E-A Systems

BOTH portable and regulation address systems can be obtained from the Electro-Acoustic Products Company, 200 E. Illinois St., Chicago, Illinois. This company makes all types of systems for stadiums, hotels, theaters, hospitals, etc.

Type EAP-4S is a portable system weighing only 60 lb. complete and is self-containing in a carrying case. It operates on a.c. current. The unit comprises a powerful amplifier employing five tubes; phonograph turntable with electrical pick-up; speaker; microphone attachment and extension cord. \$199.50, with the microphone priced extra at \$36.75 to \$49.50.

Type EAP-12 is a semi-portable type, particularly useful for operation in connection with mobile equipment, such as automobile installations for advertising purposes. The amplifier will withstand severe mechanical handling, as well as electrical surges, while self-healing condensers have eliminated the condenser breakdown problem.—*Radio Retailing*, November, 1931.



Aztec Models

FOUR new models are now being shown by the Aztec Radio Co., Atchison, Kan., completing its line for the coming season. The other models have been covered in recent issues of *Radio Retailing*.

Two are midgets, one a triple screen-grid pentode set, listing at \$39.50, complete. Model 65 lowboy, with same chassis, is \$34 complete, and Model 75, with the same superhet chassis as Model 70, is \$72 complete.—*Radio Retailing*, November, 1931.

Home Movie Cameras and Projectors

KEYSTONE Mfg. Co., Boston, Mass., is making a line of Keystone home movie cameras and projectors. The cameras come in the spring motor and hand-turn models.

Model A, spring-motor type, has F3.5 universal focus with adjustable diaphragm. 100 ft. capacity. \$35.

Model C, hand crank style, is of the same convenient size, 2½x9x4 in., with high power lens system, binocular viewfinder, film register, etc. \$12.50.

Model A-74 projector for a.c. or d.c., 110 to 120 volt, is \$50. It has Universal motor drive with special rheostat speed control. 400-ft. reel capacity.

Model D-62 is similar to the above model but with 6-8 volt automobile lamp illumination. It is supplied for d.c. only if requested. \$24.50.

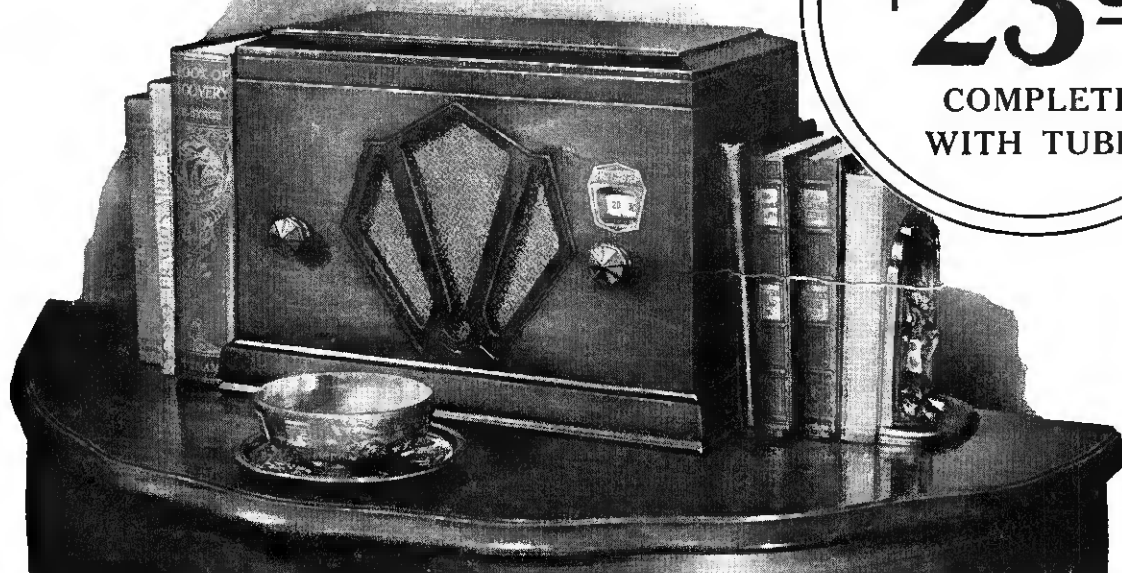
A line of Kinescope projectors at moderate prices is also available, as well as a complete assortment of accessories.

Keystone also has its own list of film subjects, ranging from 10 ft. lengths at 35c. each, to 100 ft. lengths at \$3.50 each.—*Radio Retailing*, November, 1931.

THE WAL-TONE

“MIGHTIEST MITE IN RADIO”

RETAILS
AT
\$23⁵⁰
COMPLETE
WITH TUBES



Here is the Greatest Little Radio Value You Have Had an Opportunity to Sell!

A compact, handsome, miniature receiver providing clear, rich reception and greater distance getting ability than you would believe possible, with—

A powerful, full-toned Dynamic Speaker, and—

A tuned radio frequency circuit using the new Pentode and Multi-Mu tubes, giving—

Amazing performance! The Wal-Tone actually excels in reception and reproduction many sets selling at far greater prices.

Take on the Wal-Tone! The trend today is toward inexpensive sets—and here is a money maker. The market is the widest possible, for the Wal-Tone appeals to customers who want an *only* set as well as to those who want an *extra* set for recreation room, sun porch, bedroom, or den.

You won't have to *push* the Wal-Tone—it sells on sight and sound, and usually for *cash*. The

customer takes his set with him, and you do not have to *install* it. A clean, satisfactory transaction throughout.

Order a sample set at once—or several if you want to get into the Wal-Tone business quickly. We sell direct to dealers at liberal discounts. Use the coupon below.

WALTON RADIO CORPORATION
Factory and Office - ANN ARBOR, MICHIGAN

WALTON RADIO CORPORATION
ANN ARBOR, MICHIGAN

Gentlemen: I am interested in the Wal-Tone Radio.

Please ship me _____ Wal-Tone sets to try out, for which you may bill me.

Please send me complete particulars.

Firm Name _____

Address _____

City _____ State _____

Quick Heater

RECOGNITION



The quick-acting principle in a.c. tubes is now, more than ever, accorded full appreciation by set and tube manufacturers, jobbers, dealers — and, most important, consumers.

Arcturus pioneered *that* principle over three years ago, in May 1928 — with the famous 7-second action tube.

This Arcturus contribution met with immediate success as users no longer were willing to tolerate the delay in getting reception caused by the old slow-heater. The demand for quick-heaters has become so insistent that the old slow-heater type has now been relegated to an inferior classification and must of necessity be priced appreciably lower. This difference in list price is evidence that the superior merits of the quick-heater are fully appreciated.

A lower price for slow-heaters is unimportant to set users. They will not sacrifice efficiency for price. So they demand quick-acting tubes.

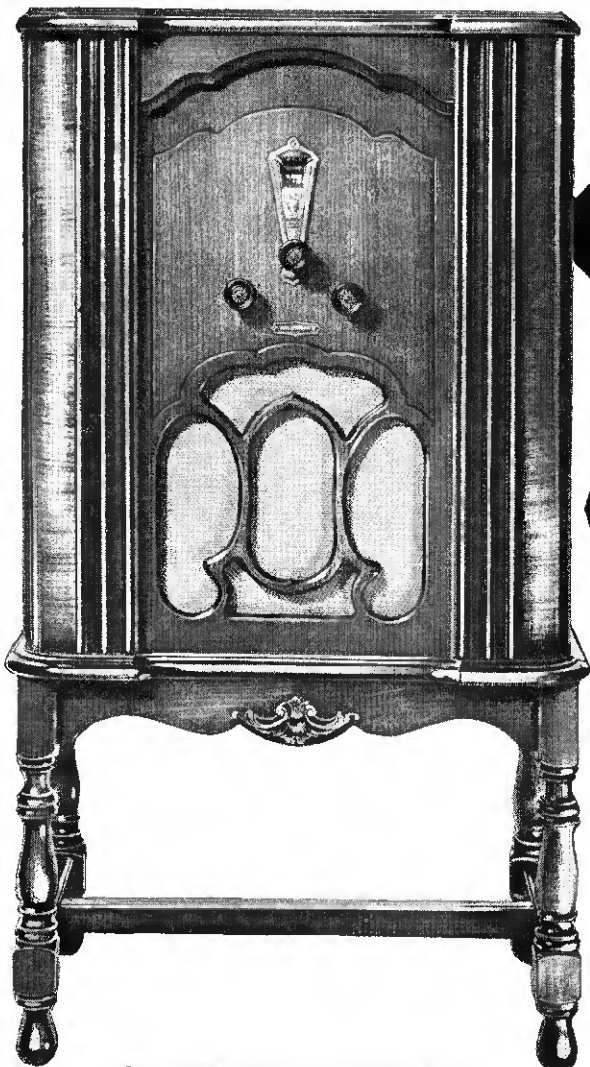
Arcturus *Blue Tubes* are all quick-acting — the same as the original “7-second tube”. Arcturus quick-acting tubes are positively not affected by “hum”. Arcturus quick-acting tubes have become the standard of the industry.

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

ARCTURUS



now you can sell AMERICAN BOSCH *Latest model* SUPER-HETERODYNE RADIO



SUPER-HETERODYNE

MODEL 31-H

Other models from \$43.50 to \$139.50
complete with tubes.

FOR
\$ 67⁵⁰
COMPLETE
WITH TUBES
and
**HERE
IT IS!**

- Read These
American Bosch
1932 Features**
- SUPER-HETERODYNE
 - PENTODE POWER TUBES
 - MULTI-MU TUBES
 - SCREEN GRID TUBES
 - FAST-HEATER TYPE TUBES
 - FULL RICH TONE
 - PERFECTED TONE CONTROL
 - VOLUME CONTROL
 - INSTANT STATION FINDING
 - ELECTRO-DYNAMIC SPEAKER
 - COMPLETELY SHIELDED
 - LARGE CHASSIS — NOT A MIDGET
 - IS REAL FURNITURE PIECE — 39 INCHES TALL

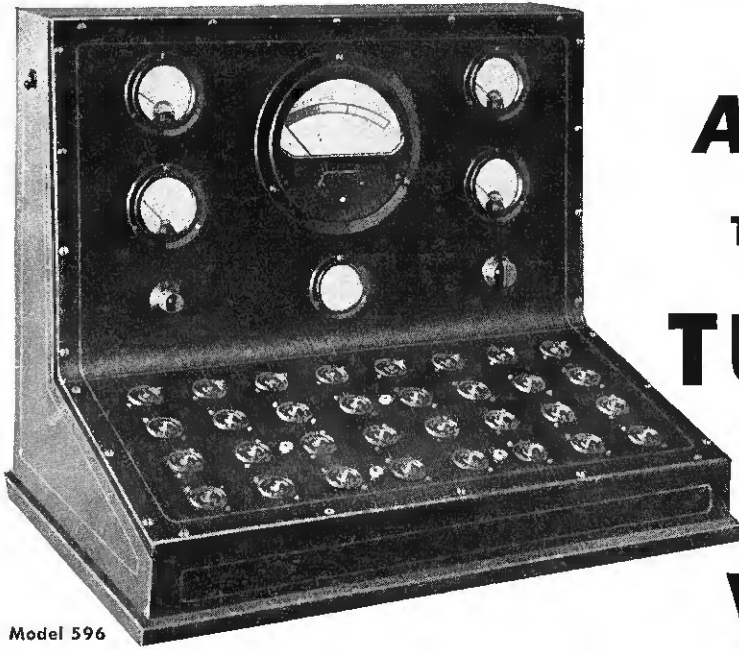
And best of all it is American Bosch heavy duty built — built to stand up and not to go out of balance after short usage. Protect your radio reputation — sell right this season. This quality radio is the achievement of engineers who think in terms of radio which will last — not how cheaply it can be built.

Sell this radio now while this low price is in effect. Write to the factory now or the nearest branch for details on the American Bosch Radio line.

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. Western prices slightly higher.



Model 596

Announcing

THE NEW DISPLAY

TUBE TESTER

WESTON

MU·TOM·ETER

POSITIVE TUBE CHECK BY MUTUAL CONDUCTANCE RATING

Build tube sales . . . convince your customers . . . protect yourself with the Weston MU-TOM-ETER—the new advanced Display Tube Tester.

Today tube buyers must be shown. They expect tubes to be tested on a device they can read and depend upon. The impressive business-like appearance of Weston Model 596 MU-TOM-ETER convinces your customers. Its definite single-scale reading, "REJECT" or "GOOD," leaves no doubt. It stamps you a modern, progressive dealer.

Besides, the Weston MU-TOM-ETER protects *you*. It passes or rejects tubes by measurement of the most important fundamental constant—Mutual Conductance—the one overall test that shows the *true* condition of tubes. Prevents "come-backs" from customers.

Built by the engineers who designed the famous portable Weston Set and Tube Testers, the new Weston MU-TOM-ETER meets the demand for a Display-Tester that rates tubes *correctly*.

FEATURES

"REJECT" or "GOOD"—by measurement on one single-scale meter of true mutual conductance with rated D. C. voltages applied to tube.

SIMPLE TO OPERATE—just insert tube . . . press button . . . read result.

SHORT TEST—bulls-eye flashes "SHORT."

PREHEATER—six sockets.

POWER PACK—specially designed to provide rippleless D.C. for plate and bias voltages.

LINE VOLTAGE CORRECTOR—compensates for variations as shown by A. C. indicator.

TEST VOLTAGE CORRECTOR—holds D. C. test voltages to right value as shown by D. C. indicator.

INGENIOUS DESIGN—automatic mutual conductance value adjuster—an exclusive Weston feature.

BOTH RECTIFIER PLATES—two millimeters indicate current in both plates simultaneously.

SPARE TEST SOCKETS—provision for future tubes.

IMPRESSIVE APPEARANCE—ebony black hardwood cabinet trimmed in red.

WESTON

WRITE FOR FOLDER J

ELECTRICAL INSTRUMENT CORPORATION

581 FRELINGHUYSEN AVENUE

NEWARK, N. J.

THE KOLSTER POLICY

Justified!



MODEL K30

Completely shielded, nine tube, band pass superheterodyne with automatic volume control, push-pull pentode output. The cabinet by Jan Streng suggests the influence of Seventeenth Century English design. Oriental walnut top rail and apron. Matched butt walnut pilasters. Decorative instrument panel. Spool stretcher. Lacquer finish.

List \$129.50 with tubes

Backed by the Financial and Engineering Resources of Mackay Radio and Telegraph Company.

Dealers everywhere quick to sense increased selling possibilities of Superheterodyne REFINED!

● Just a few short months ago we announced the New Kolster International for the first time ... announced it as a set that had been built up to certain predetermined standards of performance ... as a set in which the basically sound principle of the superheterodyne had been REFINED through advanced engineering and non-skimping manufacture.

Today the New Kolster International is establishing itself everywhere. A great distributor and dealer organization has sprung into existence. Consistent national advertising is carrying the message of Kolster performance everywhere. The public is proving that it will pay a fair price for a quality product. The Kolster policy of non-skimping manufacture has justified itself. The New Kolster International is off to a flying start. There's no depression at Kolster International Headquarters!

The New Kolster International is being sold *only* through distributors and dealers of recognized standing in the industry ... and *only* on a basis that will insure a fair profit for all concerned. Write today for full information *direct* to Kolster Headquarters, International Telephone & Telegraph Building, 67 Broad Street, New York City.

KOLSTER RADIO INC.

International Telephone and Telegraph Building
New York Office:
67 Broad Street, New York City

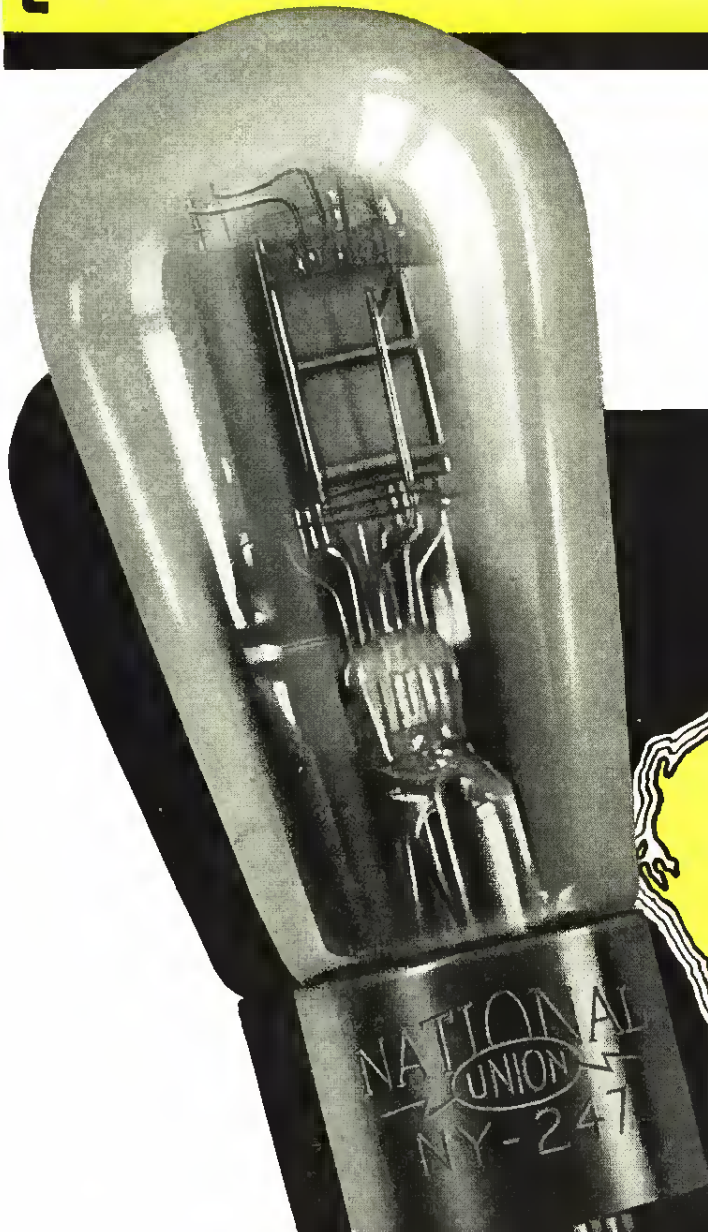
In Canada: Kolster Radio Ltd.
Toronto, Canada

Factory: 360 Thomas Street
Newark, N. J.

The New **KOLSTER**
INTERNATIONAL

NATIONAL

QUALITY PROVEN AGAIN



HERE IN THIS OPEN, RUGGED COUNTRY, THE LAND OF THE BUSH AND OF KANGAROOS, NATIONAL UNION TUBES GIVE PERFECT RECEPTION WHEN OTHER MAKES OF TUBES FAIL.

UNION

IN FAR-OFF AUSTRALIA!

... from the other side of the globe comes another report of the superiority of National Union radio tubes ... the superiority which has made them known all over the world as "the Standard Tube for Standard Sets."



The supreme test of a radio tube is its ability to give perfect reception ... crystal-clear tone ... all the subtle notes of even the most complicated orchestration.

National Union tubes have that ability. They not only bring in programs where many other makes of tubes fall down, but they bring them in clear as a bell ... without crackle or hum or buzz.

Even away off in Australia National Union tubes have demonstrated their definite superiority.

Mr. Charles E. Forrest, Managing Director of the International Radio Co., Ltd., of Sydney, says, "It was impossible to get daytime programs in one entire section of our country, because of the atmospheric conditions. Many makes of tubes had been tried; all had failed.

"National Union tubes were installed, and an amazing example of their superiority was recorded. For the first time," according to Mr. Forrest, "reception equally as good as night-time reception

was obtained throughout the day."

Why did National Union tubes provide such reception when other tubes could not? Simply because of the technical perfection built into them by Dr. Ralph E. Myers, the famous National Union engineer, who has developed these tubes on revolutionary scientific principles.

Thus distant Australia discovered what set engineers in this country already knew. For American experts by the score have selected National Union tubes as standard equipment. Their endorsement has helped to account for National Union's spectacular rise to second place in sales among all tube manufacturers.

National Union tubes are the best that money can buy. And behind their excellence is the National Union Sales plan, which is making profits for thousands of dealers. Write and let us tell you how you, too, can make money out of this booming line of tubes ... "the standard tube for standard sets."

NATIONAL UNION RADIO CORPORATION
400 MADISON AVENUE · NEW YORK CITY

THEY WORK TOGETHER



Sylv
THE SET-

... **NATIONALLY ADVERTISED SYLVANIA SET-TESTED TUBES** ...

YOUR CUSTOMERS' RADIOS ... AND

YOUR PROFITS!

RADIO
 "CHARLEY & OSCAR"
Twice a Week
Columbia Network
 TUESDAY 6:30 — SUNDAY 7:15
 E. S. T.

\$5000 CONTEST
 A de Luxe Radio each week.
 \$50 for the Winner's Dealer, too.

NEWSPAPER
 2 insertions a week in powerful
 local papers.

MAGAZINE
 Intensive Human Interest
 Campaign Reaching the Millions
 of Readers of the
Saturday Evening Post

•

**ALL Send Customers to
 the Store that Displays
 this Sign**



Sylvania
REGISTERED U. S. PAT. OFF.
TESTED TUBE

Licensed under RCA Patents

HERE is big news for every radio merchant! A tremendous national campaign now tells people about a new kind of testing—*set-testing*—that actually *proves* that Sylvania Radio Tubes give the utmost in tone, volume and distance . . . that they have been approved for over 300 different makes and models of radio sets!

Saturday Evening Post ads with big human-interest illustrations . . . two radio shows a week over the Columbia network . . . a \$5000 Prize Contest with prizes for the dealers too . . . a local newspaper campaign running in 41 cities . . . **ALL MAKE SALES FOR YOU!** And the Sylvania Authorized Dealer Sign shown on this ad ties up your store to this new kind of four-fold selling support!

Write today—find out without obligation how you can get the Sylvania Authorized Dealer Sign—and ask for a free copy of the Sylvania Certified Test Chart.

HYGRADE-SYLVANIA CORPORATION
 Sylvania Division, Dept. R 11-1
 Emporium, Pennsylvania

Please send me a copy of the new Certified Test Chart and information about Set-Tested Tubes.

- I have never sold Sylvania tubes.
- I am now stocking Sylvania tubes through

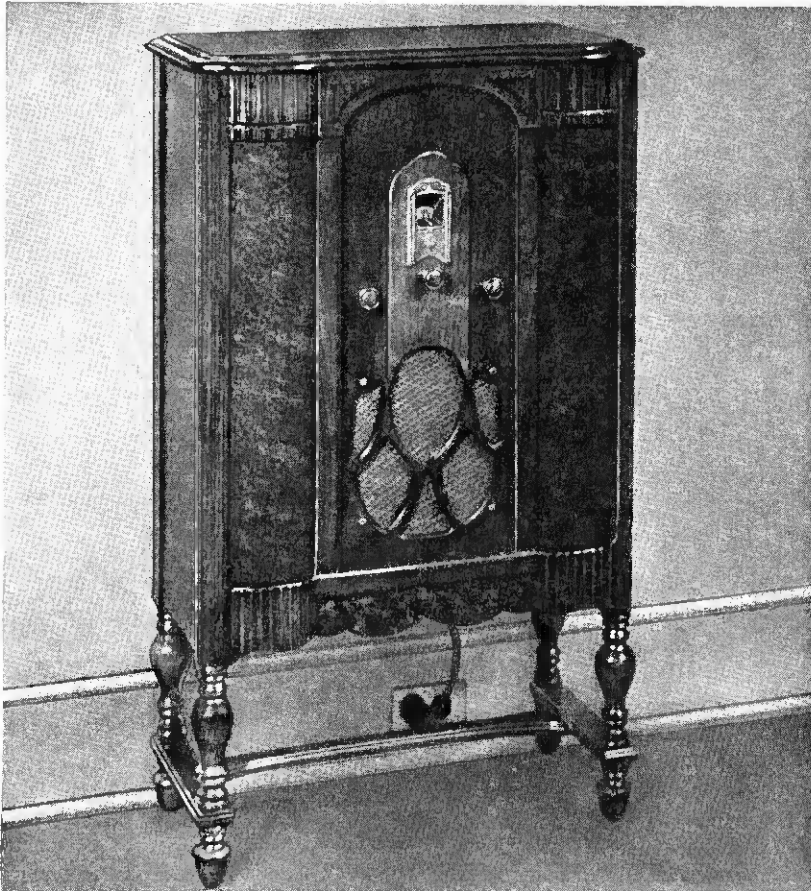
(Name of Jobber).....

Name.....

Address.....

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

meet the newest addition to the G-E RADIO line



SEVEN BIG FEATURES OF THE NEW JUNIOR LOWBOY

- 1 8-tube, screen-grid superheterodyne, using 2 RCA 235's, 3 UY 227, 1 UY 224, 1 RCA 247 and 1 UX 280.
- 2 Equipped with Tone Equalizer, exclusive G-E feature.
- 3 Large cabinet, 40" high, 24" wide, 12½" deep.
- 4 Cabinets of finest woods, beautifully ornamented.
- 5 Full range tone control.
- 6 Standard dynamic speaker.
- 7 Uses super control tubes and one pentode.

the GENERAL ELECTRIC JUNIOR LOWBOY

with the new, exclusive G-E Tone Equalizer \$89⁹⁵ with tubes

Take a good look at this newest G-E set, men, for it represents one of the biggest radio values in the low price console class!

Look at these features: 8-tube screen-grid superheterodyne with Pentode tube; automatic volume control; large, beautifully-ornamented cabinet—and the new, exclusive G-E Tone Equalizer.

This G-E Tone Equalizer "licks" one of radio's toughest problems. It overcomes the boominess and

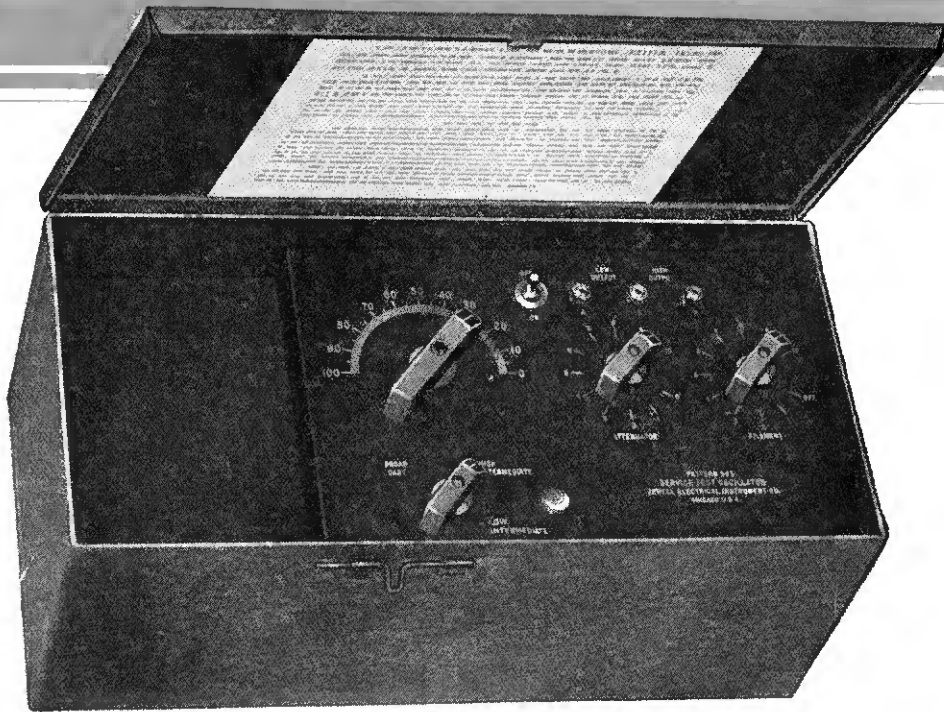
resonance of the normal radio cabinet! It removes over-emphasis on the high and low notes, making each tone clear and true. It's another big reason why you can urge your customers to "Believe their own ears"—and know they'll choose G-E.

Read the big list of features of this new Junior Lowboy shown above. Then place your order with your G-E Radio distributor. What an opportunity General Electric Radio offers dealers to-day!

GENERAL ELECTRIC RADIO

FULL RANGE PERFORMANCE

A new Jewell Test Oscillator



—with every
necessary test feature

—plus Jewell
quality construction
and
dependable operation



—at an astonishing low price!

In the Pattern 563 Test Oscillator, Jewell has again set new standards in value.

This remarkable instrument combines every oscillator feature necessary for servicing modern radio receivers, plus Jewell dependability of operation, at a price so low that no serviceman can afford to be handicapped by inferior equipment.

Features of the Pattern 563

Output frequency continuously variable from 550 to 1,500 K. C. in the broadcast.

Two intermediate bands, 125 to 185 K. C. and 175 to 450 K. C., allow servicing of all modern supers.

Metal carrying case and panel form effective shield.

Operates from batteries carried within shielded case.

Single control adjusts output frequency.

Three-position switch allows instant change to any of the three frequency bands.

Calibration curves and operating instructions carried in cover.

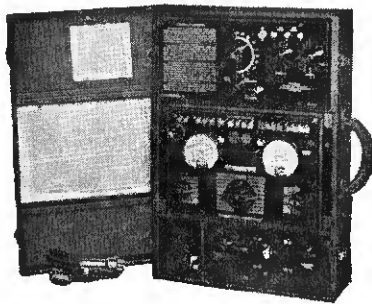
Trimmer adjustment permits spotting any much used intermediate frequency at a convenient point on the dial.

Space provided in case for carrying Jewell Pattern 559 Output Meter, which may be purchased separately.

Write for prices and complete description.

31 YEARS MAKING GOOD INSTRUMENTS

JEWELL



The Jewell Professional Service Combination

Here is a single unit that contains all equipment necessary for quickly and accurately making every service test.

The Jewell Pattern 531 Professional Service Combination includes a Pattern 444 Set Analyzer, a special Pattern 536 Oscillator, and a unit that supplies all necessary power for testing a tube in the analyzer. Write for complete details.

Jewell Electrical Instrument Company,
1642 A Walnut Street, Chicago, Ill.

Please send me literature describing the new Jewell Instruments, Patterns 563 and 531.

Name _____

Address _____

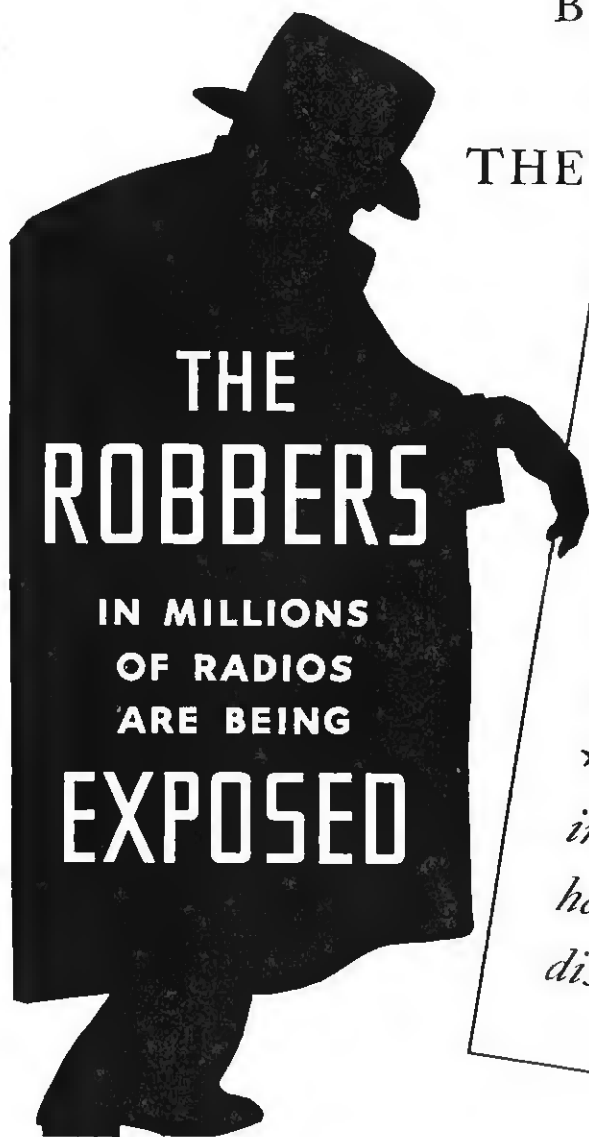
City _____

State _____

Ken·Rad Leads

In Modern Tube Merchandising!

BLAZES THE TRAIL TO
GREATER PROFITS!
THE TALK OF THE INDUSTRY!



Never before in the history of the tube industry has there been a merchandising plan as powerful and sensational as that which is built around the marvelous Ken-Rad Acrometer
★ ★ *It has changed the tube buying habits of the nation* ★ ★ *It has changed the tube merchandising methods of the industry.*

Ken-Rads Are the Fine Tubes of Radio

Ken-Rad gives you the fine tubes of radio—plus the “big idea;” the sensational Ken-Rad Acrometer sales plan that moves tubes faster than they have ever moved before. Write for the amazing story of the successes dealers are enjoying with Ken-Rad Tubes, the Acrometer sales plan and the powerful merchandising and advertising ideas built into it. THE KEN-RAD CORPORATION, Incorporated, Owensboro, Kentucky.

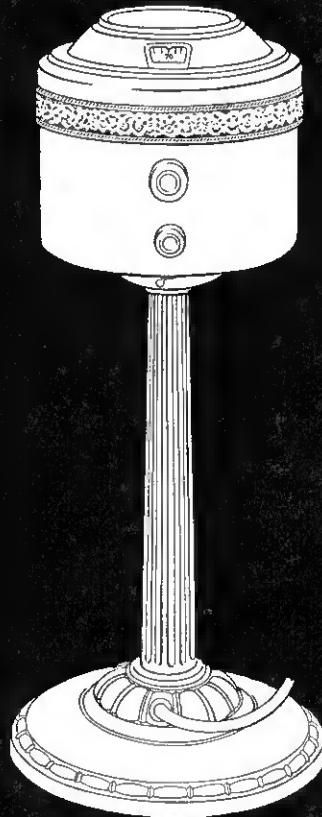
There Is Only One ACREMETER and Ken-Rad Has It!

Three Amazing New Profit Makers by GENERAL MOTORS RADIO



General Motors Radio now presents three amazing new products — two additional low-priced radio receivers and an entirely new idea in radio, the G. M. R. Super-Heterodyne Converter with remote control. Live-wire dealers will recognize in these three new profit-makers a real opportunity to increase their business through both new and old customers. What you need today is a set

The G. M. R. Super-Heterodyne Converter with Remote Control

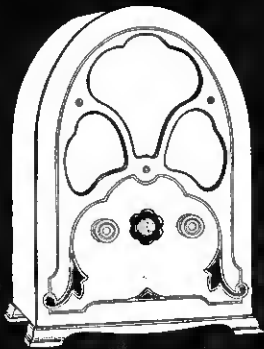


The G. M. R. Super-Heterodyne Converter, newest achievement in radio, has a two-fold purpose. 1. It converts tuned radio frequency models into highly selective, fine-performing super-heterodynes. 2. It provides remote control over all stations in the full broadcast range—a thirty-foot extension cord makes it possible to place the converter wherever it is most convenient. Here is a sensational new profit-maker in radio that every present owner will want.

List Price **\$49⁷⁵**
complete

for every purse and preference. That is just what General Motors Radio offers—17 models, \$39.50 to \$350, complete with tubes—plus radio's newest achievement—the Super-Heterodyne Converter, which makes a prospect for you out of every radio owner in your territory. Write or wire at once for the complete story of radio's great profit line.

General Motors Radio Corporation
Dayton, Ohio



6-tube Improved Super-Heterodyne

THE LITTLE CORPORAL

List Price **\$39⁵⁰**
with tubes

Lowest-priced model ever offered by General Motors Radio, the Little Corporal combines exceptional performance with attractive appearance and high utility. Its six-tube Improved Super-Heterodyne chassis with Pentode power tube rivals many large and expensive radios in range, selectivity and tone quality. The convenient size of its fine walnut-finish cabinet makes it a desirable model even in homes where larger sets are now owned.



7-tube Improved Super-Heterodyne
with Automatic Volume Control

THE SALEM

List Price **\$69⁵⁰**
with tubes

The Salem, seven-tube Improved Super-Heterodyne with automatic volume control, takes rank as one of the greatest values in radio today. In a smart full-sized walnut-finish cabinet, it is attractive in appearance as well as remarkable in performance. Its wide range, sharp selectivity and beautiful tone compare favorably with the fine reception of the highest-priced sets produced.

Keep his head up and we'll all come through!



You recognize this man. He lives in your own town, not far from you . . .

Though faced with unemployment, he is combating adversity with courage. He has retreated step by step, but fighting. He has spread his slender resources as far as they will go.

This winter he and his family will need your help.

There are many other heads of families much like him in the United States. This winter all of them will need the help of their more fortunate neighbors.

This is an emergency. It is temporary. But it exists. It must be met with the hopefulness and resource typical of American conduct in emergencies.

Be ready! Right now in every city, town and village, funds are being gathered for local needs—through the established welfare and relief agencies, the Community Chest, or special Emergency Unemployment Committees . . .

The usual few dollars which we regularly give will this year not be enough. Those of us whose earnings have not been cut off can and must double, triple, quadruple our contributions.

By doing so we shall be doing the best possible service to ourselves. All that America needs right now is courage. We have the resources. We have the man power. We have the opportunity for world leadership.

Let's set an example to all the world. Let's lay the foundation for better days that are sure to come.

*The President's Organization on
Unemployment Relief*

Walter S. Gifford

WALTER S. GIFFORD, DIRECTOR

Committee on Mobilization of Relief Resources

Owen D. Young

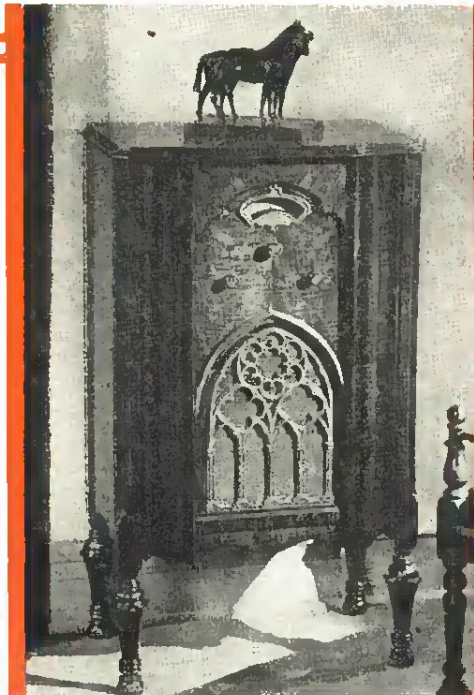
OWEN D. YOUNG, CHAIRMAN

The President's Organization on Unemployment Relief is non-political and non-sectarian. Its purpose is to aid local welfare and relief agencies everywhere to provide for local needs. All facilities for the nation-wide program, including this advertisement, have been furnished to the Committee without cost.

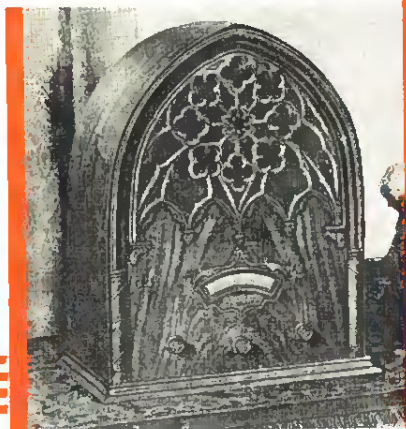
Echophone

through its Quality gives

PUNCH



Model "90" Superheterodyne — Large Type Chassis, eight tubes including two Pentodes Push Pull and four Variable-Mu, Pre selector, 4-gang Condenser, 10-inch Jensen Dynamic Speaker, Full Vision Dial, Tone Control, Phonograph Jacks, Burl Walnut Panels . . . **\$98.50 complete**



Model "60" Superheterodyne, (Left) Seven tubes including Pentode and three Variable-Mu, Jensen Dynamic Speaker, Full Vision Dial, Tone Control, Phonograph Jacks, Walnut Cabinet — 6 inches deep. **\$53.75 complete**

Model "80" Superheterodyne, (Right) Eight tubes including two Pentodes Push Pull and three Variable Mu, Pre-selector, Jensen Dynamic Speaker, Full Vision Dial, Tone Control, Phonograph Jacks, 4-gang Condenser, Burl Walnut Cabinet — 6 inches deep. **\$69.50 complete**



Echoette Model "40" four tubes including Pentode and Variable-Mu. Dynamic Speaker, Walnut Panelled **\$32.75 complete**

Model "70" direct current superheterodyne—7 tubes including D.C. Pentodes and D.C. Variable-Mu. Jensen Dynamic Speaker. **\$59.50 complete**

to your Sales Effort and Sales Story

Echophone supplies you with wonderful sales arguments when you are standing face to face with a customer. The reason is simple. There's that Echophone Quality so well known since 1921. You can say a lot about that. It's the quality that has built Echophone sales year after year and made money for dealers. An Echophone demonstration and Echophone appearance puts plenty of punch into your sales efforts. A wide range of new models gives you the right receiver for any prospective purchaser. Get Echophone "punch" into your business now — let Echophone do a big profit-making job for you.

ECHOPHONE RADIO MFG. CO., LTD.
 Executive Offices and Factory
WAUKEGAN, ILLINOIS
 Export Division—Echophone Company Export
 44 Whitehall St. New York, N. Y.

ACTION IS THE THING!

Get in touch with our nearest distributor or write us direct for complete details. Our new line is outstanding in quality and is the finest we have yet produced. Feature the quality that gives you the sales punch.

Harassing Dame Rumor

ODD, isn't it, how our pictures of things change with the years? Time was when an editor was pictured as a bespectacled individual laboriously scratching on paper with pen. Modern tempo changed that into a nervous demon tied to a typewriter. Then the rise of imitative journalism gave us the somewhat cynical picture of the editor whose chief tools in trade were the scissors and paste pot.

Today, the editor, as *Radio Retailing* pictures him, is a determined individual with a traveling bag and an allegorical spear, traveling the country harassing Dame Rumor and bringing home, not the bacon, but the facts.

Take this recent situation: whenever radio men got together they retailed the ugly rumor that the radio business was in a bad way. Midgets were selling like hotcakes. The poor console was gasping its last breath. Pretty soon manufacturers, jobbers and dealers would gather their wives and babes and find choice locations in community bread lines.

What did the editors of *Radio Retailing* do? Managing Editor Ray Sutcliffe grabbed his traveling bag and departed for a month. On his travels he visited eight important states and found out what is actually happening in the radio industry. Part of his findings, diametrically opposed to Dame Rumor, are found in the editorial pages of this issue of *Radio Retailing*. Field investigation, indulged in periodically by *Radio Retailing's* editors, is a far cry from the all too prevalent practices of the scissors-and-paste type of journalism. Difficult? To be sure! Expensive? Of course. Worth while? Decidedly, as the tremendous circulation of *Radio Retailing* and its unparalleled reader interest testify.

Radio Retailing, as one of the McGraw-Hill publications, is pledged to do the best editorial job in its field—leadership in news gathering, leadership in interpretation, leadership in merchandising ideas, leadership in repair and service work.

MEMBER OF THE A.B.C. and A.B.P.

The New Majestic Line has had the most astounding **PUBLIC ACCEPTANCE** in Majestic History

- Exclusive Features
 - Dramatic Merchandising
 - Unequaled Values
- did it!

Majestic's alert, aggressive engineering department gave the current line of Majestic sets three outstanding engineering developments that were *exclusive*. These advantages were then presented to the public in such a way that the tremendous importance of these features was fully appreciated by millions of families. Majestic's unrivaled manufacturing facilities made possible Values to be found nowhere else in the industry.

Majestic dealers are capitalizing on those three great features — Spray-Shield Tubes, Twin Power Detection and the "Modulated" Circuit. Each of the eight models is superheterodyne—each employs Multi-Mu and Pentode tubes. Let a Majestic Distributor give you *all* the advantages of a Majestic franchise.

GRIGSBY-GRUNOW COMPANY, CHICAGO, ILL.
World's Largest Manufacturers of **COMPLETE** Radio Receivers

All prices slightly higher West of the Rockies.



MAJESTIC BRUCEWOOD

Just Announced
A value in grandfather clocks — amazing in performance as a radio ... perfection as a piece of furniture.

Majestic

Licensed under patents and applications of R. C. A., Hazeltine, LaTour, Lowell & Dunmore and Boonton Research Corporation.

Superheterodyne RADIO

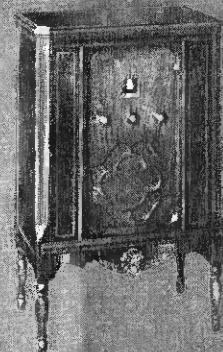
MULTI-MU and PENTODE ... of course

3 of the **EIGHT** Great Models

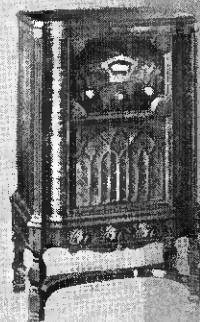


MAJESTIC HAVENWOOD
Exceptionally selective and beautifully toned. Georgian design. Famous Majestic superheterodyne chassis providing tone control, Spray-Shield and Pentode tubes and full dynamic speaker. Complete with tubes. **\$44.50**

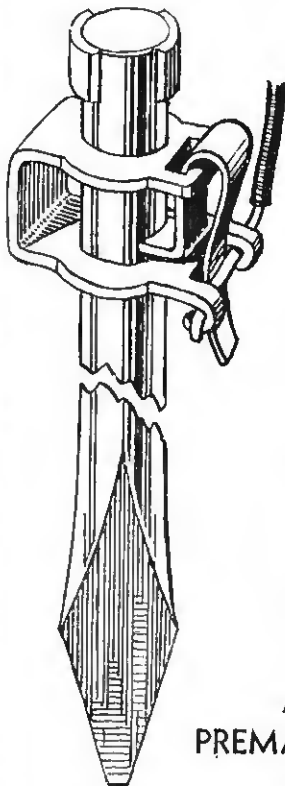
MAJESTIC ELLSWOOD
A lowboy of early English design. Equipped with Majestic superheterodyne chassis of monitor construction, using Spray-Shield and Pentode tubes, "Modulated" circuit, tone control and Grand Opera Speaker. Complete with tubes. **\$59.50**



MAJESTIC BRENTWOOD
Jacobean Lowboy. The Majestic superheterodyne chassis uses 9 tubes, including Spray-Shield, Multi-Mu and Twin Pentode Output, Twin Power Detection, tone control and Grand Opera Speaker. Complete with tubes. **\$99.50**



New!



**PREMAX
HEAVY DUTY
GROUND ROD**
for
*Hard Places and
Tough Jobs*

The Premax Heavy Duty Ground Rod is five feet long — formed of $\frac{1}{8}$ in. drawn steel rod — and plated with cadmium.

The special clip for the ground wire connection is an entirely new Premax design. A strong, formed steel yoke encircles the rod and supports the stiff spring clip which makes the contact between wire and rod, as shown in the illustration.

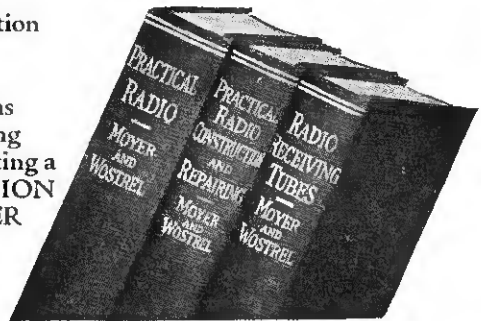
No tools are necessary. Simply depress the spring, slip the wire under the lugs, and the job is done. The inner end of the spring bites firmly and solidly into the rod. The connection is quick and permanent.

Try this new Premax Rod. It will save you money in installation and service.

Ask your Jobber or write
PREMAX PRODUCTS CORP.
Niagara Falls, N. Y.

Makers of Premax Complete Aerial Equipment

—this edition includes complete instructions for building and operating a TELEVISION RECEIVER



Complete data on the construction and repair of modern radio sets

THESE three books cover the entire field of building, repairing and "trouble-shooting" on modern broadcasting receiving sets. The Library has been brought right-up-to-the-minute in every respect, and is based on the latest 1931 developments in the design and manufacture of equipment. The recent interest in television and short-wave reception is reflected in sections dealing with the construction of these types of receivers.

Radio Construction Library

[1931 Edition Completely Revised]
(Including Short-Wave Receivers and Television)

Three Volumes, 1087 pages, 6x9, 605 illustrations

By JAMES A. MOYER and JOHN F. WOSTREL
Massachusetts Department of Education

CONTENTS

VOLUME I.—Practical Radio:
This volume presents the fundamental principles of radio so clearly and simply, that anyone of average training will be able to read, understand and apply them. In one chapter alone, it gives actual working drawings and lists of materials necessary for the construction of seven typical sets.

VOLUME II.—Radio Construction and Repair:
All of the elementary principles of radio construction and repair are given full consideration. Complete instructions are given for the building and construction of superheterodyne, short-wave and television receivers.

VOLUME III.—Radio Receiving Tubes:
In this volume the essential principles underlying the operation of vacuum tubes are explained in as non-technical a manner as is consistent with accuracy. It gives the construction, action, reactivation, testing and use of vacuum tubes and applications for distant control of industrial processes and precision measurements.

THESE three books embody not only a thorough home-study course but a ready means of reference for the experienced radio-technician. Step-by-step information is given on wiring, "trouble-shooting," installation and servicing to get the best tone quality, distance and selectivity in broadcast reception in all types of sets.

Practical data is given on radio equipment such as antenna systems, battery eliminators, loud speakers, chargers, vacuum tubes, etc.

A section is devoted to the identification of common faults in receivers and methods of making workmanlike repairs.

The three books are profusely illustrated with understandable diagrams of hookups, connections, loud speaker units, installation work and antenna erection—as well as numerous photographs, tables and charts which clarify the text.

**See this Library
for 10 Days Free!
No Money Down—Small
Monthly Payments**

It is your privilege to examine this Library for 10 days without cost. If the books prove satisfactory, send an initial payment of only \$1.50 and \$2.00 a month until \$7.50 has been paid. Otherwise return the books.

Useful, Durable
Steel 50-Drawer
Resistor Cabinet

FREE

(Drawers 8x3x2 1/2-in. inside. Case is 33x18 1/2 x 8 1/2-in.)

with Special Introductory Deal

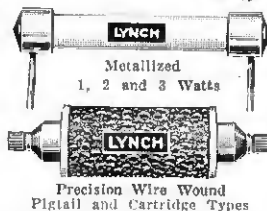
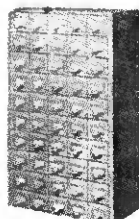
Write today for details of this Unusual LIMITED offer on

LYNCH

METALLIZED—PRECISION WIRE WOUND
RESISTORS

JOBBERS—It will pay you to amazing Sales Proposition. write for details of our new.

LYNCH MFG. CO., Inc.
Dept. R, 1775 Broadway, N. Y.



TRAV-LER

**RADIO RECEIVERS
AUTO-RADIO RECEIVERS
AND
TELEVISION RECEIVERS**
LICENSED BY R.C.A. & AFFILIATES

TRAV-LER MFG. CORP.
SAINT LOUIS

**McGraw-Hill
FREE EXAMINATION COUPON**

McGraw-Hill Book Co., Inc., 370 Seventh Avenue, New York.

Gentlemen:—Send me the RADIO CONSTRUCTION LIBRARY, all charges prepaid, for 10 days' Free Examination. If satisfactory I will send \$1.50 in ten days and \$2.00 a month until \$7.50 has been paid. If not wanted I will return the books at your expense.

Name

Home Address

City and State

Name of Company

Occupation RR-11-31
To insure prompt shipment, write plainly and fill in all lines.

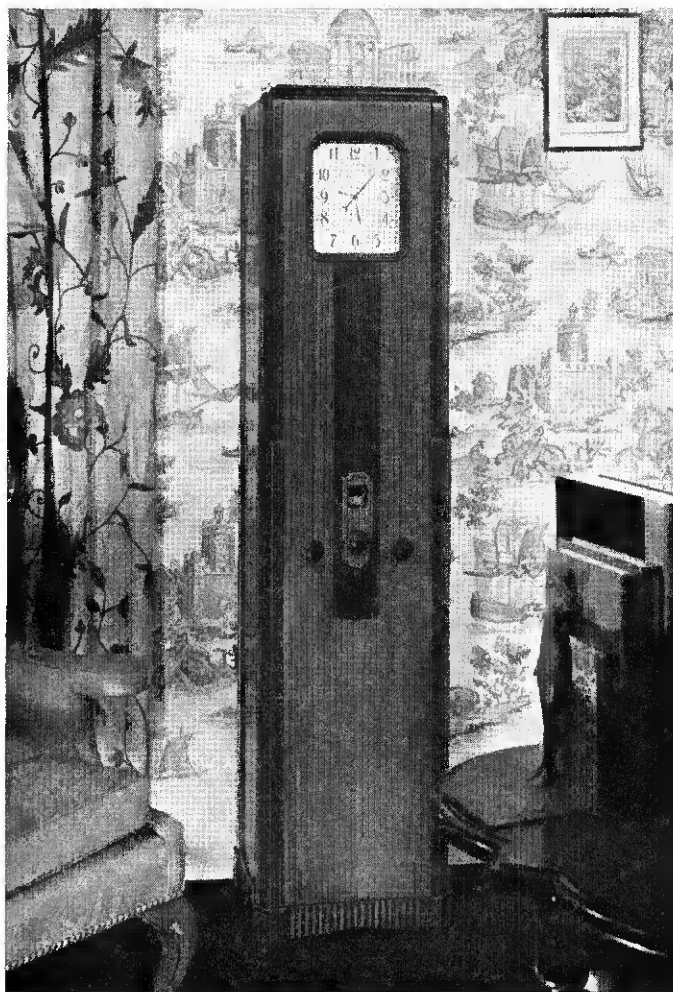
THIS NEW *Style Note* IS THE MOST IMITATED DESIGN IN RADIO TODAY

The importance of an innovation in radio can be measured by its imitations. And the Westinghouse Columaire design—less than a year old—is already being imitated by manufacturer after manufacturer.

Imitated in appearance but not in performance! For the Columaire design is more than a tall, graceful cabinet. The imagination and daring that brought a new note of style beauty to radio also established a new standard of performance in radio reproduction. No imitation can duplicate the protected distinctive features found only in the Westinghouse Columaire design.

There's a brand new selling appeal in the new beauty that the Columaire Jr. Deluxe brings to radio. Coupled with the improved performance and popular price, it means a more profitable radio business for you. Ask your Westinghouse Radio Distributor about the Columaire Jr. Deluxe and the complete line of companion sets in the Columaire series and conventional designs. Ask him, too, about the sales and advertising plans that are back of this complete line.

WESTINGHOUSE ELECTRIC & MFG. COMPANY
MERCHANDISING DEPARTMENT MANSFIELD, OHIO



The Columaire Jr. Deluxe—a completely screened 9-tube super-heterodyne set with automatic volume control, fully graduated tone control, Multi-Mu and Push-Pull Power Pentode Tubes.

Westinghouse
Radio



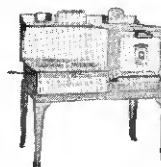
Westinghouse
ELECTRIC
APPLIANCES
for the HOME
ONE SELLS
THE OTHERS



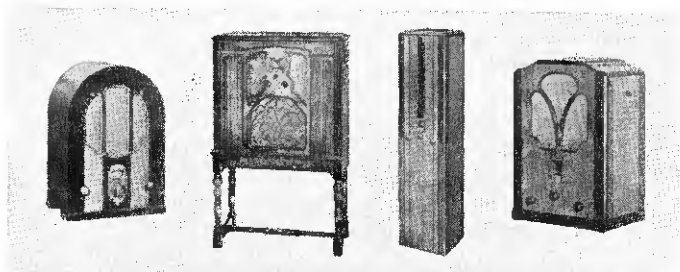
New Super-Suction Vacuum Cleaners, including a low-priced motor-driven brush model.



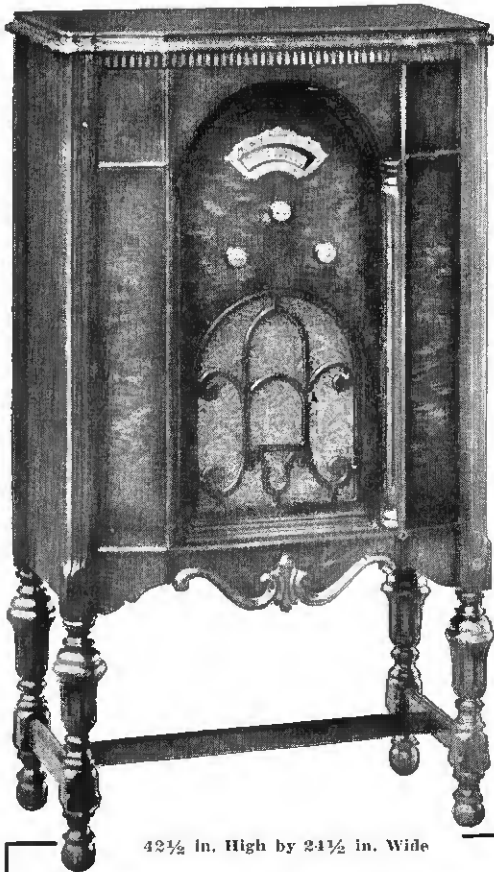
The Westinghouse "Completely Balanced" Refrigerator with amazing improvements and new discoveries.



The famous Flavor Zone Ranges in types, sizes and prices for every home.



The Portable Midget; The WR-5 Conventional Model; The Columaire Jr.; The Columette.



42½ in. High by 24½ in. Wide

Model 914. Nine tube FULL SIZE superheterodyne. Uses following tubes: 2-35; 1-24; 3-27; 2-47; 1-80. List price complete with genuine Cunningham or Radiotron tubes \$ **89.00**

AUDIOLA Superheterodyne CONSOLES

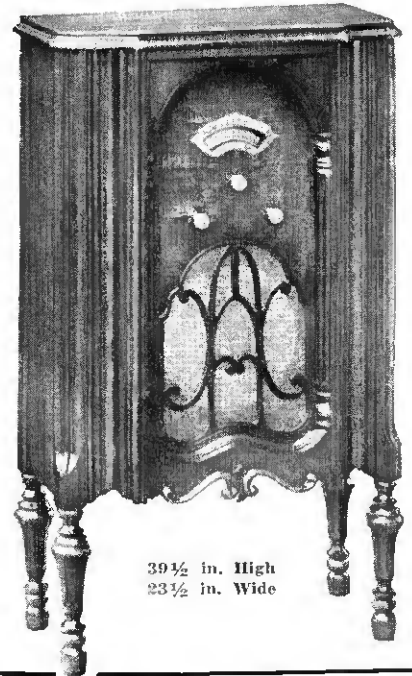
"Known for Its Tone"

Every Latest Selling Feature to Help Move Sets Quickly

Pentode. Variable-Mu. Full Range Tone Control. Full Vision Dial. Phantom Light Indicator. R.C.A. Tubes. Jensen Dynamic Speaker. Beautiful Cabinets. Superb Tone Quality. Exceptional Performance. Extreme Value.

10 YEARS of successful set building is your best insurance that Audiola is a highly profitable line to handle. 10 years ago there was a great demand for Audiola—the demand has increased yearly—today the demand means better business for you.

An Audiola franchise today is of great value—there are territories available for jobbers—don't overlook this outstanding radio opportunity.



39½ in. High
23½ in. Wide

AUDIOLA RADIO CO.

430 SO. GREEN ST.
CHICAGO

Model 712. Seven tube FULL SIZE Superheterodyne. Uses the following tubes: 2-35; 2-24; 1-27; 1-47; 1-80. List price complete with genuine Cunningham or Radiotron tubes..... \$ **69.95**

Tireless Yes But NOT TIRESOME

INTO our office comes what seems to us to be an almost tireless procession of reports of "sampling" tests. These tests are made by radio and home entertainment product manufacturers who shrewdly realize that their own dealers can answer that vital question, "What trade paper does the radio dealer read because it gives him the most assistance in his business?" The answer is important, naturally, because it automatically selects the magazine to be used by the manufacturer in telling his sales story not only to his present retailers but to his prospective dealers as well.

Here's how the latest manufacturer* to make a sampling test describes it: "Five hundred of our best accounts in all parts of the country were merely asked to designate the trade paper

which they read regularly and which gave them the most assistance in their business."

The results? Of the dealers who answered the letter, here's how the votes were cast:

- Radio Retailing received 142 votes
- Second magazine received 79 votes
- Third magazine received 49 votes
- Fourth magazine received 44 votes

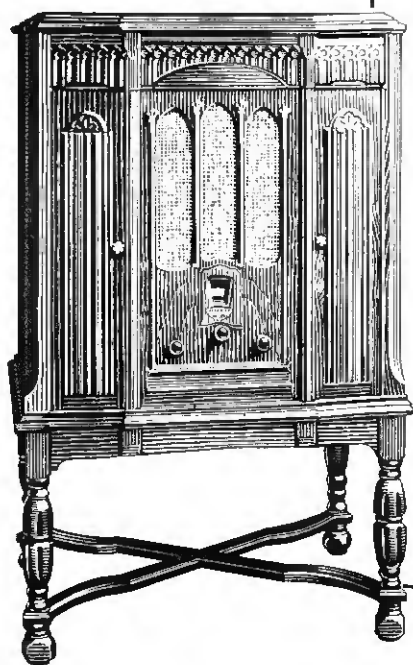
This test checks with the results of all other investigations made by other manufacturers to find the most widely read and most helpful magazine in the radio and allied home entertainment field. These consistent victories are not tiresome to *Radio Retailing*. They point to a job well done and a corresponding obligation to continue leadership.

A MCGRAW-HILL PUBLICATION MEMBER OF THE A.B.C. AND A.B.P.

*Name, of course, upon request.

Find 2 Profits

where only ONE grew before



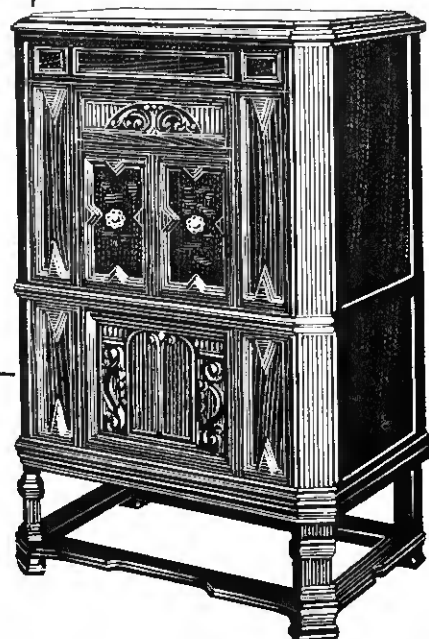
RCA Victor Radio Phonograph Model RAE-26. 9-tube Super-Heterodyne with complete 10-point Synchronized Tone System. Slow-speed clutch, automatic record changer with 10-record capacity **\$247⁵⁰** Complete

Look into the Back!

for these 10 Points of the RCA Victor Synchronized Tone System without which no radio can be called up-to-the-minute!

- 1 Super-efficient RCA Victor Super-Heterodyne circuit.
- 2 Continuous band-pass variable tone control.
- 3 Shock-proof, rubber mounted chassis.
- 4 Scientifically impregnated condensers.
- 5 Noise eliminating power transformer.
- 6 New RCA Victor automatic volume leveler that corrects fading.
- 7 Three-point shielding (tubes, chassis, cable).
- 8 Perfect acoustic Synchronization of chassis and cabinet.
- 9 Over-size electro-dynamic speaker.
- 10 New RCA Pentode tube with push-pull application.

RCA Victor Radio Phonograph Model RAE-59. 10-tube De Luxe Super-Heterodyne, complete 10-point Synchronized Tone System. Slow-speed clutch for playing new Program Transcriptions. Automatic record changer with 10-record capacity. New Home Recording unit . . . **\$350⁰⁰** Complete



OTHER
RADIO PHONOGRAPHS
AT FROM \$129.50 TO \$995

These are the Kind of Dollar-Stretching Values the Public Wants—and the Kind of Full-Profit Numbers the Radio Business Needs. Two-in-One Instruments at Prices the Public Will Pay.

The BIG SWING this year is to combinations. Because they mean bigger values! Because they mean complete entertainment! Because Victor's sensational new long-playing records — Program Transcriptions with 30 minutes of music on a 12-inch record—open up a wholly new kind of finer-toned, more convenient music-in-the-home!

With these instruments, you can get the cream of this profit-

able business. They're both radio and phonograph—in one cabinet—at one low price—with one down payment—sold at the cost of making one sale and yielding a profit that's worth working for.

So get busy. See your RCA Victor distributor. Get these instruments in and go after profitable business! RCA Victor Company, Inc., "Radio Headquarters," Camden, N. J. A Radio Corporation of America Subsidiary.

DOUBLE YOUR RECORD PROFITS!

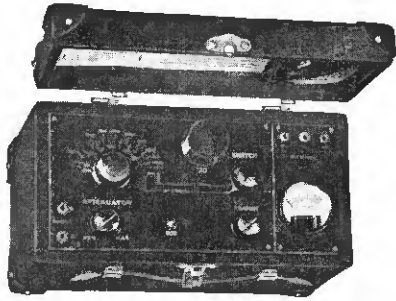
Your trade gets nearly 4 times as much music from the new Victor Program Transcriptions as from old records of the same size. They pay only about twice as much. It's a bargain for them...and it's a bargain for you, for every Program Transcription sale pays roughly twice the profit of an old-style record sale!



RCA Victor

RADIOS . . . VICTOR RECORDS
PHONOGRAPH COMBINATIONS





Readrite

No. 550

OSCILLATOR

(Licensed by A. T. & T. Co.)

*If not at your Job-
bers we will ship
direct when remit-
tance accompanies
order.*

\$18 Net to dealer
\$30 list

\$21 Net to dealer—\$35 list
with output meter



A STURDY modulated instru-
ment carefully made. Completely shielded
with separate battery compartment. Fur-
nished with 22½-v. and 3-v. batteries.
Also one '30 tube. Covers broadcast band
(550-1500 kc.) and intermediate band
(120-185 kc.) direct reading. Other i.f.
ranges available through sharp harmon-
ics. Operating instructions attached in
case cover with shielded wire leads. Very
compact. In leatherette case, 6x11½x5½
in. Weighs but 8 pounds. Built to high
standards. Every serviceman should have
the No. 550 oscillator to align r.f. gang
condensers, locate defective r.f. trans-
formers, adjust i.f. transformers, check
oscillator stage and determine sensitivity
of a receiver. A necessary instrument.
Get yours today. Write for catalog of
servicing instruments.



READRITE METER WORKS

Established 1904

6 College Ave., Bluffton, Ohio

**Weather-Proof Padded Covers
for ALL Radios
and Washing Machines**



No. 10—Fits all Junior
Table models of from 5
to 9 tubes, \$2 (\$2.50
Colorado and West).
No. 12—Fits all Low-
boys and console models
not over 42 inches high,
\$4 (\$4.50 Colorado and
West).

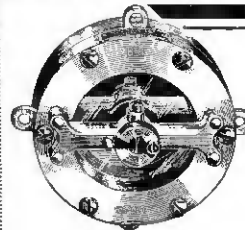
No. 15—Fits all High-
boys, both consoles and
combinations, \$6 (\$6.75
Colorado and West).
No. 11—Fits all very
small Midget sets of 4
tubes or less, \$1.25
(\$1.60 Colorado and
West).

Washing Machine—No. 18—Fits
all round or square tub washers;
either wringer or spinner models, \$3.50
(\$4.00 Colorado and West).

**The Clifford W.
MAISH BEDDING CO.**

1501 Freeman Ave., Cincinnati, O.

*Shipped parcels post,
C.O.D., postage paid—
Open Account if you
have account with us.
Satisfaction guar-
anteed.*



**The MASTERPIECE
In Microphone Construction
—The New Heavy Duty Model "BB"**

Model "BB"
List Price
\$25.00

A two-button microphone that has
become the talk of the radio industry.
It is 3 in. in diameter by 2 in. thick
and is nearly twice as heavy as any
other microphone in its class. Equipped
with Extra Heavy 24 Kt. Gold Spot
Centers. Duralumin diaphragms. Hair
line precision of manufacture. Fully guar-
anteed. Finished in highly polished chrome
plate. Compare this new, heavy duty Model
"BB", listing at \$25.00, with any \$10.00 to
\$50.00 microphone on the market.

UNIVERSAL MICROPHONE CO., Ltd.

1163 Hyde Park Blvd., Inglewood, Calif., U. S. A.

TRUVOLT RESISTORS

TIME **LABOR** **EXPENSE**

FEWER resistors required in stock—
and fewer sizes in the service man's
kit. That's the happy situation when
you use TRUVOLTS.

And think how easily repairs are made
with TRUVOLTS—and the valuable
time you save yourself and your
customers.

The exclusive TRUVOLT Adjustable
clips may be added, removed or set at
any point for exact voltage values.

Patented, open-air winding
keeps TRUVOLTS cool. All
standard sizes.

**Mail Coupon
for Catalog**

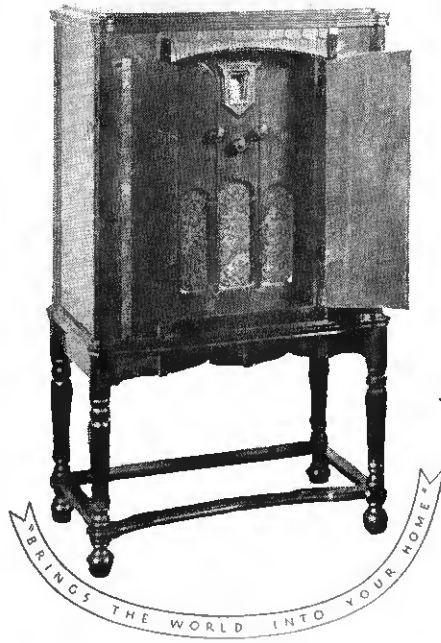
175 Varlock St., New York, N.Y.
ELECTRAD

Please send me complete 35-page catalog
and special replacement volume
Name _____
Address _____

KB-11



Look
for the shield
of quality



Prepare for
**HOLIDAY
PROFITS**
with the **GRAYBAR**
RADIO LINE!

Clinch sales this holiday season with a line of radios priced to meet present-day buying habits . . . quality radios . . . Graybar radios! For example:

The Graybar "100", representing the highest development in radio art. Pentode tubes... improved Super-Heterodyne Circuit... band pass control... resonant absorber... new automatic volume control . . . All in an artistic walnut cabinet! . . . Price? Only \$178.00!

The Graybar "Eight" . . . the Super-Heterodyne Portable . . . with tone control . . . eight tubes . . . new super-control screen grids . . . Only \$69.50.

The Graybarette "Four" . . . 4 tube Portable model . . . Has circuit of the tuned radio frequency type and new dynamic speaker. Costs \$37.50.

The "Console" . . . with automatic volume control . . . Pentode tubes . . . Super-Heterodyne . . . \$119.00.

All prices include tubes.

Guaranteeing the quality of every Graybar radio there's the Graybar reputation for quality that goes back 62 years.



The Graybar "Eight"—Super-Heterodyne Portable



The Graybarette "Four"—Four tube Portable



The "Console"—Pentode-tube Super-Heterodyne

Graybar
OFFICES IN 76 PRINCIPAL CITIES

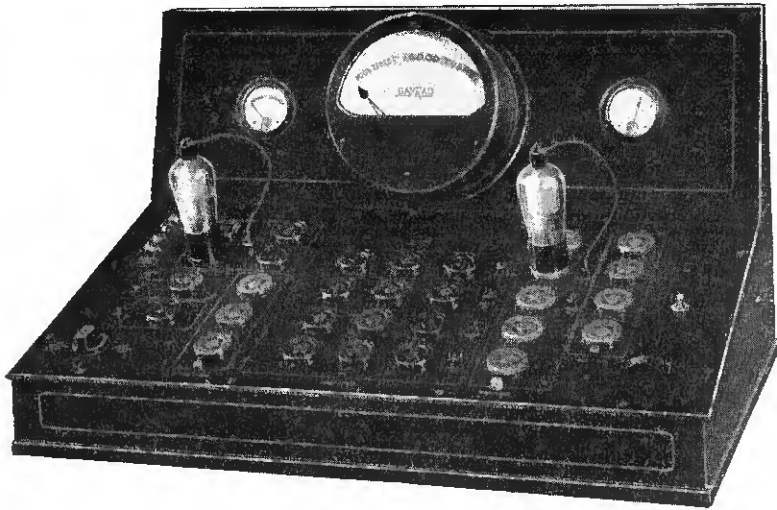
GRAYBAR ELECTRIC COMPANY, Graybar Building, New York, N. Y.

RR 11-31

Gentlemen:—Please send information about your Dealer Poster Plan—a direct forceful way of identifying me as a Graybar Dealer to my customers.

Name..... Address.....

READ THIS—For Complete Tube Testing



Tube Quality is shown on a meter that reads, Good—Weak—Poor. Short circuits are indicated by four Neon Lamps. A noise test that can be connected to any radio in your store.

That is the

DAYRAD

Type 375

Tube Analyzer

Dealers cost complete ready to connect to your A.C. house line and use. **\$174.⁰⁰**

Write for further description of this complete, simplified Direct Reading Tube Analyzer.

Other instruments, too, for the smaller stores, at reasonable prices for good equipment.

THE RADIO PRODUCTS COMPANY, Dayton, Ohio

Address Dep't R., Fifth and Norwood

SPEED

RCA Licensed

RADIO

TELEVISION

FOTO-ELECTRIC

TUBES

I pledge my word that no finer tubes can be made. SPEED Quality must be maintained in all our plants.

CABLE RADIO TUBE CORP.

Executive Offices

230-240 N. 9th St.

Brooklyn, N. Y.



RADIO WIRE PRODUCTS

ANTENNA WIRE LEAD-IN WIRES
ANTENNA KITS HOOK-UP WIRES
ANTENNA ACCESSORIES ANNUNCIATOR WIRES
LIGHTNING ARRESTERS CABLES

WRITE FOR CATALOG AND PRICES

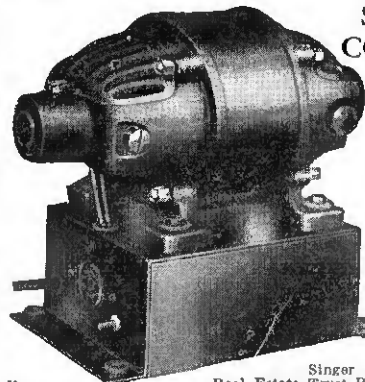
If Your Jobber Cannot Supply You—Order Direct

CORNISH WIRE CO. 30 CHURCH ST.,
NEW YORK, N. Y.

Makers of the Famous

BRAIDITE HOOK-UP WIRE

**Sensational DC-AC
CONVERTER Value!**



Sell A.C. radios, phonographs, talking motion picture equipment, etc. in D.C. districts along with JANETTE Rotary Converters. Every such sale means two profits. Janette Converters are quiet and dependable. Sizes 110 to 2500 watts.

Send for full information and prices.

JANETTE MFG. CO.
555 West Monroe St.,
Chicago, Ill.

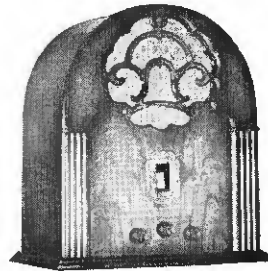
For 32, 110 or 230 volts D.C.

Singer Bldg., 149 Broadway, New York.
Real Estate Trust Bldg., Philadelphia.
Harrison Sales Co., 314 Ninth Ave., N., Seattle, Wash.
Lombard Smith Co., 324 N. San Pedro Ave., Los Angeles, Calif.

THESE 3



Model WH—Low-boy. \$69.95 Complete with Zenith Quality Tubes.



Model LH—Table Model. \$49.95 Complete with Zenith Quality Tubes.



Model MH—High-boy. \$79.95 Complete with Zenith Quality Tubes.

THE SEASON'S GREATEST SALES SUCCESS

ZENETTE is sweeping the country. It is the radio par excellence... because it gives highest consumer value; highest dealer profit in its price class; lowest consumer cost. ☪ Zenith dealers everywhere are quickening turnover and amassing exceptional returns with these extraordinary Zenith-built receivers...the only low-priced receivers with 4-gang condensers...which cut out "cross-talk" and "riding-in". ☪ If you want to make "good time" profits now—write your Zenith distributor. He has all the facts! Zenith Radio Corporation, 3620 Iron Street, Chicago, Ill.

4 CONDENSERS

Only Zenette, among low-priced radios, has 4-gang condensers. Not even all high-priced radios have them. 4-gang condensers cut out annoying "cross-talk" and "riding-in".

- Tone Shading Control
- Super-heterodyne
- Multi-mu tubes
- Pentode tube
- Vernier tuning
- Full illuminated dial
- 10-Kilocycle calibration
- 10-Kilocycle selectivity
- Full-range Dynamic Speaker

Prices slightly higher Far Western United States and Canada

NEW *Super*-HETERODYNE

Zenette

MADE BY ZENITH RADIO CORP.

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 \$135 to \$290. Zenette radio sets (advertised here) are outstanding in their price class—\$49.95 to \$79.95 complete.

please note

To manufacturers now planning cabinets for early new-year radio sets, television and electrical specialties: Adler-Royal offers you—in addition to structural integrity—a fertile source of successful merchandising ideas and an experience of over half a century in appealing to public fancy. . . May we cooperate with you? *Adler Manufacturing Co., Incorporated, Louisville, Kentucky.*

ADLER-ROYAL cabinets

A few manufacturers with whom we have worked—*Atwater Kent, Fada, Edison-General Electric, Colonial Radio, Westinghouse, J. C. Penney, Sears-Roebuck, Magnavox, National Carbon, etc.*



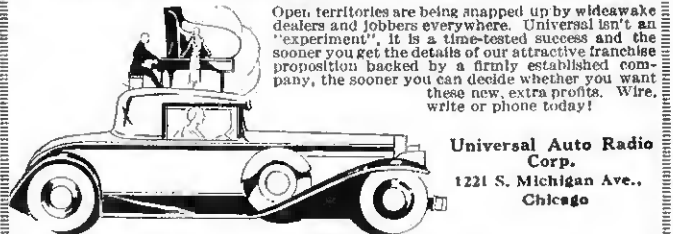
with
Remote Control
AT NO EXTRA COST!

LOOK! Dealers! Distributors! Here are New Profits for You!

Get your share of the liberal profits already being made on Universal Auto Radio! Here are two compact, powerful sets giving wonderful, dependable performance. The \$69.50 set includes 6 tubes and ALL accessories, including Remote Control. New Pentode feature, Super Dynamic Speaker and Automatic Volume Control! The Standard model has same features except 5 tubes and sells for only \$59.50 complete. Standard installation charge at authorized dealers.

Your customers will like the marvelously simple, conveniently-placed Remote Control. Right at fingertips under steering wheel, No backlash — no detuning! Only one of many outstanding features which makes Universal Auto Radio your logical choice.

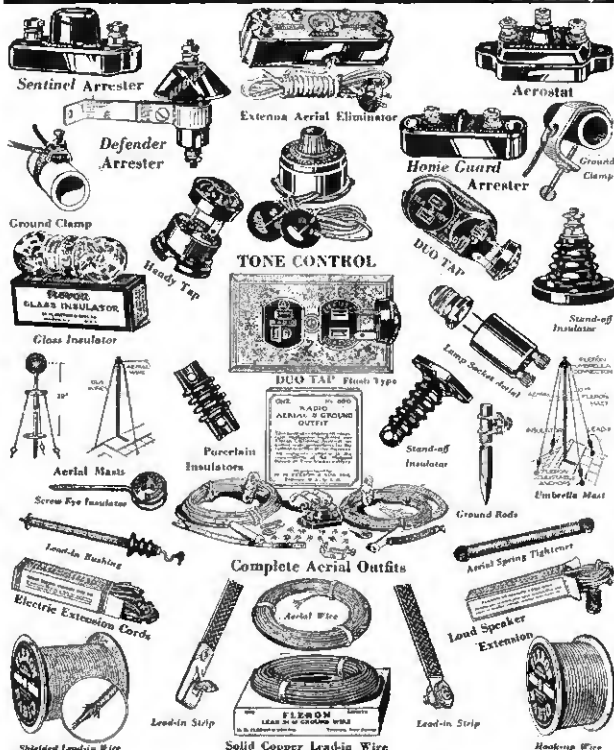
Territories Going Fast! Write Today!



Open territories are being snapped up by wideawake dealers and jobbers everywhere. Universal isn't an "experiment", it is a time-tested success and the sooner you get the details of our attractive franchise proposition backed by a firmly established company, the sooner you can decide whether you want these new, extra profits. Wire, write or phone today!

Universal Auto Radio Corp.
1221 S. Michigan Ave.,
Chicago

FLERON RADIO AERIAL ACCESSORIES



The Complete Line From One Source
M. M. FLERON & SON, Inc.
TRENTON, NEW JERSEY

New Sales Ideas For Sale At 8 Cents a Month!

Yes, *Radio Retailing*, published monthly, serves its many readers with dozens of practical sales plans, service kinks, window displays, collection and accounting plans and many other workable ideas at a cost of only 8 cents a month. One dollar a year.

This introductory offer is for cash with your order only. The regular price of *Radio Retailing* is \$2 a year. If you already subscribe to *Radio Retailing* send in your \$1 and have your present subscription extended at the reduced price.

FILL IN THE ORDER BLANK AND MAIL IT TODAY

Cash must accompany order for half price rate.

RADIO RETAILING R. R. 11
330 W. 42nd St., New York, N. Y.

Attached is \$1. Enter my order for *Radio Retailing* for one year .
Extend my present subscription for one year .

Name

Street

City.....State

Company.....Position

Canadian Subscription Price \$2 per. Cash with order only.



YOU SHOULD READ YOUR OWN COPY OF RADIO RETAILING REGULARLY EACH MONTH

RADIO RETAILING is read by 25,000 progressive radio merchants, radio and electrical wholesalers, department store managers and buyers, central station merchandise managers, radio service men, and other dealers interested in the sale of all home entertainment products.

RADIO RETAILING brings to those men a "dollar value" return unequalled by any other radio publication. It is not a "fan" magazine. It is the clearing house of all the practical selling ideas developed by salesminded distributors of radio sets, television receivers, portable and auto radios, phonograph combinations, 16 mm "home-talking" movies, shortwave sets, tubes and allied items.

RADIO RETAILING is not sold on any newstand. It is sold through subscription only and mailed direct to recognized dealers once each month. Don't depend on some one else's copy. Have your own mailed direct to you for less than 9c. a month.

Special Half-price Offer

The regular price of **RADIO RETAILING** is \$2 a year. Here is your opportunity to secure a full year's subscription at just half-price. Simply send in \$1 with the coupon below and the next 12 issues will be sent to you. Check, money-order or currency may be sent at our risk. **PAYMENT MUST ACCOMPANY ORDER** at this low rate.

Mail this coupon  with \$1.00 TODAY

SAVE \$1 WITH THIS COUPON

The regular price of *Radio Retailing* is \$2 a year. This coupon and a check, money-order or cash for \$1 will bring you the next 12 issues of this practical dealer merchandising service at 1/2 the regular rate.

Mail Your Order—NOW

Payment must accompany order as we cannot bill at reduced rate.

SEND MONEY AT OUR RISK

RADIO RETAILING, 330 W. 42nd St., New York, N. Y.

RR 11-31

Here is my \$1. Enter my name for a year's subscription (12 months) to *Radio Retailing* at special half price rates starting with the December number.

Check here if you are already a subscriber and want your subscription extended at special \$1 price.

Name

Address

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

Company..... Position.....

Nature of Business.....

Price outside U. S. and Canada \$3 a year. Price in Canada \$2.50 a year. payment with order only.

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:

Positions Wanted, 5 cents a word, minimum \$1.00 an insertion, payable in advance.
Positions Vacant and all other classifications, 10 cents a word, minimum charge \$2.00.
Proposals, 40 cents a line an insertion.

INFORMATION:

Box Numbers in care of any of our offices count 10 words additional in undisplayed ads.
Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

DISPLAYED—RATE PER INCH

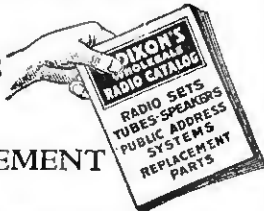
1 inch\$7.50
2 to 3 inches..... 7.25 an inch
4 to 7 inches..... 7.00 an inch
Rates for larger spaces, or yearly rates, on request.
An advertising inch is measured vertically on one column, 3 columns—30 inches—to a page. Radio Retailing

DEALERS--SERVICEMEN!

Here is your FREE Copy of our Latest

WHOLESALE RADIO CATALOG

BIG PROFITS on REPLACEMENT PARTS



Dixon for Service and Low Prices
Don't Wait!—Write Today!

DIXON

Radio and Electric Corp.

110-112 East 23rd Street
New York City, New York, U. S. A.

SPECIAL NOTICE :

To the Radio Industry

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

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

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

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4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

C. H. THOMPSON, Secretary.

McGraw-Hill Publishing Company, Inc.
Sworn to and subscribed before me this 28th day of September, 1931.

(SWAL) I. E. BEIRNE,
Notary Public N. Y. Co. Clk's No. 203, Reg. No. 38102. Kings Co. Clk's No. 636, Reg. No. 3129.
(My Commission expires March 30, 1933)

REPRESENTATIVES WANTED

Exclusive Radio Service Representatives Wanted in West, South and Middle West. This nationally known radio parts institution is about to appoint exclusive representatives to call on radio dealers already doing business with us. State radio service, selling and other experience, also what you are doing now. RW-153, Radio Retailing, 520 No. Michigan Ave., Chicago, Ill.

WANTED

WOULD buy cash job lots electric refrigerators; must be reputable make, in original packing boxes, with 60-cycle motor or without any; four, five or seven cu.ft.; state quantity and price f.o.b. cars New York. Write W-149, Radio Retailing, Tenth Ave. at 36th St., New York.

LEGAL NOTICE

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 October 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, depose 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, 10th Ave. & 36th St., N. Y. C. Managing Editor, Ray V. Suttiffe, 10th Ave. & 36th St., N. Y. C. Business Manager, Maurice Clements, 10th Ave. & 36th St., N. Y. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each

Radio Dealers! Radio Service Men!

New Low Prices
Guaranteed Replacement Condenser Blocks and Transformers Net
Atwater-Kent 37 Cond. Block with chokes \$3.95
Atwater-Kent 37 Power Transformer..... 2.95
Atwater-Kent 40 Pack Complete..... 6.50
Zenith ZEP, Stewart-Warner, Mohawk
Blocks
Majestic "B" Eliminator Cond. Block... 2.95
Electrolytic Condenser, 2 Anode..... 2.10
Electrolytic Condenser, 3 Anode..... 2.75
Hard-to-get parts—We have them
Send us your repair work for estimate
Write for our FREE CATALOGUE
Grant Radio Laboratories
6819 South Halsted St., Chicago, Ill.

SELL PORTABLE Talkie Sound-on-Film

To Theatres, Schools, Churches, Clubs
Write for manufacturers' prices on Soundheads, Photocells, Optical Systems, Rectifiers, Amplifiers, Horns, Faders, Synchronous Motors, Projectors, Lamp-houses, Screens, Microphones, etc.
Dept. RR—S.O.S. CORP.
1600 Broadway, New York City
Cable Address "SOSOUND"

Electrical RECORDINGS MADE TO ORDER

24 Hour Service. Finest Quality new metal alloy recordings: For Announcements: Public Address Sound Truck Advertising, Etc. Low cost, long life, light weight, unbreakable records; all sizes write for details. ROYAL RECORDING & FILM STUDIOS, Dep't R. 661 N. Michigan Ave., CHICAGO.

"SEARCHLIGHT"

IS

Opportunity Advertising

—to help you get what you want.

—to help you sell what you no longer need.

Take Advantage Of It

For Every Business Want

"Think SEARCHLIGHT First"

Mr. Employer



Haven't you somewhere in your organization . . . some bright young fellow who is ambitious to get ahead?

Every man can't be a college graduate. Every man can't even have a High School education.

And there are men—many of them, too—who have not been fortunate enough to have even finished the Grades.

But, that doesn't mean that they lack ambition—because, as a matter of fact, there are hundreds and hundreds of such men in every community—in every big factory—who really WOULD like to know more so that they might earn more.

Many such men have within them the spark of genius; others possess that indefinable something that makes them splendid material to build on.

But, these qualities are being lost to your organization, because these men lack a knowledge of the fundamentals that would make them invaluable to your concern. Their education stopped with their schooling, and they don't know how to go on. They probably know of home-study schools, but have little faith in them.

And yet, a home-study school—providing it is well financed and ably managed—offers them just the opportunity they want. It gives them a chance to get, in a few months time, the additional education they need, without either quitting their work or leaving their homes; and usually at a cost of only a few cents a day.

Such a school is the Radio and Television Institute, of Chicago—a \$2,000,000 concern, the foundation of which was laid in 1916. Its course of home-training in Radio and the

whole Electronic field, has not only been planned, but is actually supervised, by an Advisory Board made up of highly paid engineers and executives, each actively connected with some big and well known concern in the Electronic field.

Which means, of course, that any man trained by this Institute will be trained "right", because these men, working for large Radio and Television concerns, know exactly what the Industry needs in the way of competent men, and exactly how a man should be trained to meet this need. And, the result is an entirely new approach in the teaching of Electronics, a common sense method more practical, and more certain of success, than any method ever tried before.

The School and its course of home-study, is endorsed by fifteen of the oldest and largest manufacturers in the Radio and Electronic field; and is the only home-study Radio School to be endorsed by these firms. And, these endorsements were given only after a most thorough investigation of the School and the men behind it.

Now, then, somewhere in your organization there must be a man—or perhaps several—who have in them the ability to do bigger things, if only they were better grounded in the fundamentals of the vacuum tube and photo-electric cell.

We believe our training will give these men just that and make them worth more money to you, and to themselves. And we should like an opportunity to tell you more about our proposition—something more about our School, more about our course of home-training, more about our Advisory Board, (which, by the way, is no mere paper Board, but a group of men who actually are paid to get together, regularly, to review all matters pertaining to the School); and more about those firms who have endorsed this Institution.

The R. T. I. Advisory Board

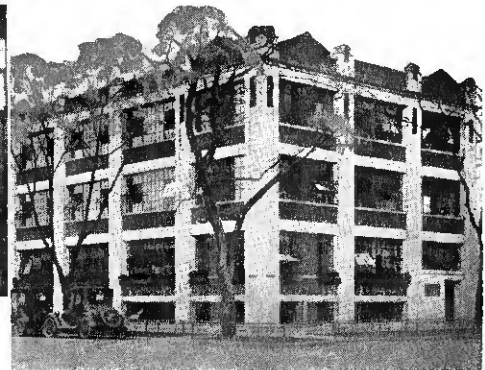
- HOMER HOGAN, General Manager of West-houses-Herald and Examiner Radio Stations KJW and KFKX.
- KENNETH A. HATHAWAY, Radio Technical Advisor for the Chicago Daily News.
- KENDALL CLOUGH, Chief Engineer for Silver-Marshall, Inc., Manufacturer of Radio receiving sets and other Radio apparatus.
- KARL E. HASSEL, Chief Engineer for Zenith Radio Corporation, Manufacturers of Zenith and Zenette Radio receiving sets.
- HAROLD P. MANLY, Head of the Radio-technic Laboratory, author of Radio Encyclopedia and Consulting Engineer.
- JRA E. RICE, Acoustical Engineer and expert on sound picture equipment installations.
- F. H. SCHNELL, Chief of Staff, Radio and Television Institute, and a world known figure in Radio communications, specializing in high frequency.

Endorsed by Leading Firms

These leading firms and associations have endorsed R. T. I. training and are co-operating with the Institute in a training program for the purpose of creating better trained Radio Technical Men.

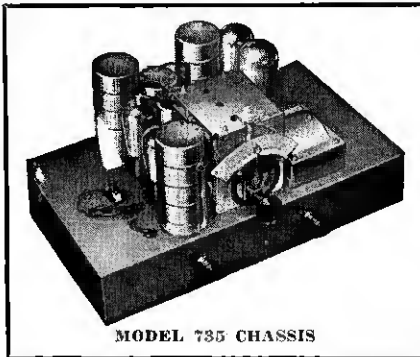
- | | |
|--------------------------------------------------------------|---------------------------------------------------------------------|
| BOSCH
United American
Bosch Co. | KENNEDY
Collin B. Kennedy Co. |
| BALKEIT
Balkeitt Radio
Corporation | MAJESTIC
Grigsby-Grunow Co. |
| CROSLLEY
Crosley Radio
Corporation | PHILCO
Philadelphia Storage
Battery Co. |
| CLARION
Transformer Corpora-
tion of America | SILVER-MARSHALL
Silver-Marshall, Inc. |
| DEFORREST
DeForest Radio Co. | STROMBERG-CARLSON
Stromberg-Carlson
Telephone Mfg. Co. |
| FADA
F. A. D. Andrea, Inc. | ZENITH
Zenith Radio
Corporation |
| HOWARD
Howard Radio Co. | Radio Trades Ass'n
St. Louis, Mo. |
| Musico and Radio Trades Ass'n
Salt Lake City, Utah | Radio Service Man-
ager's Association
New York |

RADIO and TELEVISION INSTITUTE
2130 Lawrence Avenue : : CHICAGO, U. S. A.



Left: Laboratory Building. Above: View in Radio Laboratory. Right: Administration Building Radio and Television Institute.

Ambitious Men: who are really interested in bettering their condition, are also cordially invited to write us for full information about the wonderful opportunities for trained men, that exist today in the great, new Electronic field—made up of Radio, Sound Pictures, Public Address Systems, Television, etc.—everything, in fact, that makes use of the vacuum tube or photo-electric cell.



DEWALD

PENTODE SUPER SERIES 1932
 LICENSED UNDER R. C. A. PATENTS

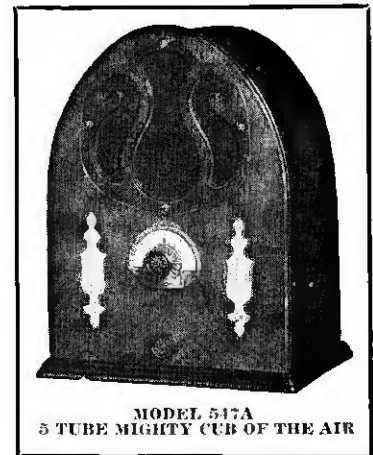
A Complete Line of Super Quality Radios at New Lower Prices On Which You Can Make Bigger Profits

Why handle non-descript merchandise on which you sacrifice profits as well as your reputation, when you can buy the nationally known line of Pierce-Airo Receivers at new low prices, maintain your reputation for quality and service, make a better profit and offer

A RADIO CHASSIS FOR EVERY PURPOSE

<p>MODEL 735 Pentode Variable-Mu Super Het chassis. Same chassis with 8 tubes—Model 746 M. For A.C. current.</p>	<p>MODEL 535 Pentode 5-tube Super-Tuned radio frequency, Variable-Mu chassis of tremendous power. For A.C. current.</p>	<p>MODEL 637 Pentode 6-tube direct current chassis; employs all heater type tubes and provides for wide variation of line circuit.</p>	<p>MODEL 547 A Pentode 5-tube Super-Tuned radio frequency, Variable-Mu. The mighty "Cub" of the Air. For A.C. current.</p>
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Write today for circular illustrating and describing the entire line of new 1932 DeWald—R.C.A. Licensed Receivers.



PIERCE-AIRO, Inc. 510 Sixth Ave. New York City
 MANUFACTURERS OF FINE RADIO SETS FOR TEN YEARS

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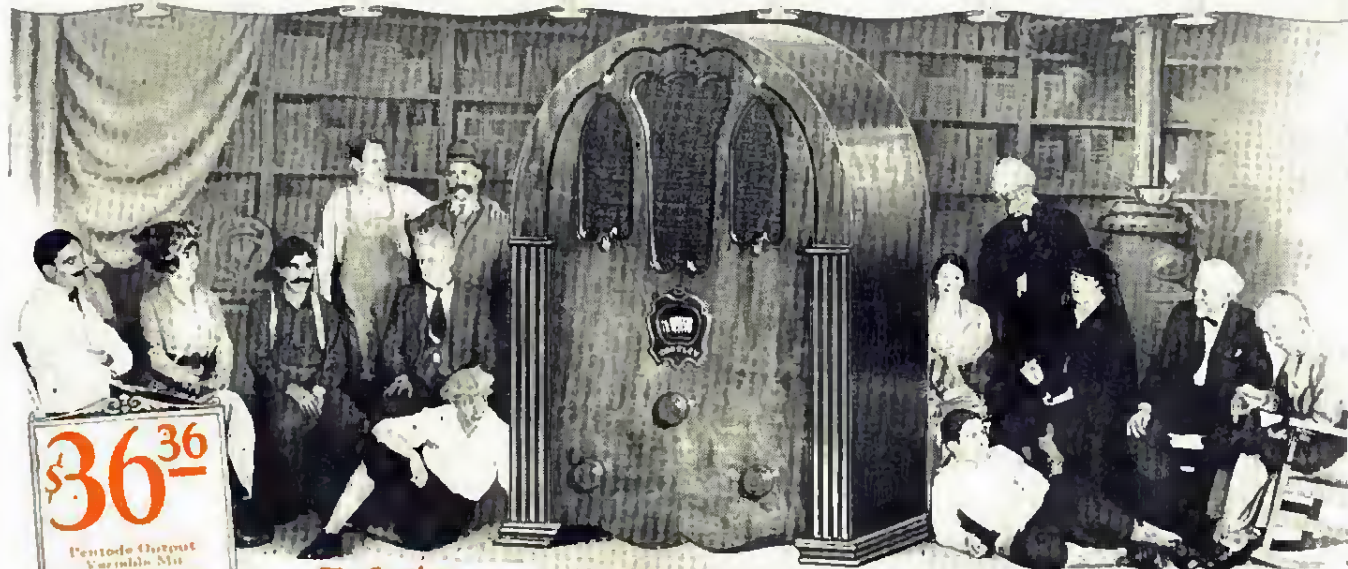
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YOU'RE THERE WITH A CROSLEY



\$36³⁶
 Pentode Output
 Variable Mu
 Superheterodyne
 Complete
 with Tubes

The Crosley **LITFELLA**

The new Crosley **LITFELLA**—a 5-tube table model **SUPERHETERODYNE** radio receiver incorporating big set features—Pentode Output—Variable Mu—full floating moving coil dynamic speaker—and other Crosley features.

When that happy, everyday, tremendously funny group of "REAL FOLKS" broadcast every Monday night over a nationwide N. B. C. network — You're THERE with a Crosley.

The Crosley **LITLBOY**

An exquisite lowboy console housing the same type 5-tube Pentode, Variable Mu Superheterodyne radio receiving set and Crosley full size full floating dynamic speaker as The **LITFELLA**. Front panel is of American black walnut. The posts and stretchers are finished in walnut. The sides and top are of 5-ply walnut veneer. An unusual radio value.

\$48⁵⁰

Complete With Tubes



8-Tube Push-Pull Pentode Output **SUPERHETERODYNE**

The Crosley **PLAYBOY**

An exquisitely designed all wood table or mantel model, 17 1/2" high, 17 1/2" wide, 10 1/2" deep. Front panels of imported Oriental wood finished in two-tone effect. The solid side panels meet at top in a high lighted walnut finish. Incorporates the new Crosley 8-tube push-pull Pentode output, Variable Mu Superheterodyne chassis and latest Crosley full floating moving coil dynamic speaker. Embodies all the new Crosley features. Never before such superlative radio performance at so low a price.

\$49⁷⁵

Complete with 8 Tubes



The Crosley **CHEERIO**

A magnificent cabinet of rare beauty, full forty inches high, housing the new Crosley 8-tube push-pull Pentode, Variable Mu Superheterodyne chassis and newest Crosley full floating moving coil dynamic speaker. All new Crosley features are incorporated.

\$65 Complete With 8 Tubes



The Crosley **MERRY MAKER**

Another forty inch console of unusually attractive design and sound construction housing the new Crosley 8-tube push-pull Pentode, Variable Mu Superheterodyne chassis plus the new type Crosley Auditorium size full floating moving coil dynamic speaker.

\$75 Complete With 8 Tubes



The Crosley **ANNOUNCER**

One of the most beautiful floor console models. Stands forty-two inches high. Incorporates the new Crosley 8-tube push-pull Pentode, Variable Mu Superheterodyne chassis plus the new type Crosley Auditorium size full floating moving coil dynamic speaker.

\$85 Complete With 8 Tubes

The Crosley **PLAYTIME**

Here it is! A dream come true! A granddaddy type A, C, G, electric halolock incorporating the new Crosley 8-tube push-pull Pentode, Variable Mu Superheterodyne radio receiver and Crosley Auditorium size, full floating moving coil dynamic speaker. The same A, C, G, loose current connection operates both clock and radio.

\$95 Complete With 8 Tubes



10-Tube Push-Pull Pentode Output **SUPERHETERODYNE** with Meter Tuning and Automatic Volume Control

The Crosley **TENSTRIKE**

An unusually attractive and compact table model receiver incorporating the new Crosley 10-tube push-pull Pentode output, variable Mu Superheterodyne chassis with **METER TUNING** and Auditorium size Crosley full floating moving coil dynamic speaker. Stump walnut veneer front panel with burr maple overlay. Without finish sides, top and pilasters. Grill openings enameled and locked with changeable cloth. Dimensions: 20 1/2 inches high, 16 inches wide, 10 inches deep.

\$69⁵⁰

Complete With 10 Tubes



The Crosley **HAPPY HOUR**

Front panel of this magnificent six-legged console is of beautiful figured stump walnut veneer arched with burr maple in two tone effect, and high-lighted. Curved pilasters of especially selected stump walnut veneer. American black walnut veneer top and sides. Six turned and fluted legs, capped with oval medallions in contrasting shades. The spindle knob of the speaker extends in a fan like manner from the base coil in each leg. Incorporates the new Crosley 10-tube push-pull Pentode output, variable Mu Superheterodyne chassis with **METER TUNING** and Auditorium size full floating moving coil dynamic speaker.

\$99⁵⁰

Complete With 10 Tubes

THE CROSLEY RADIO CORPORATION
 POWEL CROSLEY, Jr., President
 Home of "the Nation's Station" — W.L.W.
 CINCINNATI

(Montana, Wyoming, Colorado, New Mexico and West, prices slightly higher.)

CROSLEY RADIO

