

RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING



Leading **BY A YEAR-**

**WITH WORLD WIDE RECEPTION, STEWART-WARNER
FORGES AHEAD TO ADD TO ITS RECORD OF ALWAYS
BEING FIRST WITH THE NEWEST**

Just a year ago, the Radio Industry needed a new tonic. The public thought—"Radio has nothing new to offer."

Then Stewart-Warner again demonstrated its pioneering leadership by offering a new amazing feature that took the whole country by storm—World Wide Reception.

Here was a radio, that in addition to improved reception of standard programs, opened up an entirely new field of interest—foreign stations, ships at sea, airplanes, etc.—stations that could not be heard on standard radios.

The complete line, including console models with and without built-in short wave converter, priced from \$34.95 to \$104.75, proved a wonderful sales stimulant for the

Stewart-Warner Dealer. A separate short wave converter which, used with virtually any make of A. C. set, gave world wide reception, also brought him many sales from people who wanted to get the thrilling short wave broadcasts without buying a new set.

World Wide Reception, pioneered by Stewart-Warner, has proved the biggest selling appeal in all radio history. In 1932 Stewart-Warner Dealers with a Round-the-World Radio a year ahead of all are in a position to sweep the field. In addition, they can reap big profits and establish themselves as the leading source of home entertainment by handling the amazing new Stewart-Warner Movie Camera Line that is proving such a sensation. Write for details. Stewart-Warner Corp., Chicago, U. S. A.

STEWART-WARNER RADIO

A GREAT RADIO BACKED BY A GREAT NAME

Do You Rate This RESALE BUSINESS?

Initial equipment tube business in 1931 receivers will be reflected in replacement business in 1932. Are you one of the thousands of Dealers who are cashing in and will cash in on the huge replacement market that Arcturus is building through its initial equipment business?

Today—Arcturus Blue Tubes are used as standard equipment by more set manufacturers and in more sets than any other tube! Today—Arcturus is building for you a bigger replacement market than any other tube! Today—millions of radio listeners are becoming 'blue' tube conscious! Today—Arcturus Blue Tubes are the fastest-selling, profit-building tubes on the market, and tomorrow, will be the most profitable tube franchise.

The long list of set manufacturers using Arcturus Blue Tubes reads like a 'who's who in the industry.' Critical engineers for exacting and leading set manufacturers imposed the most rigid comparative tests... measured the tonal qualities with precise instruments...checked for rugged construction...tested for serviceable life...then made their decision. Arcturus...the blue tube...won with colors flying!

And...also endorsing Arcturus quality, are manufacturers and retailers in 64 foreign countries throughout the world who use and sell Arcturus Blue Tubes—exclusively.

Use the tube that is endorsed and used by the leaders of the radio industry...Arcturus Blue Tubes. Get lined up for this huge replacement market. Feature Arcturus—and watch your sales jump. If you don't handle Arcturus Tubes, ask your Jobber, or us, for the details of this valuable franchise.

WHO'S WHO in the Industry OR Some of the Manufacturers Who Used Arcturus Tubes in 1931

Atwater Kent Manufacturing Co.
Columbia Phonograph Co.
Crosley Radio Company
Stewart Warner Corporation
Transformer Corp. of America
Wurlitzer Mfg. Co.
Zenith Radio Corp.
Advance Electric Company
Air-King Products, Inc.
Anderson Manufacturing Co.
Audiola Radio Company
Automatic Musical Instrument Co.
Balkeitt Radio Company
Bulova Watch Company
Davidson-Haynes Mfg. Co.
Detrola Manufacturing Co.
Dubilier Clock Company
Eastern Coil Co., Inc.
Echophone Radio Mfg. Co.
Elgin Radio & Television Co.
Galvin Manufacturing Corp.
Genera. Television & Radio Corp.
Halson Radio Mfg. Co.
Hoodwin Company
Howard Radio Company
Insuline Corp. of America
Jackson-Bell Company
Jesse French & Sons Piano Co.
Kendis Radio Company
Lincoln Radio Corporation
Los Angeles Radio Mfg. Co.
Master Radio Mfg. Company
Midwest Radio Corporation
Missior-Bell Manufacturing Co.
Mutual Manufacturing Co.
Pacific Radio Mfg. Company
Patterson Radio Mfg. Company
Perry Products Company
Peerless Manufacturing Co.
Powell Manufacturing Co.
Remler Company, Ltd.
Revere Radio Corporation
Scott Radio Laboratories, Inc.
Sterling Manufacturing Co.
Trav-ler Manufacturing Corp.
Trojan Factories
United Air Cleaner Corp.
United Motors Service, Inc.
Waltham Radio Corporation
Ware Manufacturing Co.
Warner Engineering Corp.
West Coast Radio Company
Western Coil & Elec. Co.
Western Radio Mfg. Co.
Wilcox-Gay Corporation

ARCTURUS RADIO
TUBE COMPANY
Newark, N. J.



ARCTURUS

The **BLUE TUBE** with the **LIFE-LIKE TONE**

Radio Retailing, February, 1932. Vol. 15, No. 2. Published monthly. McGraw-Hill Publishing Company, Inc., 330 West Forty-second Street, New York, N. Y. \$2 per year, 25 cents per copy. Foreign postage, \$3 a year U. S. Currency, or 15 shillings. Canada (including Canadian duty), \$2.50. Entered as second-class matter April 10, 1925, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Printed in U. S. A.

RADIO RETAILING

HOME ENTERTAINMENT MERCHANDISING

Vol. 15

No. 2

Contents for February, 1932

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With the Aid of an Electronic Tube

This near relation of the set tube family constitutes an important part of the automatic leveling device on all elevators in the new McGraw-Hill Building. Its keen eye will stop your elevator on an exact level with the thirtieth floor where dwell the editors of "RADIO RETAILING"

McGRAW-HILL PUBLISHING COMPANY, INC., 330 WEST 42d ST., NEW YORK, N. Y.

CHICAGO . . . 520 North Michigan Avenue SAN FRANCISCO . . . 883 Mission Street LONDON, W. C. 2 - Aldwych House, Aldwych
Cable Address: "McGRAWHILL, N. Y."

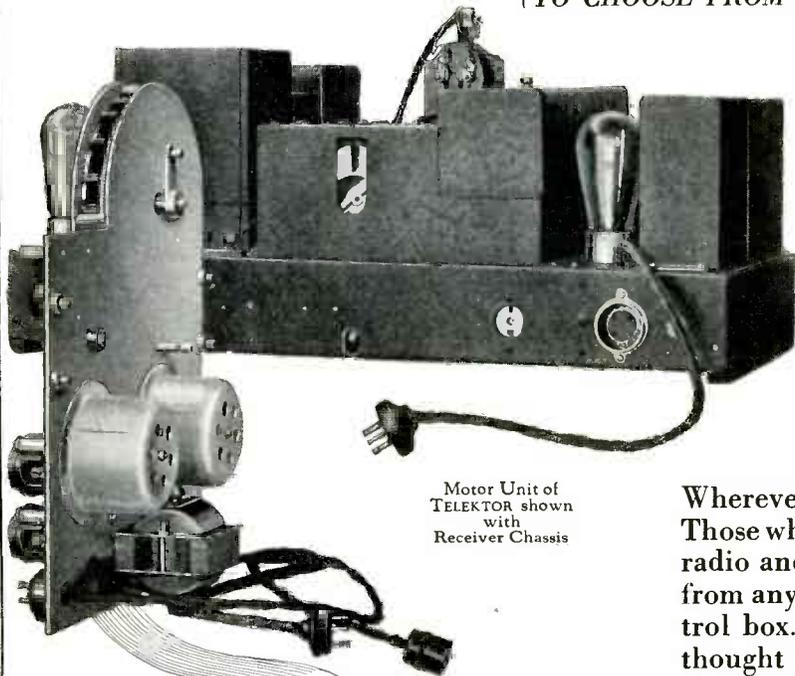
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Member A.B.P., Member A.B.C. Printed U. S. A.

Now TELEKTOR-

(TO CHOOSE FROM AFAR)

For
**Stromberg-Carlson
DEALERS**



Motor Unit of
TELEKTOR shown
with
Receiver Chassis

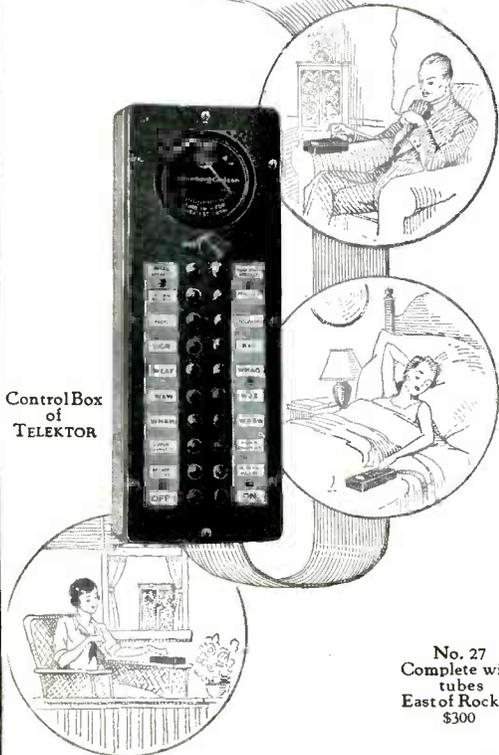
A GAIN Stromberg-Carlson gives its dealers the latest in radio—the wonderful new TELEKTOR System.

Wherever it is displayed it is attracting crowds. Those who see it are fascinated at the way every radio and record operation can be controlled from any point with a simple push button control box. Lovers of radio are thrilled at the thought of Stromberg-Carlson quality of performance in every room from a single receiver. Dealers with TELEKTOR are getting people into their stores;—are selling them TELEKTOR Systems or are selling them Stromberg-Carlson TELEKTOR Type Radios, which afterwards they can equip for TELEKTOR operation. The Stromberg-Carlson franchise is based on the principle of a dealer making money on the line.

Stromberg-Carlson Telektor Type Radios from \$300 to \$660 including the Multi-Record Radio (automatic radio-phonograph combination, electrical). Prices, complete with tubes, East of Rockies.

Stromberg-Carlson Standard Receivers from \$175 to \$225.

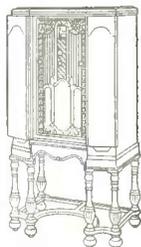
STROMBERG-CARLSON TELEPHONE MFG. CO., ROCHESTER, N. Y.



Control Box
of
TELEKTOR

Telektor Type Radios—Each one a "High Profit" Unit of Sale—

No. 27
Complete with
tubes
East of Rockies
\$300



No. 22
Complete with
tubes
East of Rockies
\$375



No. 14
Complete with
tubes
East of Rockies
\$660



1894

Stromberg-Carlson



1932

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



A DUAL REASON
FOR DEALERS IN

Westinghouse

Dual-automatic Refrigeration



BEFORE taking on any make of electric refrigerator make sure of two things. Is it mechanically right? Is it in the market to stay?

The Westinghouse Dual-automatic passes both tests. It is beautifully-styled and precision-built. It includes all the worthwhile features that critical buyers demand PLUS the exclusive principle of Dual-automatic operation — completely automatic under all conditions. And it is built by a company whose leadership in electrical equipment is unquestioned . . . a concern whose name spells reliability . . . one that can be counted on at all times to protect *your* interests and *your* investment.

Westinghouse alone offers a refrigerator that guarantees the *double value, double convenience,* and *double economy* of Built-in Watchman control. Double protection for your customers PLUS lowered sales costs for you!

In addition, Westinghouse stands behind you with a sensational advertising program. Smashing national campaigns, strong newspaper advertising, arresting displays, sales-getting literature . . . everything needed to make big profits for Westinghouse dealers in 1932.

Look into the Westinghouse dealer franchise. It's fair. It's liberal. And it adds *extra profit* to *your* 1932 sales.

Write, wire or telephone for details.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Mansfield, Ohio

COMPLETE ADVERTISING AND SALES PROMOTION AID



NEW DUAL-AUTOMATIC WATER COOLERS · MICARTA CABINETS

Here are the new Westinghouse Water Coolers — the most beautiful line ever offered. Striking designs . . . black Micarta cabinets inlaid with aluminum strips . . . Chromium trim. Dual-automatic, of course.



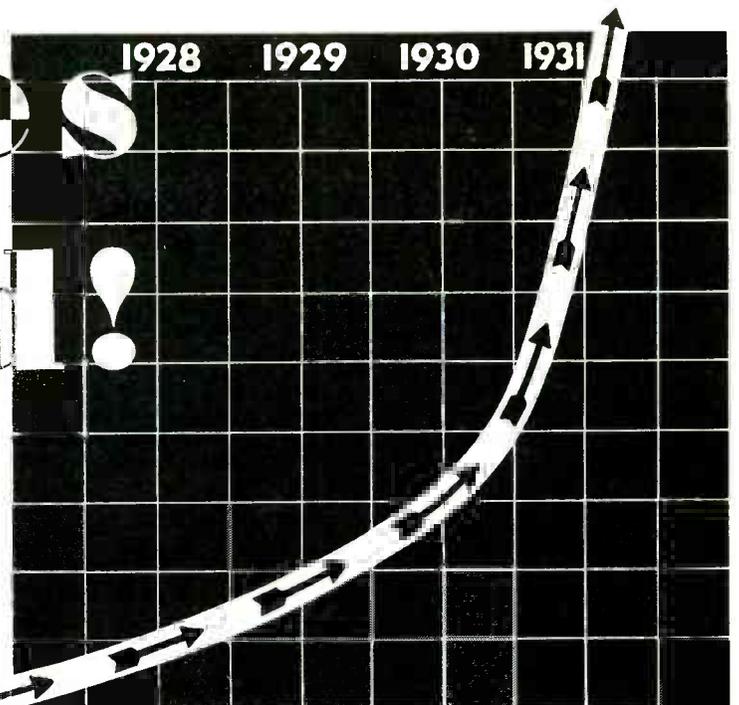
Model MT-8 is for water supply line, with bubbler and self-closing faucet. With refrigerated compartment, Model CMT-4.



Model CMB-4 is portable for bottle supply. Equipped with lock compartment for bottled beverages. Without compartment, Model MB-5.

Get the FACTS that made this amazing MAYFLOWER

sales record!



Sold thru retail
outlets only
Period-styled
cabinets
Pre-sold by national
advertising
A complete
refrigeration line
Refrigeration
since 1920

“GREATER sales and profits for the retail merchant.”—

That is the story these Mayflower facts and figures tell.

Mayflower, backed by twelve record-breaking years, has pioneered in the retail merchandising of electric refrigeration. And Mayflower has proved the soundness of both plan and product with outstanding success.

Look at the Mayflower sales curve. Follow its upward path—particularly for the last four years. Look ahead to further profit-paying progress for the retail merchant with Mayflower. There is a great opportunity for someone in your territory to cash-in on Mayflower. Get the facts and figures now.

MAYFLOWER
ELECTRIC REFRIGERATION



Send us your name and address and we will mail you our booklet outlining the complete Mayflower retail merchandising plan. Trupar Mfg. Co., Dayton, Ohio.

here is a "NATURAL" for PROFIT SEEKING DEALERS!

STEWART-WARNER
Sensational **NEW \$50** *four speed*
MOVIE CAMERA



This new, different movie camera, endorsed by movie stars, opens up a vast market that never has been touched. For it is the kind of movie camera that the public has always wanted, at the price they want to pay.

Think of a movie camera that makes movie taking easier than snapshots—a movie camera that a child can operate—yet takes living moving pictures of theatre-like brilliance.

No wonder it was accepted by the 16-mm. trade over night. No wonder it is taking the whole country by storm.

For, into it has gone Stewart-Warner's 25 years' experience in building gear mechanism of watch-like accuracy and enduring dependability. It was designed by leading professional cameramen of the capital of moviedom—Hollywood.

Has all the essentials of the high-priced cameras. And in addition astounding features that no other camera offers at any price:

4 Speeds: S-l-o-w motion, low, regular, and talking picture speed; audible film counter; 100-ft. film capacity; uses any standard 16-mm. film, developed free; the lightest spring-driven movie camera on the market.

Thousands and thousands of letters, in response to National magazine and newspaper advertising, prove it is the hottest thing in movie history. It has struck the bull's eye of public preference squarely.

If you want quick profits that lead to more, get in on this sensation. Easy to sell—no service costs to you—and it paves the way for the sale of a screen and the new Stewart-Warner projector. It's a sure-fire knock out. Get in now to get the business.

Send the coupon now for details that tell all—prove all, to your satisfaction. Stewart-Warner Corporation, Chicago, U. S. A.

Hollywood Model, only \$50 Complete with leather bound, waterproof Carrying Case of sporty new design

MOTION PICTURE DIVISION, RR-2
 STEWART-WARNER CORPORATION,
 1826 Diversey Parkway, Chicago, Ill.

Without obligation, please send me details regarding your Movie Equipment Line.

Name.....

Address.....

Town or City..... State.....

8,860,000 PROSP



A revolutionary new radio development
THE AIR CELL SET
 makes every unwired home a prospect for you
NO STORAGE BATTERIES—NO RECHARGING

NEARLY 9,000,000 homes — many within easy reach of your store — are unwired and therefore unable to use electric radio. They represent a vast potential market for radio sets. All they have been waiting for is an opportunity to enjoy radio the way it is enjoyed in homes with AC sets.

That opportunity is here — and so is yours to dig into a comparatively unworked field, with

assurance of sales and profits! It comes with Air Cell Sets made by over twenty different radio manufacturers.

This huge market — nearly 9,000,000 homes — has unquestionably been neglected. The stampede to AC receivers temporarily side-tracked the attention of manufacturers. As a result — until now — little attention has been given to developing battery sets which eliminated the inconvenience

A NEW THING IN RADIO

SETS WAITING TO BE SOLD!

and expense of carrying heavy storage batteries to the nearest point for recharging.

For three years, National Carbon Company, Inc., has sensed the need of this market—has been searching for a new source of radio "A" power which would enable radio manufacturers to build a battery-operated set to meet the need of these millions of homes. The EVEREADY AIR CELL "A" BATTERY, together with a new two-volt tube used in Air Cell Sets, is the answer.

Air Cell Sets—powered with Eveready Air Cell "A" Batteries—are a tremendous advance over all previous ideas of battery sets. They are absolutely independent of storage batteries and are wired specially for Air Cell operation. They give AC performance with battery power—without recharging—at less operating cost than storage battery sets. They are your opportunity to sell the latest development in modern battery-operated radio to countless homes.

Nation-wide advertising campaign, launched this month, tells millions about these new sets

A national advertising campaign on Air Cell Sets and Eveready Air Cell "A" Batteries commences in February. This campaign appears in *The Country Gentleman* and leading national farm publications with millions and millions of readers. It has been planned in such a way as to help radio set dealers and distributors everywhere get immediate sales.

Tie in your sales program with this intensive, carefully developed advertising campaign. Talk Air Cell Sets to your trade. If you are not yet stocked with Air Cell Sets, arrange with your jobber now to be ready when the demand comes.

Air Cell Receivers are being made in a wide variety of styles and a wide range of prices—to suit every taste, every purse, and every radio need in unwired homes. Over twenty radio set manufacturers are already making the Air Cell Receivers using the new Eveready Air Cell "A" Battery. 2-volt tubes to go with Air Cell Sets are being made by several manufacturers including the makers of Eveready Raytheon Radio Tubes.

Go after your share of this new business. Get our latest information on Air Cell Sets and the Eveready Air Cell "A" Battery. Send the coupon at once.

NATIONAL CARBON CO., INC.
 General Offices: New York, N. Y.
 Branches: Chicago Kansas City New York
 San Francisco

Unit of  and Carbon Corporation

NATIONAL CARBON COMPANY, Inc.
 30 East 42nd Street, New York City

Gentlemen:

Please send me full information regarding Eveready Air Cell "A" Batteries and the names of manufacturers making the New Air Cell Sets.

Dealer's name _____

Address _____



OPPORTUNITY RIDES THE AIR —open your door and let it in

In this great new age of radio, a thousand opportunities for pleasure and profit throng the air each night. Glorious music—dramatic entertainment—news of world events—sports—business and market reports—all are yours at the turn of the dial. For a startling new invention now gives country homes the same fine quality of radio reception known to city dwellers!

A new battery—the Eveready Air Cell "A" Battery—used in any market, and with Eveready Layerbilt "B" Batteries, does away completely with the troubles of recharging and frequent battery replacement. This battery will last for 1000 hours operating time—a full year, under average use.

Distance, volume, selectivity, tone—all these qualities can be enjoyed in your home right now—with out electrification. Twenty leading manufacturers are making the new, dependable Air Cell Sets—so reasonably priced as to be within everybody's reach. All of them use Eveready Air Cell Batteries for "A" power. Let your local radio dealer tell you all about these marvelous new sets, and—

An even better Eveready Layerbilt at lower cost

Eveready Air Cell "A" Battery is his brother to Eveready Layerbilt "B" Battery, known for years for economy and long life. Whether used in the new Air Cell Sets or in the older models of battery sets, Eveready Layerbilt gives unsurpassed service with lower operating costs than ever before. Eveready Layerbilt "B" Batteries have now been radically reduced in price as follows:

Eveready Layerbilt No. 18A—	Old Price	New Price
Eveready Layerbilt No. 18A—	\$1.25	\$2.25
Eveready Layerbilt No. 18B—	\$2.95	\$2.25
Eveready Layerbilt No. 18C—	\$2.95	\$2.25

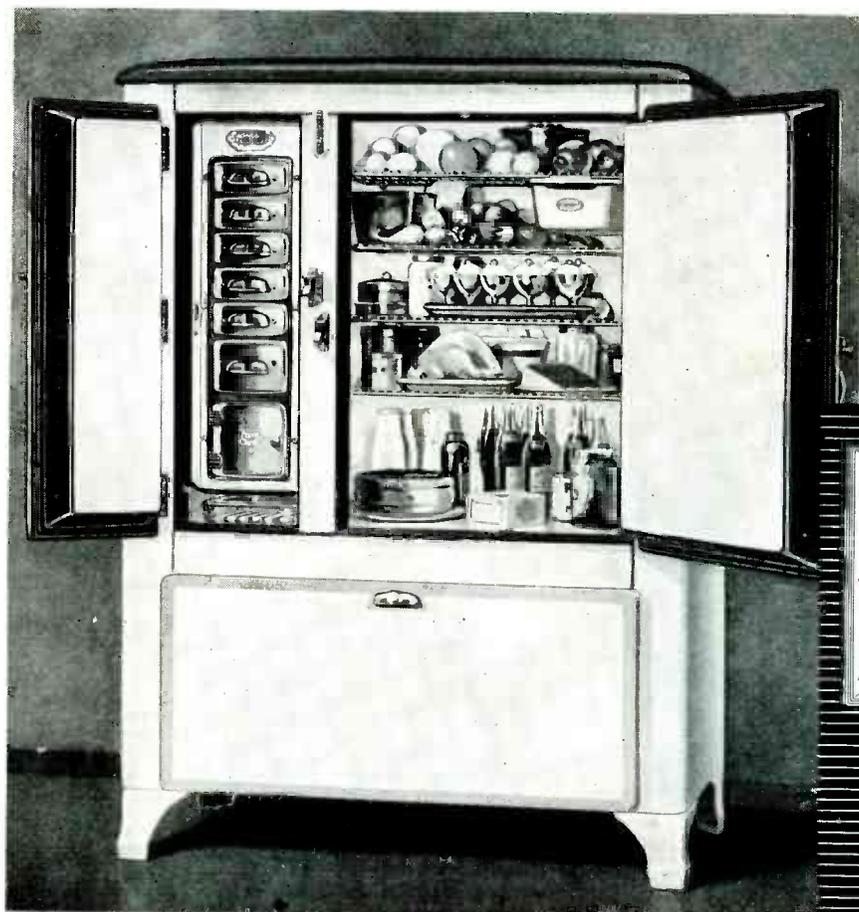
EVEREADY
 Radio Batteries



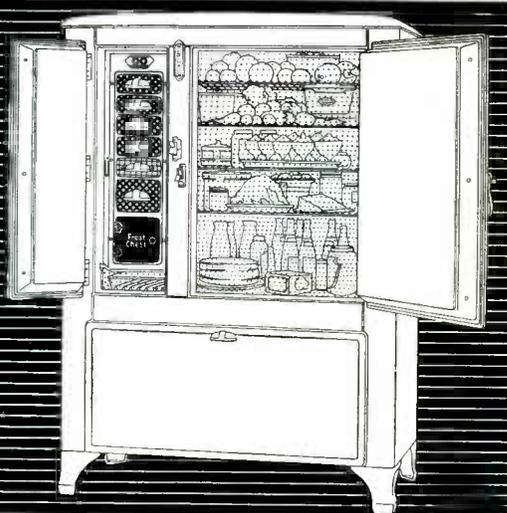
The above advertisement appears in the February issue of *The Country Gentleman* and *Successful Farming*, and in the March issues of *Capper's Farmer*, *The Farm Journal* and *Country Home*.

— A BIG THING FOR YOU

The new FULLY AUTOMATIC Kelvinator



*the most salable
merchandise on
the market!*



THE most complete and the finest line of electric refrigeration Kelvinator has ever built. Many noteworthy improvements and refinements—greater value—better performance—higher quality—and exclusive *fully automatic operation*. This, in a few words, is what makes the 1932 Kelvinator Line the most desirable franchise in the Industry.

The new Standard and De Luxe Models, of which there are 9 different sizes, from 4 to 22 cubic feet food storage capacity, are the *only* fully automatic electric refrigerators built.

The new "K" Model, available in 4 sizes and in both porcelain and lacquer finishes, brings Kelvinator Quality, Performance and Value to the low-priced field.

And, in addition to this great new Line of Domestic Cabinets, the Kelvinator Commercial Line for 1932 covers every field in which electric refrigeration is used. It represents a source of



- | | |
|---|----------------------------------|
| 1 | FOOD PRESERVATION
TEMPERATURE |
| 2 | BELOW FREEZING
TEMPERATURE |
| 3 | FAST FREEZING
TEMPERATURE |
| 4 | WORLD'S RECORD
FAST FREEZING |

extra volume and profit for Kelvinator dealers.

Wire, write or phone to-day for complete information. With Kelvinator you can build up greater volume and *bigger profits*.

KELVINATOR CORPORATION
14263 Plymouth Road - Detroit, Michigan

Kelvinator of Canada, Ltd., London, Ontario
Kelvinator Limited, London, England (458)

WHAT ABOUT 1932?

THAT'S the question every one is asking. Looking ahead is vitally important nowadays!

Here is National Carbon Company's program: National Carbon Company, in 1932, is going to continue the well-defined policy that it has developed and maintained for more than thirty years on all its products:

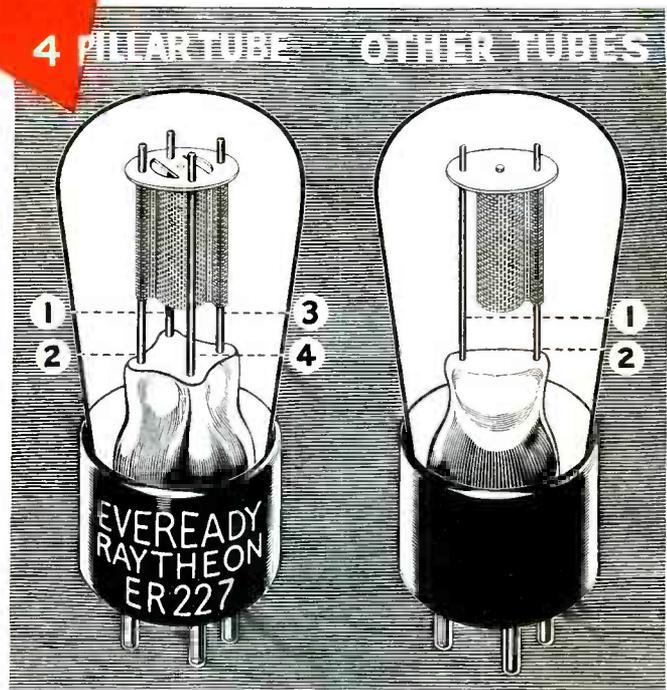
FIRST: To be ever on the alert to contribute new products of outstanding merit to the fields in which its interest lies.

SECOND: To promote the sale of Eveready products in a way that will earn the loyalty and enthusiasm of the trade.

THIRD: To improve continuously all Eveready products, and thus to maintain their leadership as outstanding merchandise.

This definite policy has been followed in the past with the development of Eveready Radio "B" Batteries, reaching a peak of efficiency and performance in the exclusive Eveready Layerbilt construction; and again in the case of the Eveready Air Cell "A" Battery, which in a short time has contributed so much to the cultivation of the long neglected yet important rural field.

So it is with Eveready Raytheon 4-pillar Tubes. They represent, not Chinese copies of a dozen other brands of tubes, but the only radio tube which is radically different and better in structure and design. You can hear the difference and see the reason — and so can your customers. And because



Notice the four strong pillars. With this solid foundation the fragile parts cannot move a hair's breadth from their fixed position. All other tubes have only a two-pillar foundation. Two supports instead of four! Jolts, bumps and vibration often impair their vital accuracy.

they are truly outstanding, another worth-while Eveready contribution to the radio field, we plan to secure for Eveready Raytheon 4-pillar Tubes the position to which their merit entitles them. A sales and advertising program to reach this goal is now under way. It will be pushed aggressively during 1932.

NATIONAL CARBON COMPANY, INC. General Offices: New York, N. Y.

Unit of Union Carbide  and Carbon Corporation

EVEREADY RAYTHEON 4 - PILLAR RADIO TUBES

Clarion smashes

7 new models

9-tube ALL-WAVE
combination

\$79⁵⁰



THE two smash hits of the radio season—Clarion's new 9-tube ALL-WAVE combination and the 10-tube console—are leading the trend to bigger profits with bigger sets! It's the new thing that brings in business—AND THESE ARE NEW, in features, in value, in money-making possibilities. Way under competition in price, way over in performance! They're the headliners of a completely new Clarion line. For all the important details get in touch at once with the Clarion distributor in your district or with TRANSFORMER CORPORATION OF AMERICA, Ogden and Keeler Avenues, Chicago, Ill.



The Radio with **98%** pure
tone!

Model 140—\$79.50 complete. Here's Clarion's big hit for 1932, the 9-tube super-heterodyne ALL-WAVE combination—its 3-tube converter assures 50% better reception of short-wave programs from all over the world, gets ships at sea, police calls at home, and airplane flashes. It's the new thrill—and the new money-maker!

The **ONLY** complete line a

competition!

every one a leader

*embodying every development,
meeting every demand*

10-tube de luxe
Console

\$89⁵⁰

*Five other
reasons for Clarion
supremacy!*

Model 100 . . \$39.95
COMPLETE
6-tube mantel model

Model 120 . . \$49.95
COMPLETE
7-tube mantel model

Model 101 . . \$52.50
COMPLETE
6-tube console

Model 121 . . \$67.50
COMPLETE
7-tube console

**Motor Model . . at new
sensational, low price**
All Superheterodynes

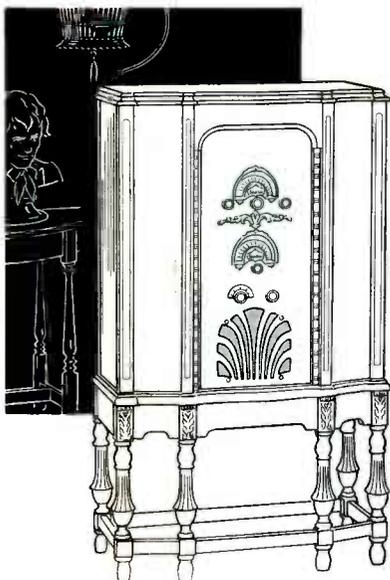
Prices slightly higher west of the Rockies.

Model 160—\$89.50 complete. The 10-tube de luxe superheterodyne with super-size speaker, phonograph attachment, and numberless other advancements. Its handsome 6-legged cabinet alone means many added sales! A new low price—a new high value—and still higher profits for you!



dealer can afford to carry!

WORLD - WIDE RECEPTION with True Sparton Performance Now Completes the Most Salable Line in Sparton History



**MODEL 16 AW
MULTI-WAVE RECEIVER**

A de luxe 12-tube Superheterodyne in a cabinet of characteristic Sparton richness. Two separate tuning controls provide exceptional operating simplicity. A turn of the band selector and control knob instantly adapts this super-modern instrument for either long or short wave reception. Super-sonne chassis, Automatic Volume Control, Tone and Static Control, Phono Pick-up Jack and all other latest Sparton features.

THE new Sparton Multi-Wave sets and the new Sparton Short-Wave Converter have extended Sparton reception around the world.

And they have increased the attractiveness of the Sparton franchise by completing the most diversified and salable line in Sparton history.

Long experience and outstanding success in the development of short-wave receivers for police work provided an unequalled background for this latest achievement by Sparton engineers.

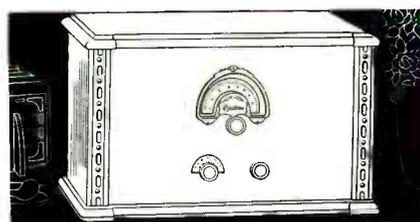
Sparton Automobile Radio has been adopted by more police departments than any other make. And these new Multi-Wave Spartons are certain to be the first choice of discriminating radio listeners, who demand true Sparton quality and performance in both long and short wave reception.

Ask your Sparton distributor for details of these super-modern instruments, which offer new profit opportunity for dealers by opening vast, new fields of radio enjoyment for owners.

Widest Range of Models and Prices Sparton Has Ever Offered!

Model 9—small console	8 62.50
Model 10—junior Superheterodyne	69.50
Model 12—console Superheterodyne	64.50
Model 15—console Superheterodyne	99.50
Model 16—console Superheterodyne	114.00
Model 16 AW—console multi-wave Superheterodyne	155.00
Model 25—console Superheterodyne	136.00
Model 26—de luxe console Superheterodyne	165.00
Model 26 AW—console multi-wave Superheterodyne	195.00
Model 30—radio-phonograph combination	235.00
Model 30 A—radio-phonograph combination with long-playing attachment	248.00
Model 35—de luxe radio-phonograph combination	585.00
Model 40—automobile radio	99.50
Model 45—Visionola home-talkie	575.00
Model 51—country home-battery set—table type	79.50
Model 52—country home battery set—console type	99.50
Model 60—short-wave converter	49.75

Prices include Sparton precision-built, factory-matched tubes. Western prices slightly higher.



**MODEL 60
SHORT-WAVE CONVERTER**

Encased in a beautiful table type cabinet, this 4-tube converter transforms any standard AC broadcast receiver into a short-wave Superheterodyne by simply plugging into light socket and connecting the aerial and ground wires. Full AC operation, with integral voltage and current supply system.

THE SPARKS-WITHINGTON COMPANY (Established 1900)
JACKSON, MICHIGAN, U. S. A.

(769)

SPARTON RADIO "Radio's Richest Voice"

Only Sparton has the Musical Beauty of Sparton



Radio



Refrigerator



Home Movie-Talkies



Automobile Radio



Tubes



Automobile Warning Signals

Sylvania offers You

the Aristocrat of TUBE ANALYZERS

at **NO** ACTUAL COST



(Above) — Sylvania Combination Display Analyzer
Showcase dimensions: width 34"—depth 20"—height 40". Clip the coupon. Learn how to get this combination unit AT NO ACTUAL COST TO YOU.

Tube testing means—

1. More tube sales.
2. Steadier profits.
3. More customers in your store . . . they buy more of everything you sell.

HERE'S the last word in scientifically designed tube analyzers . . . one that truthfully measures tube conditions! It's the Sylvania Analyzer . . . and here's what you get under the Sylvania plan . . . AT NO ACTUAL COST TO YOU.

1. **ANALYZER**—Beautifully finished in genuine walnut . . . gleaming with chromium plated fittings. Meter readings are clear, simple to understand. Red—defective; Pink—doubtful; Green—satisfactory.
2. **DISPLAY MERCHANDISER**—Brilliantly illuminated and mirrored interior display make this combination unit one that any dealer is proud to show. At one glance customers see both the need for new tubes and the new tubes that they need. A complete tube stock may be kept in the merchandiser under lock and key.
3. **SALES-HELPS**—Sylvania supplies 19 DIFFERENT TESTED SALES-HELPS for direct mailing to your customers. They bring new customers to your store . . . they make tube testing pay big dividends.

In addition—**Radio advertising** featuring "The Sylvanians" popular orchestra and quartet twice each week over the Columbia Basic Network, and **newspaper advertising** . . . in 31 leading cities . . . **make more sales for you.**



The Sylvania Counter Analyzer

for use in stores where floor space is too limited to permit the use of the Combination Display Analyzer. Overall dimensions: width 25"—depth 14 5/8"—height 16 1/2".

Join Sylvania. Clip the coupon NOW for full information on this profit-making plan.

HYGRADE SYLVANIA CORPORATION,
Sylvania Division, Dept. R-2-2
Emporium, Penna.

Please send me full details of the Free Sylvania Analyzer Plan.

My Jobber is..... City.....

My Firm Name.....

Address.....

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

Sylvania

REGISTERED U. S. PAT. OFF.

THE SET-TESTED TUBE

NEW—Speed up your sales just when you need them!



Model 66

10 tube Superheterodyne

A new and striking design in a Colonial Console Cabinet — **\$99.50**
Complete with Tubes

Fada presents Model 66 **“Round-the-World”** **Radio Receiver**

From 15 to 550 meters—for short and normal wave reception—designed and built to the high FADA standard of quality—yet priced to meet present-day purses.

Complete Unit:

Not an adaptor, not a “two-piece” job hastily thrown together, but a complete design emerging after months of experiment in the FADA laboratories. Single chassis 10-tube superheterodyne of exceptional performance with Automatic Volume Control on both ranges.

This new set has performance that you would expect from FADA both on the short and normal wave band.

“Round-the-Year” Profits

Another FADA challenge to the radio world. In 1931 thousands of dealers acclaimed FADA as a noteworthy stabilizing influence. In 1932 FADA again invites progressive dealers to join them in profitable sales, on legitimately priced merchandise and without fear of disastrous results from unstable policies (which some of you may have experienced.)

All present FADA models, both the Deluxe Flashograph series and others, continue in the FADA line without modification.



FADA Wireless Electric Iron—Six pound Automatic— Adds profit every month! Sells on sight. One sale makes ten more.

FEATURES

No electric cord
Speedy—efficient
Economical
Convenient
Quick heating
Holds heat
Automatic
Chromium finish
Cool handle

HOW IT WORKS—When iron is placed on special stand connected to ordinary outlet in contact position it is quickly heated—ready for use.

Replacing on stand it again draws heat but has thermostatically controlled element in iron itself which uses current only as needed. \$8.90.

3 YEAR GUARANTEE—For quick profits, on this fast selling item—write or wire for nearest distributor for detailed information.
A. C. 110 volt 25-60 cycle.

F. A. D. ANDREA, INC., LONG ISLAND CITY

FADA

Radio

1920 · SINCE BROADCASTING BEGAN · 1932

NOW FADA announces a complete line of FADA ELECTRIC REFRIGERATORS

engineered and built to rigid Fada standards

FADA REFRIGERATOR

For convincing profitable selling, you will find in these FADA refrigerators every modern feature of ranking merit plus exclusive FADA designs and inventions.

Here are just a few of the many selling features (wire or write for further details).

Cabinet: New in style with finer finish; automatic lighting. Larger food compartment capacity and shelf areas; pleasing plain front with all "circus" hardware eliminated; extra bottle space.

Cooling Unit: Completely shielded in porcelain; large ice trays of sanitary rustproof solid aluminum with chromium plated front.

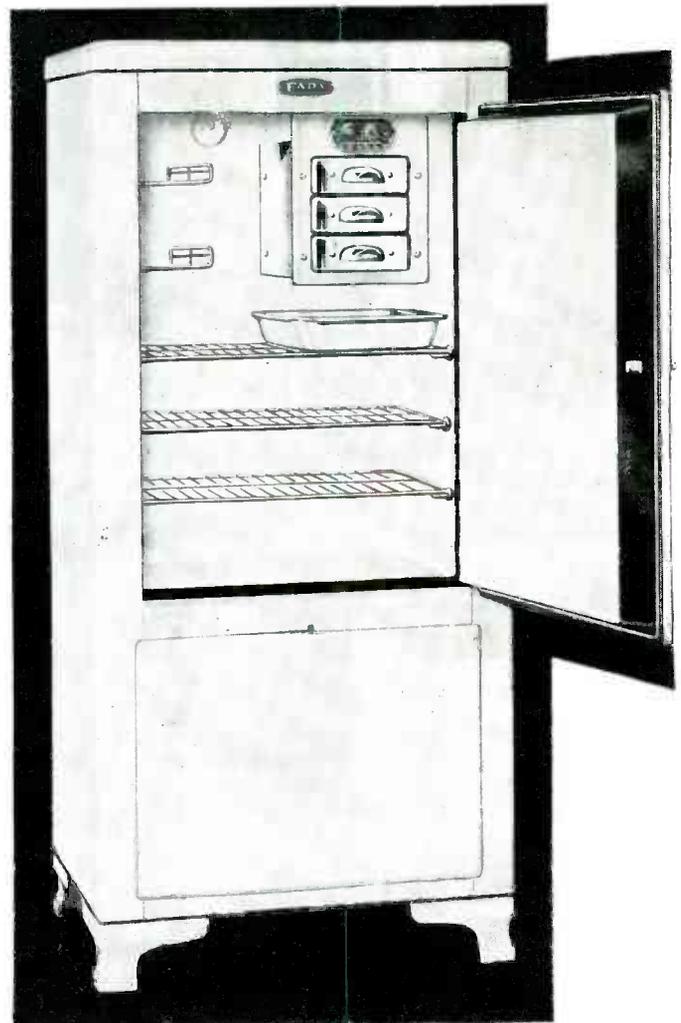
Compressor Unit: Noiseless flexible coupling between motor and pump. No belt; cooling fan directly mounted in motor shaft without gear or pulleys. Entire assembly shock-mounted on springs.

Pressure Control: Capillary tube, an exclusive FADA feature, eliminates all moving parts on the cooling unit. Does away with the usual expansion or float valve.

Cold Control: 10 point automatic cold control—insures proper food compartment temperature—adjustable for extra fast freezing of ice cubes—refreezing time well under two hours.

Refrigerant: Safest and most efficient known—methyl chloride.

Available for standard 60 cycle A. C., 25 cycle A. C. and D.C. Further specifications and prices on request.



Model No. 651 Porcelain Interior, Porcelain Exterior.

Contracts being closed now. Exclusive distributor franchise available in some excellent territories. Wire or write for the facts.

F. A. D. ANDREA, INC., REFRIGERATOR DEPARTMENT LONG ISLAND CITY, NEW YORK



BEYOND COMPARISON

The World's Most Luxurious Musical Instrument

Automatic Phonograph combined with specially engineered 13-tube Custom Built Super-Heterodyne Radio—with selectivity and power giving complete command and utmost enjoyment of all entertainment on the air.

*

Two speeds available at the touch of a lever for either standard 78 R. P. M. records or the new $33\frac{1}{3}$ R. P. M. long-playing program transcriptions.

*

Automatically handles 3 to 22 records of any make—10-inch, 12-inch or both sizes intermixed. Plays records in any sequence—each side in succession or one side only. Repeats or rejects record at touch of a button.

*

Tone quality that mirrors every delicate shading of the original voice and instrument—with "perspective" depth and richness. Faithful rendition throughout the entire audio frequency spectrum, from the gigantic 64-foot 16-cycle tone of the world's largest organs to the 6000 and 7000 cycle harmonics of the piccolo.



CAPEHART "400" • Chippendale
Also available in Adam Cabinet



CHECK its *exclusive features*. Watch it handle records of any size and make, automatically doing whatever can be done by hand. Above all *hear* it. Then you'll agree that we're thoroughly justified when we say the Capehart "400" is above comparison with any other radio-phonograph combination. Tone is its crowning glory.

The market for such a superlative instrument is always open, regardless of season. The margin permits active promotion *and every sale yields a handsome profit*. Capehart's active program of co-operation helps you to locate your prospects and close the sales.

Leading dealers throughout the country have already proved the powerful sales appeal of the Capehart "400"—and are profiting by the dominance over competition which this instrument affords.

You, too, can win this dominance *and profit* with the Capehart "400." Write now for complete information regarding our proposition—without obligation to you, of course.

CAPEHART CORPORATION, Fort Wayne, Indiana

CAPEHART

C A P E H A R T • A G R E A T N A M E I N M U S I C

STEADY!

..... *Gentlemen of the Radio Industry*

AFTER having set up the entertainment miracle of the century; after having built in the last five years the greatest human-service institution on earth, the broadcasters now find themselves "under fire" amounting to incrimination. Politicians, press, special interests, and others, all join in the attack.

But shall it be the rôle of the radio industry, which has benefited so greatly from the broadcasters' services in this wonderful adventure of the past decade, to join with the mob of their assailants? Or does simple justice dictate that radio men shall consider carefully where their own allegiance lies—even their own obligation to stand by and interpret to the public the great accomplishments of broadcasting?

WITH the introduction of the Senate resolution calling for an investigation of advertising in broadcasting, with the move to take 15 per cent of the wavelengths for "educational institutions," and with the filing of Senator Dill's bill to destroy clear channels, the forces which would tear down the present wonderful radio system begin to get in their work.

Lest the radio industry and trade itself share in these general attacks on the broadcasters, who are the very foundation of our business, *Radio Retailing* feels that it is time for plain talk.

Where do the present attacks come from?

From certain newspaper interests which eye radio enviously as competition.

From "blocs" claiming places in the air to disseminate their own propaganda.

From politicians eager to fix their own political fortunes, by utilizing radio's popularity, and by getting closer control over stations back home

through the 15-per cent grab of "educational" wavelengths.

From small stations envious of the greater service and popularity of the successful broadcasters.

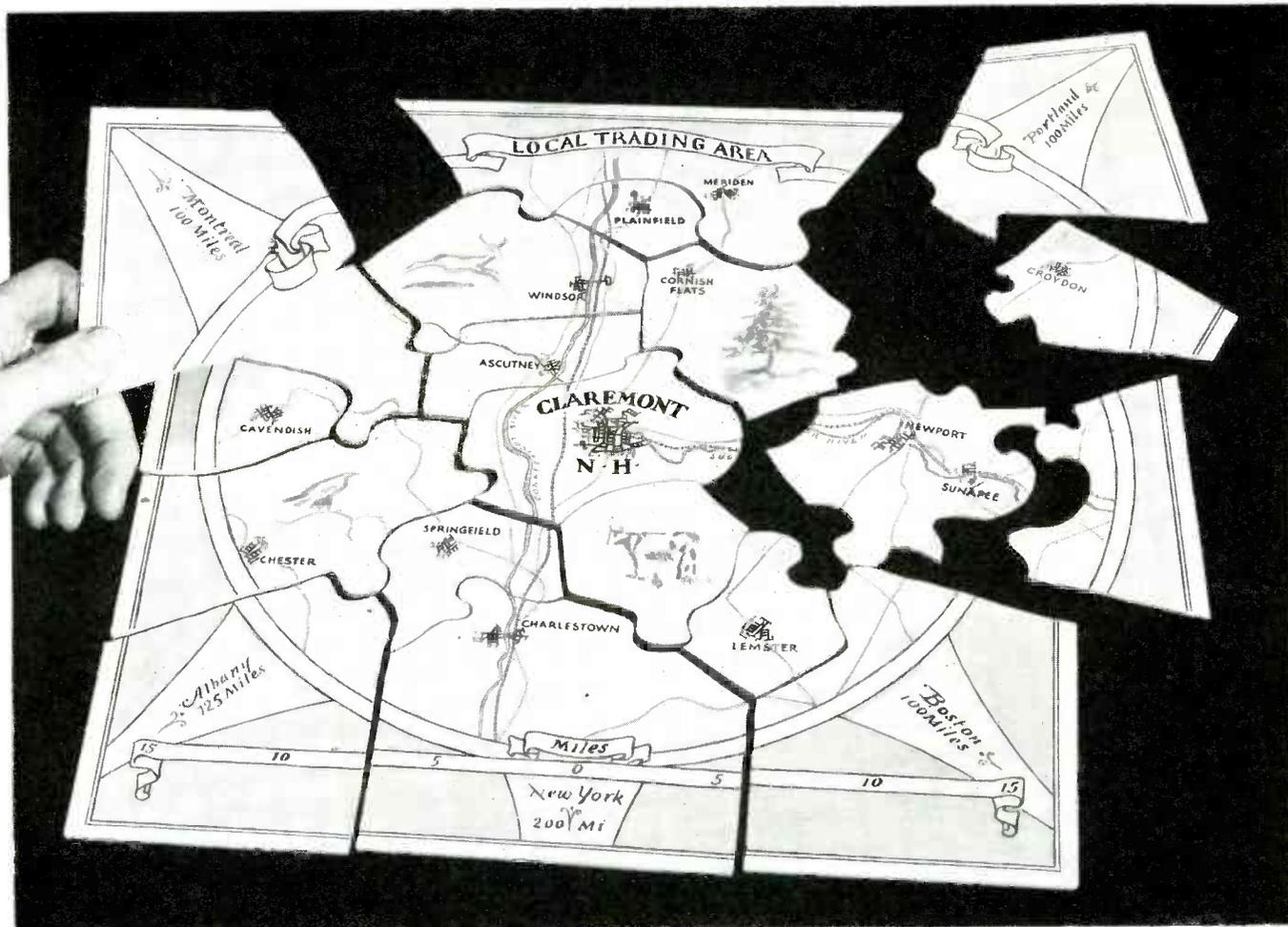
ON THE one hand we have the most marvelous entertainment and educational system that ever existed, a creation of the past five years. And arrayed against it are selfish interests who would destroy all that has been created, in order to benefit from the wreckage.

There is no question on which side lie the interests of the radio trade and industry. Broadcasting is the radio industry's very life-blood. And the present "American system" of *paying for broadcasting through advertising* has brought to American broadcasting the greatest aggregation of talent in the world.

Every man who derives his livelihood from radio in any way owes it to himself, his family and his industry to help strengthen the hands of the broadcasters at this critical time. The "American system" of broadcasting is entitled to a square deal. The American system brings *free* to the American public nightly "the greatest show on earth." If advertising has protruded itself objectionably, that unfortunate element is bound to be self-corrective.

But let no rocks be thrown from inside radio's own camp. In the battle now starting, the interests of all radio men are bound up together.

It is the duty of the radio industry to strengthen, not to weaken, the very foundations of its own existence and prosperity—the *American system of broadcasting by which the choicest talent and entertainment are brought free to every home in the land.*



S O L V E

EDITORIAL FOREWORD

Last month a member of the editorial staff of *Radio Retailing* was assigned personally to study Claremont, New Hampshire. The direct reason was due to an appeal for help, received from an old established radio dealer in that town. The indirect reason W. W. MacDonald journeyed to Claremont was because this letter reflected the same sentiment of hundreds of other ethical dealers who have written us from all over the country.

"Radio manufacturers, thinking only in carload lots, have difficulty in visualizing the dealer's problem of placing each individual set in someone's home profitably," wrote this merchant. "High pressure merchandising, that may go in the big cities, has no place here—in fact we small city dealers are tremendously handicapped by its existence.

"And the many promises by the set makers of sounder policies of protection soon to come now are falling on deaf ears. We have heard them too often and for five years. . . . Even in these times my firm pays every bill every Friday night. We are one of the leading radio outlets in town, yet, right now, because national lines are being sold 'down the river' to cut-price dealers we are at a standstill. What can you do to help us?"

The Claremont picture is one of national significance. Why? Study the following tabulations. Sixteen per cent of all our prospects live in cities and towns ranging in population between 2,500 and 25,000. And most of our rural citizens (a total of 44 per cent of the entire population of the country) are served by these very same dealers. Furthermore, it is through the small city and town merchandisers that the salvation of this industry will be effected. Here are the figures:

60 Per Cent of Our Total Population Live in Places of 25,000 or Less, or are Contacted by the Small Town Dealer*

Population	No. of Towns	Total Population	% of Total Population
10,000 to 25,000	606	9,097,200	7.4
2,500 to 10,000	2,183	10,614,746	8.6
Less than 2,500	13,433	9,183,035	7.5
Rural		44,637,188	36.4
TOTAL	16,222	73,532,169	59.9
Cities over 25,000	376	49,242,877	40.1
GRAND TOTAL	16,598	122,775,046	100.0

*J. Walter Thompson Company, "Population and Its Distribution," 1931 edition.

Small Town Policies Must Be Revamped—Or 60% Of Our National Market Will Stagnate

4 STORES DO 69% of the BUSINESS

DEALER	TYPE	1931 RADIO SALES
1	Radio — Music	\$13,300
2	Radio — Music	12,100
3	Mail-Order General Store (Branch)	11,700*
4	Plumbing Supp., Elec. Appliances	11,200
5	Radio (Chain)	5,600
6	Furniture	4,300
7	Furniture	4,100
8	Furniture	2,800
9	Grocery	2,100
10	Furniture (Branch)	1,400
11	Hardware	800
12	Electrician, Elec. Appliances	600
Total Sales by Claremont Dealers.....		\$70,000

*Estimated sales in trading area served by other dealers.

Claremont!

CLAREMONT, N. H., is a typical rural shopping center with 12,300 people; 2,800 families. A non-union mill town with 7 major industries employing 2,500 workers in normal times, these supporting 1,500 homes. It also is the hub of a productive farming area and attracts trade from such nearby settlements as Windsor and Springfield, Vt., and Newport and Sunapee, N. H. The Chamber of Commerce estimates that fully 4,000 families regularly patronize its shops. Boston, 100 miles away, is the nearest "super-city."

According to Government census figures 39 per cent of Claremont's homes had radio in April, 1930. Saturation is now about 60 per cent and it is estimated that 85 per cent of the remaining non-users will be legitimate prospects when employment improves. Replacements should be a substantial factor when the mills resume full-time schedules. Thus, although the cream has been well skimmed, radio is still in a better position with respect to saturation than many other accessories to the home.

Yet Claremont's radio business appears to border on a state of premature stagnation. All stores have been hard hit but radio dealers feel that they are suffering all out of proportion to the depression due to the fact

that unsavory conditions within the industry itself have accentuated hard times. Other merchants seem content to plug along, though forced to retrench, confident in the future of their chosen field. The radio dealers, on the other hand, are far less sanguine and have become dispirited, relaxed effort.

Advertising is a good barometer. The entire trade spent less than \$500 with newspapers in 1931, barely half the 1930 expenditure.

Ignoring such inherent small town difficulties as spotty reception and severe local interference, Claremont must contend with these additional handicaps, which are probably at the bottom of the present muddle:

1. An over-supply of dealers
2. Franchise instability
3. Periodic dumping from Boston
4. Too frequent model changes.

OBVIOUSLY there are too many stores selling radio in town. A glance at the table on this page is sufficient evidence, particularly when it is known that dealers numbers 1, 2 and 4 have done the bulk of the business for the past few seasons. That so many outlets have survived thus far is due to the fact that only one relies

solely upon radio for its livelihood.

Small dealers cannot be expected, altruistically, to drop out for the good of the business. The "fringe" outlet of today may be the leader of tomorrow. On the other hand, we have the assurance of the local trade that Claremont cannot continue to support more than four outlets, even if these handle radio as a sideline and in the light of saturation figures this view seems justified. The phonograph industry, for example, was represented for 15 profitable years by three dealers, handling four popular lines.

Manufacturers and distributors are to some extent responsible for the present over-supply of dealers. Salesmen traveling lines not represented, upon discovering that established outlets are tied up, have not hesitated to create new ones, even if it was necessary to recruit from among stores totally unsuited to the business.

Excess competition, by pyramiding selling costs, has turned a potentially profitable business for a few into a singularly unattractive activity for many.

Perhaps the most unsettling factor in Claremont has been franchise instability or insecurity. Dealers pioneering a line have not known from month to month whether they would eventually reap the benefit of their initial effort or whether some other outlet would be appointed at the eleventh hour to reap it for them.

In all fairness to distributors and manufacturers it must be said that they have frequently been justified in switching dealers but it does seem that at times they have exercised poor judgment. Take the case of line number 5 outlined in the Distribution History Table on this page. The original outlet, a hardware store, became overstocked and threw a monkey-wrench into the works by cutting price in order to liquidate. The distributor immediately, and wisely, cut this dealer off to protect the trade-name. But two years later, with two new outlets just knuckling down to serious work, this price-cutter was re-instated and within one month again had upset the applecart.

Even children don't burn their fingers twice.

In the season of 1928-29 line three was introduced to the citizens of this New Hampshire town by a dealer who is now one of the "big four." He did as good a job as might be expected, considering the comparatively late entry of this manufacturer into the radio business, but the distributor franchised a garage, whereupon the radio dealer dropped out.

In the middle of the following season the manufacturer reduced lists without protecting the garage, which promptly abandoned the radio business, and in 1930 two new outlets were secured. Both of these neglected to re-order and 1932 finds the line in the hands of a furniture dealer who will probably let it die a natural death in the coming season. What would have been the outcome had the line been left in the strong arms of its first love is problematical? It could scarcely have done much worse.

In the season of 1930-31 when the depression began

Retail History of 5

Line No. 1

1928-29	(A) Electrician*	Introduced line and did good job.
1929-30	(A) Electrician* (B) Grocery (C) Furniture	Two new dealers appointed. Electrician quickly dropped line, grocery following soon after.
1930-31	(C) Furniture (D) Radio (E) Music	Furniture store cut off by manufacturer when it cut prices. Radio outlet given franchise, doing fair job until music store was added.
1931—	(E) Music	Single remaining dealer doing fair job, considering setbacks line has suffered due to distribution changes.

Line No. 2

1928-29	(A) Radio†	Demand exceeding shipments.
1929-30	(A) Radio†	Poor deliveries injured sales.
1930-31	(A) Plumbing Supp. (B) Radio (Branch) (C) Furniture	Original dealer merged with plumbing supply house, taking line No. 2 with him. Furniture store appointed as additional dealer. Branch store of chain handles line without authorization of manufacturer.
1931—	(A) Plumbing Supp. (B) Radio (Branch) (C) Furniture	Furniture store and radio branch doing little with line. Original dealer operating with reduced efficiency due to competition.

Line No. 3

1928-29	(A) Radio†	Introduced line.
1929-30	(A) Radio† (B) Garage	Distributor put sets out on consignment to garage, whereupon radio dealer dropped out. Manufacturer cut price drastically in mid-summer without protecting garage.
1930-31	(C) Grocery (D) Music	Two new outlets secured, neither doing any volume. Both dealers neglected to re-order.
1931—	(E) Furniture	This outlet does a small radio business.

to pinch, sales falling off despite all that franchised outlets could do, several distributors endeavored to maintain volume by putting on more dealers, thereby splitting less business between more retailers. The size of the market notwithstanding, four out of five nationally known lines were represented by two or more dealers last year. Lesser known makes were even more widely franchised.

In the early years dealers attributed this sort of thing to industrial growing pains and, anticipating early reforms, were patient. But the growing pains continue, with the child at middle-age, and naturally oldtimers who have waited for sounder policies are discouraged at their failure to put in an appearance. Why build if the structure appears certain to be swept away just as the foundation is completed?

CUT-RATE sales perpetuated principally by six large operators through Boston newspapers have done much to tear down the merchandising fabric laboriously woven by Claremont dealers. The volume of business actually transacted by these outside stores by mail has in itself been only a mildly annoying factor. Far more destructive has been the effect on the morale of the local market. Newspapers from the distant seaboard metropolis are read as extensively as the local sheets and as a result prospects are quite familiar with the prices at which city dealers are offering their wares. And

Nationally Known Lines

Line No. 4

1925-26	No franchises	Several stores selling early models.
1926-27	(A) Music (B) Radio† (C) Farm Bureau	All three operated profitably.
1927-28	(B) Radio†	Music dealer switched to another make and remaining outlet's demand exceeded supply.
1928-29	(A) Music (B) Radio†	Music dealer came back into fold, both outlets operating profitably.
1929-30	No Dealers	Other lines evidently found more attractive.
1930-31	(D) Music (E) Radio	Two brand new outlets. Music dealer did good job, radio store sold a few sets.
1931—	(D) Music	Remaining outlet putting forth little effort at this time.

Line No. 5

1926-27	(A) Hardware	Introduced line, cut prices and was cut off by manufacturer.
1927-28	(B) Radio† (C) Music	Both dealers did profitable business.
1928-29	(B) Radio† (C) Music	Two outlets continue without interfering.
1929-30	(A) Hardware (B) Radio† (C) Music (D) Radio (Branch)*	Hardware dealer cut off in 1926 re-instated, promptly cutting price again. Concord store opens branch, selling line No. 3 without authorization for 60 days and then closing up. Radio outlet drops line.
1930-31	(C) Music	One outlet remaining, reduced sales.
1931—	(C) Music	Sales almost at a standstill.

*No longer active in radio. †Now merged with another local store.

when these wares are well known "standard" makes—fireworks!

Claremont contends that it can talk down cat-and-dog lines sold at cut-prices but that it cannot explain away lower-than-list prices on nationally known makes that local dealers have worked so hard to popularize. Picture the difficulties a Chevrolet dealer in a small town would encounter if these cars were offered at 10 per cent off in a nearby city and you have a fair idea of the situation confronting the radio trade.

Communication is too good, newspapers too widely circulated today to keep rural districts ignorant of what goes on in the cities. And there is grave danger that the repeated sacrifice of the "sticks" to big-city business will eventually boomerang so that even the metropolitan market will become threadbare. As several Claremont dealers point out, mail-order campaigns by Boston outlets would not be nearly so successful if small-town dealers had not spent years popularizing the advertised makes. New England is less prone to buy a pig in a poke than any other section of the country.

Small-town dealers have weathered five years of price cutting but they must see daylight if they are to continue. Meanwhile, metropolitan slashing grows worse rather than better. Dumping originally occurred in January, after the holidays. Now it has been advanced to the pre-holiday season where it does infinitely greater damage. What can be done about it? This is for

distributors and manufacturers to decide, for certainly dealers are helpless to correct it. It is interesting to note in this connection that dealers do not expect or require that the entire industry be cleaned up simultaneously. They believe they could continue to laugh off price cutting on lesser known lines if only a few of the industry's leaders would establish airtight distribution policies. The disconcerting feature of present-day radio business is the fact that even the leading brands are gypped.

The fourth apocalyptic horseman figuratively riding small-town dealers into the ground is the manufacturers' penchant for introducing new models too frequently. This ill is perhaps the most susceptible to cure as producers have merely to stop abusing the market and the evil ceases.

Semi-annual model changing might well be called a hangover from the early days. At the very beginning technical improvements came so fast and furious that it was necessary to change models to keep pace but today many companies continue the practice despite the fact that the new offerings are basically the same as the old ones. Few technical innovations offered in recent years as an excuse for new models have been sufficiently revolutionary to justify the junking of existing equipment. Many model changes, Claremont submits, have an effect diametrically opposite to that intended by the manufacturer, injuring rather than aiding sales. Too frequent model changes defeat the sale of higher priced, quality receivers by impressing consumers with the instability of radio design. Further-

more, time payment sales back up annoyingly when new models follow too closely upon the heels of older.

Models should not be superseded for at least a period as long as the average time-payment account is in force. People purchasing on the deferred plan are prone to stop paying if, in the middle of their relations with the radio industry, some "revolutionary" new model appears, particularly if it appears at a substantially lower price.

As the game is played at present, small-town dealers receive their new models shortly after the Trade Show and spend several industrious months getting these to roll. New models are not popularized overnight, especially in rural districts. Then, just as they are in a position to cash in on the momentum, a new model comes along and nullifies the effort, making it necessary to go through the pioneering process all over again. The consumer, it is well to keep in mind, becomes attracted to certain models as well as to certain makes.

Claremont dealers, in the main, are convinced that they could do a bigger business, and a more profitable one, if sets introduced in June were carried through until the following June. Major technical developments, of a nature really important to the consumer, would be genuinely welcomed "between meals" but, it is said, manufacturers have quaint ideas as to what constitutes improvements. Pseudo-hotshot gadgets gum the works.

Dealers feel that many manufacturers seek to admin-

(Please turn to page 38)

New York Prepares for



*Fairchild Aerial
Survey, Inc.*

- *How the 4-meter television waves will spread over Manhattan and the densely populated New York City area, from the tower of the tallest structure ever erected by man. Separate channels will carry sight and sound, but these very short waves, being of the quasi-optical type, with characteristics similar to light, are not expected to penetrate beyond the clearly visible "horizon" at a distance of 15 to 25 miles from the transmitting antenna*

Television

How Shortwave Impulses Will Be Broadcast From 1250-ft. Empire State Building



● *Completing the television antenna and lightning arrester on top of the airship mooring mast, 1,250 ft. above the sidewalk*

FOR months engineers of the National Broadcasting Company have been working in the topmost peak of the Empire State Building, on the site of the old Waldorf-Astoria Hotel at Fifth Avenue and Thirty-fourth Street, New York City. Early this spring, the new experimental television station on the top floor of this 1250-ft. structure will go into service, broadcasting television impulses, accompanied by sound, on two nearby channels in the 4-meter range.

Already tons of equipment have been hoisted into Al Smith's famous tower and assembled into the two transmitters, one for television and one for sound. On the 4-meter wavelengths used, it is expected that the signals will carry not beyond 15 to 25 miles, being prevented from reception at further points by the curvature of the earth and the shielding of structures.

The initial scanning equipment in the Empire State Building tower will be of the arc type, with mechanical scanning of a 120-line picture, 24 frames per second. Later in 1932 this may be increased to 180 lines, and possibly 240 lines. Eventually the far-famed cathode-ray scanning (regarding which the RCA interests have preserved such secrecy), may be tried out on the New York City installation, but evidently this is still many months off.

The transmitting equipment is installed on the topmost floor of the building proper, where the glass-enclosed studio is located. Later this studio will be connected with ground studios, and with the future Radio City buildings. Of course, the carrying of pick-up lines from outlying points is not so simple for the wide band of frequencies employed in television, and it is likely that such interlinking of studios will have to be handled by additional short-wave circuits. From the transmitter on the top floor of the building, a "stove-pipe" transmission line rises the additional 300 ft. to the tip of the airship mooring mast, the lightning arresters on which are pictured above.

Within a radius of fifteen to twenty-five miles of this

antenna, there dwell some ten million people, in Manhattan, Brooklyn, Westchester County, Long Island, Staten Island, and New Jersey. Hence as soon as the broadcasting impulses begin to go out from the lofty antenna, there will be a ready-made audience of many millions awaiting television service. Television will therefore have its first big-scale try-out during 1932 in New York City, but it is doubtful that the new art will reach a commercial or merchandising scale until another whole year has rolled around.

Engineers who claim to have seen reception from this equipment on test were pleased with the apparent brightness of the image, and with the apparent detail (two or three human figures). They also were surprised at the interest-holding ability of synchronized sight and sound (it is said they saw a musical comedy). Within twelve months a two-foot picture is expected with a million-cycle sideband required. The output of these transmitters is about 2.5 kilowatts, sufficient to get good signals out some 15 miles from the transmitter.

The year will undoubtedly see demonstrations of this television system given to prominent set manufacturers, and perhaps to the press. Several hundred sets may be built receiving simultaneously on two channels and having cathode-ray scanning and viewing, and put into operation around New York City.

Those close to the industry do not view the approaching television demonstrations with unanimous approval. Some believe that increasing public interest in television, stimulated by demonstrations of new systems will act as a deterrent to sales of radio receivers. Others feel that so long as engineers work in laboratories new things must be expected and prepared for.

Television is distinctly on the way, it does not look so hopeless, so costly as it did a year or so ago. Combined research by chemists, tube men, circuit engineers, and others, is bringing results. "There is no fundamental obstacle to television" is the statement coming from an engineer close to the art.

No w SHORTWAVES

Are Salable



The added attraction of shortwave reception swings many midget prospects to higher priced converter combinations

DESPITE the fact that the potentialities of short-wave reception have been recognized for a number of years, high frequency transmission has meant little to the average radio retailer in dollars and cents. With the introduction of "converters" by many manufacturers, however, this picture has changed. Many people who in the past have not been sufficiently interested in shortwaves to purchase complete receivers designed solely for this purpose now seem inclined to indulge their curiosity through the acquisition of a relatively inexpensive accessory.

Shortwave receiving equipment of this variety will undoubtedly constitute an important part of the radio dealer's sales this year, most of it being extra business not otherwise obtainable. As a matter of fact, many dealers have already gotten under way with converters and in the city of Rochester, N. Y., alone, we know of three at least, who are doing a good enough job to write home about.

The Hoffman Music Co., for example, with two branches in the city, sold 51, \$23 converters and 12, \$93.75 converter combinations, in October and November. H. Hoffman, one of the proprietors, says he could have sold more had they been obtainable at the time. Although the company employs one outside salesman on radio and washing machines, practically all converter sales were obtained as a direct result of newspaper advertising. Hoffman has found that there is a great deal of interest in shortwaves, due probably to the volume of

advertising which has been run not only by dealers, but also by manufacturers, during the past few months.

Approximately 90 per cent of the company's converter sales were made on the deferred payment plan to old customers of the concern. Terms as low as \$1 down were possible on the \$23 unit, chiefly due to the fact that people buying these on such terms had been dealing with the company for some time. The concern financed most of its own paper.

Hoffman recommends that converters and converter combinations be advertised and sold conservatively. Reception such as police news, special American broadcasts and amateurs are recommended, with occasional foreign reception. When the company first took on converters, it featured foreign reception in its advertising, and although volume was obtained, considerable trouble was experienced in keeping many of the devices sold. No shortwave receiver or converter, Hoffman points out, can be better than transmission conditions, and if the dealer promises too much, his equipment sometimes cannot possibly live up to his claims.

Since the store advertised more conservatively, little

"Moved 51 converters, 13 combinations in 2 months".

from a RADIO SHOP

"Sold \$1,440 worth in October and November". . . .

from a FURNITURE STORE

"10% of my business last month".

from a MUSIC HOUSE

trouble has been experienced. Volume has dropped off somewhat, although converter business remains extremely profitable.

The store has avoided selling converters on approval, and has made no home demonstrations. It is necessary, according to this dealer, for the user to play with his converter for some time before he fully appreciates its full value. This fact alone prohibits merchandising of the equipment through the medium of home demonstration.

Essentially a radio store, Hoffman's Music employs its own service men and one of the rules has been that company servicemen must make all installations, issuing operating instructions in the home. The company does not believe that it would be advisable to permit purchasers to connect them to their broadcast receivers, as some technical knowledge is necessary for proper connection.

GOOD converter business is not peculiar to the Hoffman organization. The Levis Music Company of the same city is also having a very satisfactory experience with converters (Stewart-Warner). According to Mr. Wagener, 10 per cent of the store's set sales are now shortwave combinations, salesmen moving a few separate converters as well.

Wagener also features police news reports, broadcasts from airplanes and other services of this kind, which are more or less reliable, playing down foreign reception perhaps even more than Hoffman. He has sold a number of policemen who were interested in listening to broadcasts by the Rochester Police Department, and has also had several customers who were interested in code reception.

Converter combinations, according to this dealer, have probably had a great deal to do with the ability of company salesmen to "sell up." Formerly it was difficult to sell consoles to people who were initially interested in the purchase of midgets because they could not see sufficient difference between console and midget reception to warrant the extra cost. When a shortwave converter is built into a console, however, the extra service available is immediately recognized.

Shortwave converter combinations have probably induced a lot of people to trade in old sets more quickly than would ordinarily be the case. Practically all of the converter combinations sold by Levis, for example, were sold to people with sets two years or more old, trade-ins being taken. It is therefore reasonable to assume that the converter combinations stimulated many "hangers" into immediate action.

That a highly conservative music house of this type can sell converters is evidence that highly specialized technical knowledge is unnecessary. Though the store never handled any shortwave equipment prior to the introduction of converters, it picked up these new devices and has done a good job from the very beginning.

Fully 10 per cent of all radio prospects are born

5 Merchandising Tips on CONVERTERS:

- ¶ Advertise and Sell Them Conservatively
- ¶ Play Up Police Calls, Amateur Broadcasts
- ¶ Do Not Guarantee Regular Foreign Reception
- ¶ Avoid Approval Sales, Home Demonstrations
- ¶ Have Your Serviceman Make All Installations

"tinkers" according to Wagener, the type of people who were originally interested in radio because they liked to fish for distance. Since the thrill of DX has been removed, this market has been more or less neglected. Shortwave converters, which bring some of this thrill back, fill a long felt need.

STILL another Rochester retailer has had a satisfactory experience with converters. H. August, buyer for the Peoples' Outfitting Company, a large furniture store, tells us that he sold 15 converters and 12 converter combinations in October and November. This was accomplished by running eight 140-line newspaper ads modeled after factory copy supplied by Harmon-Brown, distributor.

This furniture house, selling radio, washers and other electric appliances, believes much of the set business obtained through the introduction of shortwave converter combinations, could not have been closed if only long-wave receivers were available. All sales were made by furniture salesmen in the store. They knew very little about the technicalities of radio.

Like Hoffman and Levis, August insisted that all converters be sold without home demonstration. Unlike these two companies, however, he has played up foreign reception and to date has had no greater difficulty in keeping sets sold. The fact that his salesmen are not radio technicians and hence cannot over-enthusiast about DX probably has much to do with it.

The store service man is particularly careful to issue full instructions on the tuning of the device. This undoubtedly does away with much grief. Peoples' Outfitting does not accept trade-ins of any description.

Shortwaves, thanks largely to converters, are now salable, and dealers can get behind them with the assurance that if conservatively sold, they will stay sold, and that the volume will be sufficient to make it very much worth while to handle these devices.

1,292 Sets

ATLANTA POWER
finds public still responds
to lure of honest value
if contacted intensively

DOWN South, they still merchandise radio sets in the "grand manner," so to speak. When a single organization, even though it be as large as the Georgia Power Company, can sell, in these times, 1,292 radio sets within the brief space of one month, and at full list prices, then such an exhibition of modern salesmanship must be reported.

True, Georgia Power is a public utility, a lighting company with all the prestige and far-flung selling organization such as a state-wide institution generally possesses. Nevertheless, from the character of the careful preliminary planning, the incentives offered, the "follow through" and the spectacular success which crowned these efforts much can be learned by other, and smaller, retailers.

In practically every essential, the November radio sales campaign of the Georgia Power Company, main office in Atlanta, Ga., followed the well-established formula popular with the merchandising managers of the sales departments of utilities. For example, district quotas were established, weekly bulletins issued to each salesman, daily reports required, and the customary cash and merchandise prizes for high scores hung up. While these practices are quite common with the lighting companies, they have not been used by the independent radio retailers to the degree their selling effectiveness warrants.

The campaign started Monday, October 26 and ended Saturday, November 21. Two nationally known makes of receivers were featured. On both the regular prices were maintained, with terms of \$5 down and 12 months to pay on all orders less than \$80 and \$10 down and 12 months to pay on sets above that amount. No trade-in allowances were granted. The regular scale of salesman's commissions prevailed but special prizes, ranging from \$15 to \$50—the former for the salesman in each district selling the greatest percentage of his individual quota—were offered liberally.

Including the cooperative contributions of the set makers, a total of \$3,470 was spent for publicity, mainly in 132 weekly newspapers and three Atlanta dailies. The following, from the preliminary "plan" bulletin which announced to the organization this coming campaign, indicates the character of the appeals made to the public:

Sales Log
A RECORD
PUBLISHED BY AND FOR THE SALES DEPARTMENT OF THE
No. 211
GEORGIA POWER COMPANY
OF PROGRESS
Atlanta, Ga.
Nov. 16, 1931

TODAY MIXINS LAST WEEK OF RADIO SALE
The third difference between a one and a two week sale is that the first week is usually the most important. In the second week the sales are usually lower. This is the reason why the first week is so important. The sales in the first week are usually higher than in the second week. This is the reason why the first week is so important.

District	Sales	Percentage
Atlanta	100	100%
DeKalb	50	50%
Spalding	30	30%
Other	20	20%
Total	200	200%

Sales Log
A RECORD
PUBLISHED BY AND FOR THE SALES DEPARTMENT OF THE
No. 211
GEORGIA POWER COMPANY
OF PROGRESS
Atlanta, Ga.
Nov. 6, 1931

RADIO SETS TOTAL IN FIRST EIGHT DAYS
AND maybe this South Annual Radio Sale isn't off to a flying start yet? Well, with the slight exception of the first two days, the sales figures for the first eight days are very good. The sales in the first eight days are 1,292 sets, or 129.2% of the quota. This is a very good start for a sale of this kind.

Day	Sales	Percentage
1	100	100%
2	150	150%
3	200	200%
4	250	250%
5	300	300%
6	350	350%
7	400	400%
8	492	492%
Total	1,292	129.2%

Sales Log
A RECORD
PUBLISHED BY AND FOR THE SALES DEPARTMENT OF THE
No. 211
GEORGIA POWER COMPANY
OF PROGRESS
Atlanta, Ga.
Nov. 20, 1931

RADIO CAMPAIGN SELLS 1,292 SETS: 129.2% OF QUOTA!
ENDING: November 21st, our first Annual Radio Sale was productive of 1,292 receivers. This is a very good start for a sale of this kind. The sales in the first eight days are 1,292 sets, or 129.2% of the quota. This is a very good start for a sale of this kind.

District	Sales	Percentage
Atlanta	100	100%
DeKalb	50	50%
Spalding	30	30%
Other	20	20%
Total	200	200%

Weekly sales bulletins are an important part of all utility campaigns

in 4 Weeks... at list plus

\$72.50

buys this
GENERAL
ELECTRIC
Junior Model
RADIO



\$5 down
\$6 a month

Our annual Fall Radio Sale ends on November 21. If you have not seen and heard the new GE-Radio models, by all means do so at once. Liberal terms on any model you select. Buy now while your radio-dollar is worth so much!

GEORGIA
POWER COMPANY

\$74.50

BUYS
this latest
19:32
ATWATER
KENT



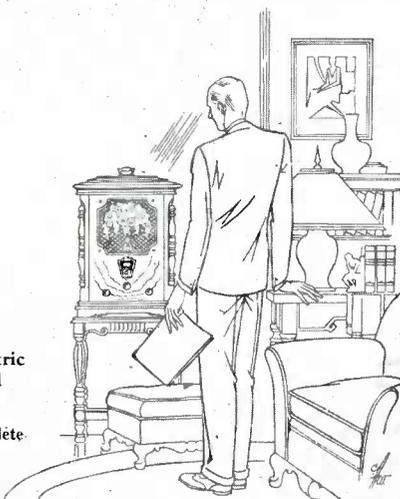
MODEL #2
Complete with tubes and installed
the great super-heterodyne
Compact with 17 Golden
Value features

\$5 down
\$6 a month

Not since radio was first announced has a really great set been so inexpensive as today. For instance, consider this Atwater Kent small set, featured in our Fall Sale now going on. 7-tube super-heterodyne, tone control, automatic volume control and all the approved new radio refinements, selling for \$74.50 complete. See it, hear it, buy it. It's a Golden Value!

GEORGIA
POWER COMPANY

Dollar for dollar... value for value
now is the time to buy your Radio!



General Electric
Junior Model

\$78.50
Complete.
\$5 down
\$6 a month

Radio dollars may come, radio values may go, but we honestly believe that now is the most opportune time for all for you to buy a good radio... a good radio like the General Electric Junior Model. It is GE quality at its best; it is a fine radio priced at present-day levels.

An 8-tube super-heterodyne, in a cabinet distinctively different in design, it may be moved from room to

room with no trouble at all. It gives you both full-range sensitivity and selectivity. It's yours for just \$5 down, balance payable \$6 a month. See and hear the new General Electric models at our store. Bring out your radio-dollars now while they're worth so much. Buy your radio now!

GEORGIA
POWER COMPANY

The electric light and power industry goes into almost every body's home, office, factory, church and theatre. We feel an attachment for these places because we serve them.
P. S. ARKWRIGHT, President.

— A CITIZEN WHEREVER WE SERVE —

● Two well known radio lines were advertised. "Now is the time to buy," attractive terms, and house-to-house calls were featured in this campaign

"We will run real, honest-to-goodness selling copy. The theme that 'Now your radio dollar is worth more than ever before' has been fully developed for each ad. The point will be made that 'Dollar for dollar... value for value... now is the time to buy your radio!'"

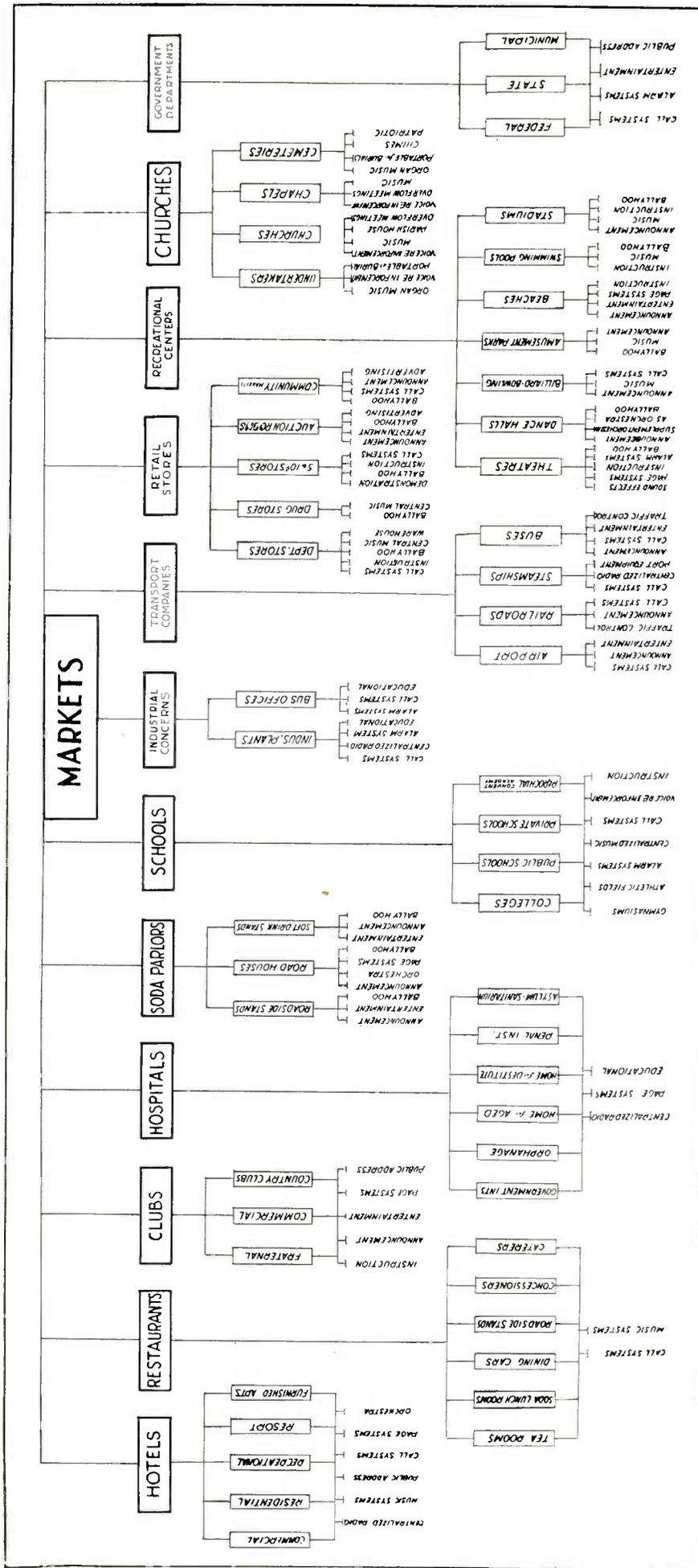
For the 1931 campaign a quota of 1,000 sets was established. Actually 129 per cent of quota (1,292 sets sold) was achieved. Why? Intensive concentration on the task at hand, lower lists and an organization in the field which clicked as one man. Nothing more spectacular than keen leadership and ripe experience in outside selling technique was behind this drive—yet 50 people per working day were persuaded that they needed a new radio set, and to pay the full price for it. Cold turkey canvassing occupied at least half the time of each sales-

man and produced a corresponding number of orders. In spite of the fact that Georgia Power operates 93 stores and serves 43,000 square miles of territory here is a record to inspire the entire industry.

Prices ranged from \$74.50 to \$170. While the majority of sales were for less than \$100, approximately 400 customers bought better quality sets above this mark.

The Georgia Power Company claims to be among the first of central stations to pioneer the sale of radio equipment. Each of its campaigns has been a success. Because it maintains prices, thus establishing a high standard of values in the public mind in the state it serves, many independent dealers in the same territory welcome its activity, preferring this type of competition to the destructive tactics indulged in by chain stores and other cut price outlets.

Where Sound Equipment Can be Sold



Prepared by Stanley G. Oppenheimer, formerly with Electrical, N. Y.

merchandise for the smaller, but more numerous, customers.

This survey also revealed the need for straight-line selling and a more definitely engineered product from the standpoint of salability and sustained service with minimum servicing. To the manufacturer who can build package units, which will eliminate 70 per cent of the field engineering now required, this latter field will prove a veritable oasis. And to the dealer who ties in with a concern who knows its market and has designed its product accordingly, will come profits greater than he now imagines.

MARKET determination should be the first step in any new sales campaign for greater profits. The sound equipment business, still an infant but destined to grow rapidly, is in especial need of concrete analysis and of selling practices. A definite survey of this market reveals at least 237 different types of prospects. Culling from this total the most likely, we discover 69 worthwhile leads (see chart) which offer high potential sales volume.

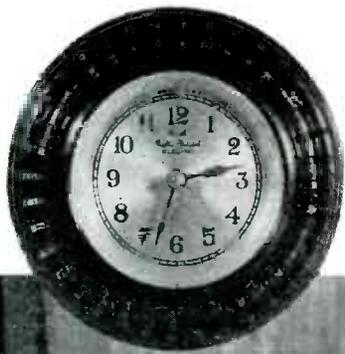
Further analysis of these markets shows a demand for two different types of equipment: the specially engineered, for large installations, and "package"

It should be remembered that 90 per cent of all sales of sound equipment apparatus are made to laymen, those not versed in radio engineering, intricate controls, meters, et cetera. The utility of the unit, its advantages of design and possibilities should, therefore, be stressed.

The accompanying chart does not indicate the comparative worth of the various markets because local conditions vary greatly. Everywhere schools, hospitals and hotels will be found to comprise at least half the total field, with educational institutions rating 25 per cent.

CLOCKING

the Programs



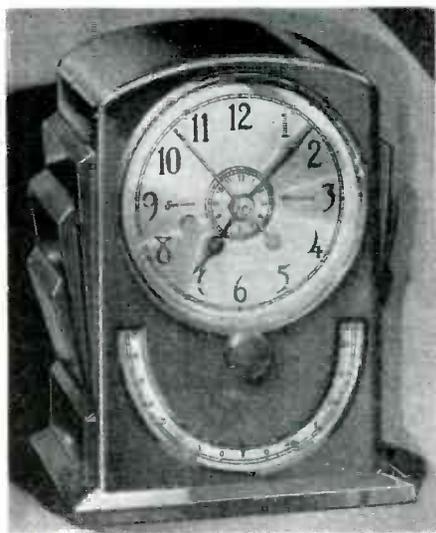
LEFT

Almost human in its action, the Cloktrola turns the radio on and off at 20 minute intervals throughout a 12 hour period. For an hour's continuous program, three keys are depressed. Any combination desired can be arranged, and an evening's entertainment, continuous or intermittent, on any one station can be provided for in advance. Cloktrola stands 7 in. high and has silver finish dial. The Booth Radio Clock Co., 2309 Hyde Park Boulevard, Los Angeles, Calif., makes this clock which retails for \$14.85.



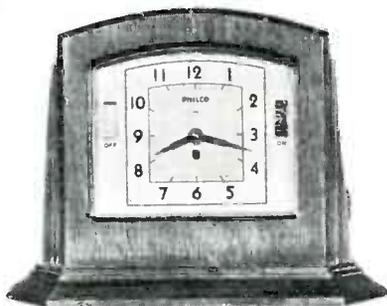
BELOW

Philco's clock will turn the radio or electrical device on or off at any predetermined time, day or night. Two small openings on the face indicate A.M. or P.M. The mahogany case was designed by Norman Bel Geddes. This clock, the product of the Philadelphia Storage Battery Co., Philadelphia, Pa., retails at \$39.50



TOP

The "Notifier" model of the Chicago Flexible Shaft Company, Chicago, has two distinct functions: It will tinkle brightly at any specified time, reminding you, for instance, that Kate Smith is about to bring the moon over the mountain. This is done by adjusting the hand on the semi-circular dial below the face of the clock. It can be set for any period from 1 minute to 3 hours. It also has a permanent alarm feature which tells you in no uncertain terms that it's time to get up. This alarm does not need re-setting. \$12.50



RIGHT

A small red flag lever is visible when the radio time switch of the New Haven Clock Company, New Haven, Conn., is set for automatic operation. This clock operates small household appliances as well as the radio and when used in conjunction with relays of different capacities will control store lighting, etc. It has self starting, sub-synchronous Westinghouse motor. The price is \$12.50

ABOVE

A Telechron movement is encased in RCA-Victor's model. This clock will switch the radio on or off at a predetermined time. The walnut cabinet is designed along Tudor lines and stands 8 in. high. RCA-Victor Co., Inc., Camden, N. J.





E. L. MATLACK
Treasurer

They Woke Up *in* Time



R. L. PAINTER
President

Quick Action Of *Painter and Matlack*.... Cutting Expenses

“ALTHOUGH our radio business now is but half its former volume (we grossed \$85,000 in 1929), our net profit is greater. And, strange to say, we have the depression to thank for this satisfactory turn of affairs,” states R. L. Painter, president of the Chester Radio Corporation, Chester, Pennsylvania.

Faced with a drastic drop in sales a year ago this January, Painter had the vision to analyze overhead and the courage to pare expenses to the bone. Frankly, this firm had let the prosperity buying wave of '29 sweep it off its feet. It obviously was over-expanded—branch store, large staff and all the other fancy fixings.

But Painter, and treasurer E. L. Matlack, did more than merely close the branch store, eliminate the non-productive help, the sales manager, the credit manager, reduce their own salaries and make other self-apparent economies, many items being luxuries they never should have incurred in the first place. . . . Painter and Matlack did more than this—they worked nights, frequently till one A.M., searching for the *hidden* losses. It is the little leaks, of course, that constitute those “insidious” profit killers. It is this angle of the Chester Radio economy policy that contains ideas that other dealers can well use. Here is what these boys did:

Painter and Matlack saw in credits, selling and servicing their three main points of attack. From the very day the latter gentleman took personal charge of collections the opportunities for reforms became apparent. Now delinquents are contacted not later than five days after a lapse occurs. His “pay-at-the-store” plan saves collectors’ commissions and his new, visible edge, card

system—with colored tabs—saves many “skip” losses. Profitless repossessions are minimized because Matlack knows the value of each set and whether or not it will pay to pull it.

“Aside from a close follow-up, accounts are kept balanced and customers happy by another practice.” Mr. Matlack explains. “When accepting the down payment we make it very clear to the customer that we are ‘merely collectors for the finance company and are subject to its rules.’ This enables us to exert pressure without incurring the ill will of the customer. The customer sees that we are regretful but perforce very firm, so he invariably pays.”

Credit losses are further held down by suggesting weekly payments to those considered poor risks. On the other hand, as monthly payments require less book-keeping, preferred risks are urged to accept this type of a contract.

THE savings effected in the sales department and in selling were many. They may be summarized as follows:

Force reduced to one, full time man, and his “floor time” cut to 30 per cent of total working hours. Must spend balance of day outside. This policy has doubled the productiveness of this employee.

Employed part time representatives, drawn from the different neighborhoods and from the types of prospects which appear to offer the most business. A highly respected negro; an employee in the local Ford plant and an insurance man, all have made good.

The president of this concern personally sells and supervises. He specializes on that tricky colored gent in the wood pile—trade-ins. The following sounds too good to be true, but it comes direct from Painter himself: No trade-in allowance is granted on sales less than \$100. The argument to support this policy runs about like this . . . "Last year we couldn't have sold you a similar set for \$165; but even if we had, and you were allowed a \$35 trade-in for your old outfit, you actually would have to pay more, in dollars, than the price we now ask for a superior article."

Every effort is made to hold trade-in deals to not more than one transaction in five. Selling time is conserved and customers' decisions are expedited by focusing attention on but a few models at a time. If a customer hesitates to state his price preference the salesman suggests: "I don't suppose you want to spend much over \$100?" This usually brings an answer to light. "Don't scatter attention," Painter enjoins. "Focus on what the customer wants."

Makes were reduced to two lines. "More are unnecessary, one brand alone is not sufficient."

Inventory, considered a part of the sales economies picture, was reduced by means of a simple, home-made card system. Now stock is held to actual needs by making up one of these cards for each set that comes in. When the receiver is sold the card becomes a part of the customer's record file. If the set comes back, the card again goes in the "live," "used" or "obsolete" inventory drawer. Other classifications for merchandise are "storage," "out on demonstration" and "outside

repairs." Takes a little time to operate but worth it.

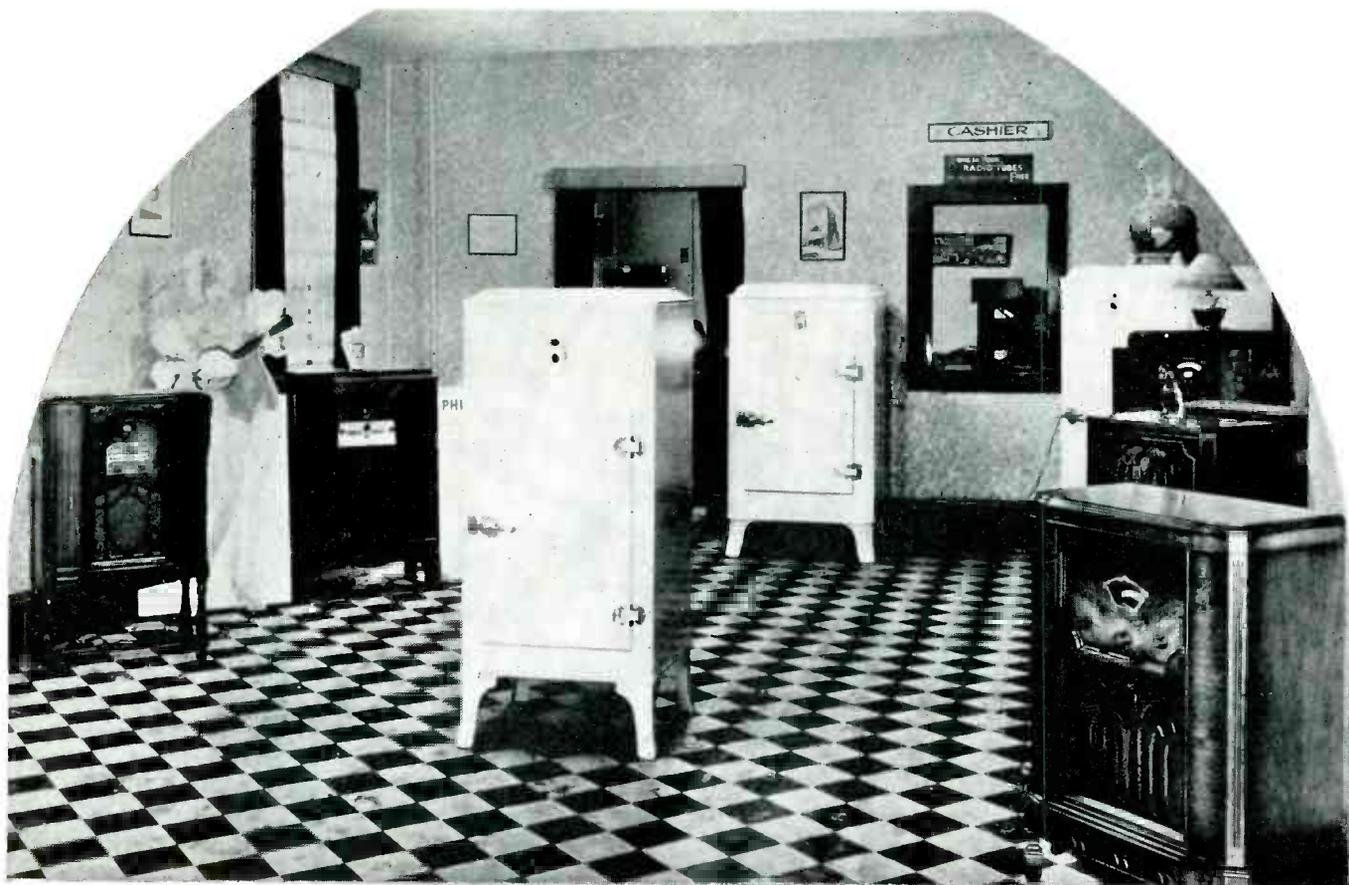
The advertising budget was cut from 5.8 per cent of total gross to 2.2 per cent. The newspaper copy now is informative in nature rather than general or institutional. A check is made of the pulling power of each ad and only the productive ones are repeated.

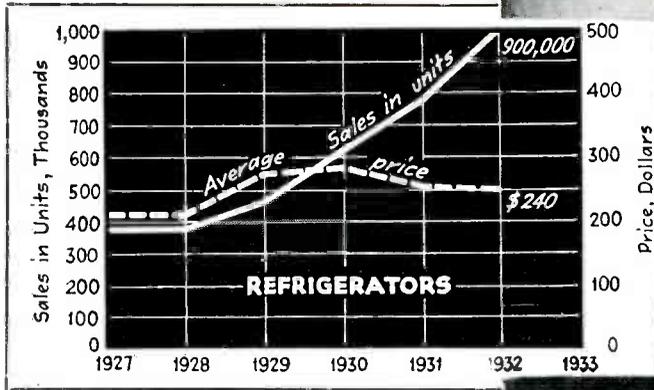
"We used to spend money," confesses Mr. Painter, "for any promotional stunt that came along. Now we've cut out all the frills. We must know just exactly what the proposition will cost and what its tested results will be."

With regard to service, Chester Radio closed its own department and arranged with a local service specialist to handle its calls on a contract basis. Such a procedure is not always to be recommended. Many dealers are now operating their own service department at a profit. However, this particular concern studied both sides of the matter and chose a course of action which, in its own case, would save the most money.

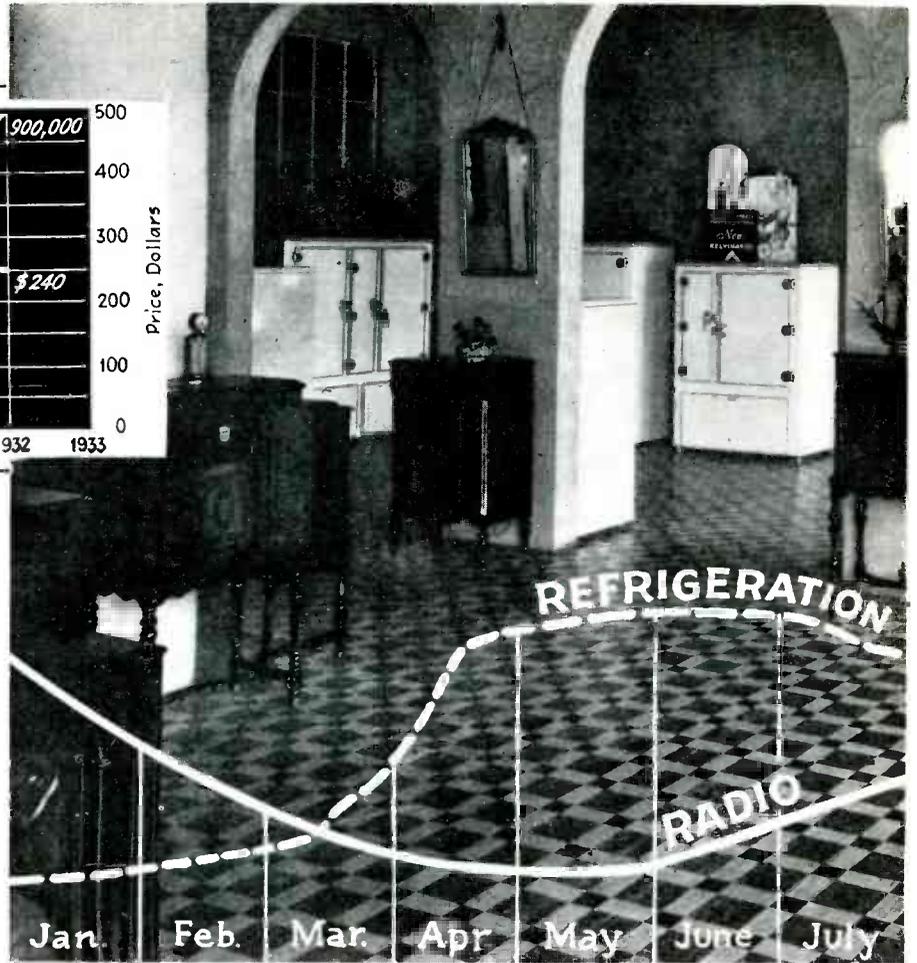
From the preceding it will be seen that Chester Radio Corporation has made many revisions in its original conception of how a radio business should be operated. It has not been afraid to acknowledge its mistakes nor to apply the pruning knife vigorously. While some of the savings are well known and undoubtedly have been practiced by many readers of this magazine, the fact that such a course of action turned an average monthly loss of more than \$800 into a profit of equal size—all within less than ten months, points to the study of expenditures as one of the most important functions of today's independent retailer.

When Sales Fell Off.... Turned Looming *Losses* into *Profits*





Since 1928 refrigeration sales have increased yearly, while the average unit price has fallen but slightly



From

JANUARY — to

THE aggressive manner with which this industry of ours merchandised electric refrigerators during 1931, the success which attended this effort, and the increasing interest now manifest, marks refrigeration as radio's "hottest" complementary line.

According to Webster the word *complement* means: "that which makes up or supplies a deficiency. It often implies two things which mutually *complete* each other and together constitute a whole." In this harmonious, self-evident relationship of refrigeration to radio lies danger as well as security. That radio dealers and distributors will pay much attention to refrigeration during the coming months, all admit. That the radio industry is assuming a new responsibility which carries with it the vital need for the exercise of great skill and care and study in order that this item may be sold properly and with profit to all involved, is apt to be overlooked.

Last year the radio fraternity accounted for approximately 15 per cent of all domestic electric refrigerator sales—and also for not less than 25 per cent of all *added* volume enjoyed by the refrigerator manufacturers during that period. For 1932 it should register 20 per cent of the total refrigerator business; and this in the face of powerful competition from many other types of outlets.

The preceding figures necessarily are estimated. They are, however, based upon the opinion of many well-informed executives in close touch with both the radio and the refrigeration industries as well as on careful field investigations.

DANGERS OF PRICE CUTTING

UNQUESTIONABLY the rock on which our refrigeration bark is most likely to split is that of "Price Cutting." There are many new refrigeration dealers and refrigeration manufacturers in the field—a majority from the ranks of radio and accustomed to "take-away" selling practices and the featuring of price. An electric refrigerator is a specialty device. It can be sold in volume only by the application of specialty methods and the use of specialty men. When these newcomers awake in July or August to a realization that the best selling season is past, and that they are left with a sizable inventory of electric refrigerators, what will happen? Certainly they will be strongly tempted to cut prices. This potentially menacing condition, to be effectively met, calls for constructive thinking right now. The manufacturers, who have created and are creating these outlets, must make clear to these merchants that re-



January

Refrigeration-sales success depends on the consistent use of outside solicitation and follow-up. Specialty selling forces must be organized and individual salesmen and dealers thoroughly trained in the requirements of this new proposition.

As an example of this trend to feature price instead of performance, we direct the reader's attention to the popularity of the "metered" payment idea. This recently introduced proposition—its advantages and disadvantages—was discussed in detail on page 39 of the December issue.

Quoting from this article:

"Whether, in the long run, '25 cents a day' will benefit the refrigeration industry or whether this idea is but transitory, will depend largely upon the judgment used in the extension of this plan. Certainly the average dealer must continue to get a substantial down payment and to watch his credit risks just as carefully under this new dispensation as formerly."

A \$48,000,000 MARKET FOR THE RADIO INDUSTRY

SOME idea of the magnitude of the market for domestic electric refrigerators may be gained by a glance at the accompanying chart. Note that 400,000

REFRIGERATION

entering record year

MANUFACTURERS

pledge \$412,000 for promotion

RADIO INDUSTRY

will enjoy full share of total sales

units were sold in 1927 and that more than twice this number (900,000) were purchased last year. The Electric Refrigeration Bureau of the National Electric Light Association has set a goal of 1,000,000 domestic refrigeration installations as its 1932 objective. Based on the estimate made in the first part of this article, those types of retail outlets manned by radio-minded men should enjoy 200,000 units, (20% of this business) or an added gross—estimating the average unit sales price at \$240—of \$48,000,000.

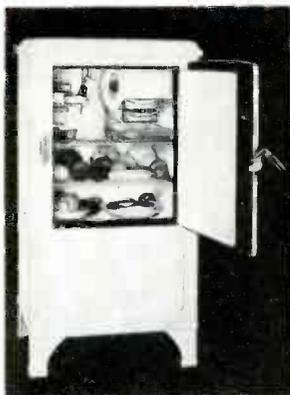
Justifying this million mark hung up by the Bureau—which is the promotional instrument for refrigeration of the electrical industry—are elaborate plans for the greatest cooperative advertising and selling activity, on a nation-wide basis, in its history. The 1932 publicity budget of the National Electric Refrigeration Bureau calls for the expenditure of \$412,000—this money to be subscribed by the refrigerator manufacturers. Of this sum about \$300,000 will be spent to popularize electric refrigeration in the national household magazines.

The details of this tremendous activity have been incorporated in a plan book, "Another Million in 1932." It tells local dealers what they can do to "tie in" and illustrates, in colors, all the display material available. Write to the National Electric Light Association, 420 Lexington Avenue, New York City, for your copy. No charge to dealers.

In conclusion, radio set makers, radio jobbers and radio dealers must not forget that radio merchandise still constitutes, and always will, their bread and butter income. Even this coming spring and summer consoles must not be relegated to the storehouse or to the back of the store. Rather radio and refrigeration must be skillfully blended so as to complement each other—the one to make up for the shortcomings of the other—so that the net result will be a consistently active and profitable business.

No better type of prospect for electric refrigerators exists than the radio customer. Nineteen thirty will prove the soundness of this statement.

Electric REFRIGERATOR



APEX

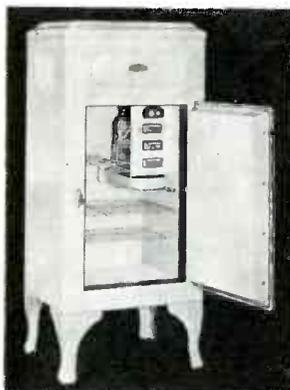
Apex Electrical Mfg. Co.
1067 E. 152nd St., Cleveland, O.
No. of dom. models.....5
Capacities....4.4 to 7.8 cu.ft.
Lowest price\$179.50
Highest price\$299.50

BOHN

Bohn Refrigerator Company,
St. Paul, Minn.
No. of models5
Capacities.....4 to 16 cu.ft.
Lowest price\$202.00
Highest price\$542.00

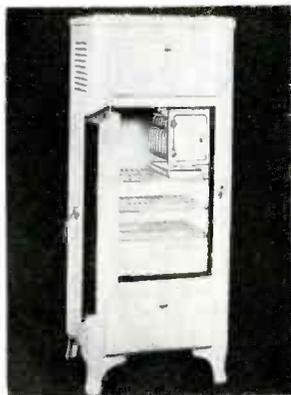
BRYANT

Bryant Electric Refrigeration
Co., New Milford, Pa.
No. of models2
Lowest price\$200.00
Highest price\$211.00



BUCKEYE

Domestic Industries, Inc., 282
N. Diamond St., Mansfield,
Ohio
No. of models.....2
Capacities....5½ and 7 cu.ft.
Lowest price\$99.50
Highest price\$159.50



CAVALIER

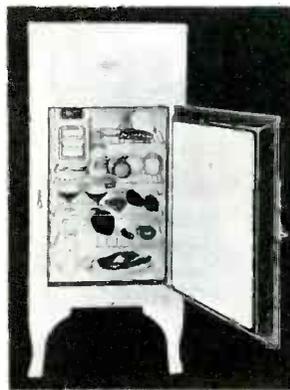
Tennessee Furn. Corp., 343 W.
First St., Chattanooga, Tenn.
No. of dom. models.....15
Capacities.....4 to 10 cu.ft.
Lowest price\$149.50
Highest price\$365.00



COPELAND

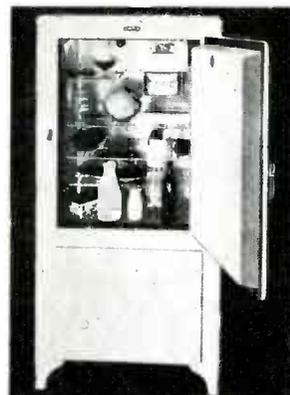
Copeland Sales Co., 332 Cass
Ave., Mt. Clements, Mich.
No. of models20
Capacities..4 4/10 to 25 cu.ft.
Lowest price\$160.00
Highest price\$650.00

CROSLEY
Crosley Radio Corporation,
Cincinnati, Ohio
No. of models.....2
Capacities....4½ and 5½ cu.ft.
Lowest price\$99.50
Highest price\$139.50



DAYTON

Dayton Refrigeration Corp.,
520 Kiser St., Dayton, Ohio
No. of models.....3
Capacities.....5 to 8 cu.ft.
Lowest price\$139.50
Highest price\$199.50



CHILRITE

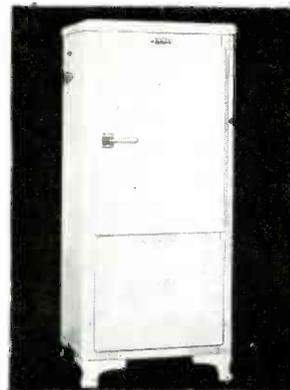
Narraganset Machine Co.,
Pawtucket, R. I.
No. of models.....5
Capacities.....5 to 7½ cu.ft.

DEVON

Devon Manufacturing Co.,
11 Beacon St., Boston, Mass.
No. of models2
Capacities7 and 9 cu.ft.
Lowest price\$380.00
Highest price\$430.00

ELECTRO-KOLD

Electro-Kold Corp.,
Spokane, Wash.
No. of models12
Capacities....4¼ to 22 cu.ft.
Lowest price\$183.00
Highest price\$677.00

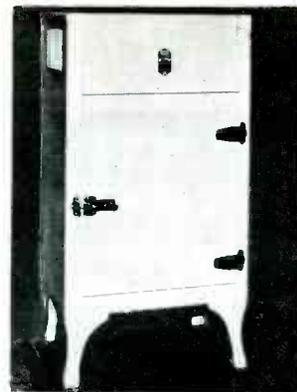


FADA

F. A. D. Andrea, Inc.,
Long Island City, N. Y.
No. of dom. models.....6
Capacities.....5 to 7 cu.ft.
Lowest price\$179.50
Highest price\$265.00

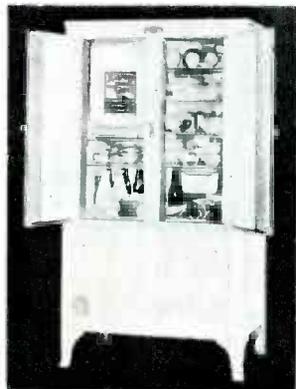
MAKES . . . PRICES . . .

DIRECTORY



KEOKUK

*Keokuk Refrigerating Co.,
429 S. Fourth St. Keokuk, Ia.*
No. of dom. models.....10
Capacities....4.2 to 10 cu.ft.
Lowest price\$176.00
Highest price\$390.00



GIBSON MONO UNIT

*Gibson Electric Ref. Corp.,
Greenville, Mich.*
No. of dom. models.....4
Capacities.....3 to 7 cu.ft.

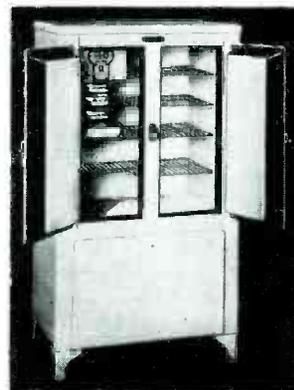
ICEBERG

*Iceberg Manufacturing Co.,
Gardner, Mass.*
No. of models12
Capacities.....4 to 24 cu.ft.
Lowest price\$189.50
Highest price\$650.00



ICEMASTER

*Icemaster Co., 114 Hale St.,
Haverhill, Mass.*
No. of dom. models.....18
Capacities.....4 to 32 cu.ft.
Lowest price\$265.00
Highest price\$1000.00



FRIGIDAIRE

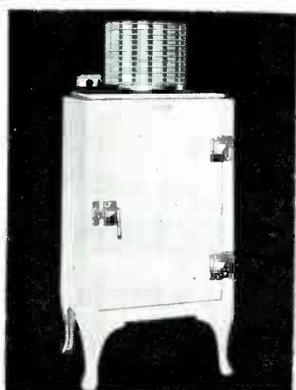
*Frigidaire Corporation,
Dayton, Ohio.*
No. of dom. models.....8
Capacities.....3 to 18 cu.ft.
Lowest price\$160.00
Highest price\$643.50

ICE-O-MATIC

*Williams Oil-O-Matic Heating
Corp., Wilmington, Ill.*
No. of models.....10
Capacities.....4 to 13 cu.ft.
Lowest price\$175.00
Highest price\$525.00

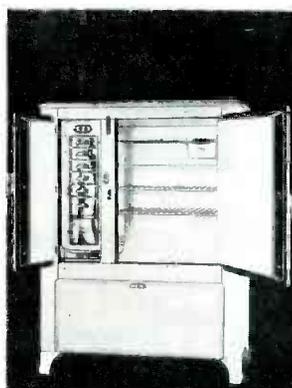
KING KOLD

*Illinois Moulding Co., 23rd and
Western Avenue, Chicago, Ill.*
No. of dom. models.....7
Capacities.....5 to 8.5 cu.ft.
Lowest price\$139.00
Highest price\$270.00



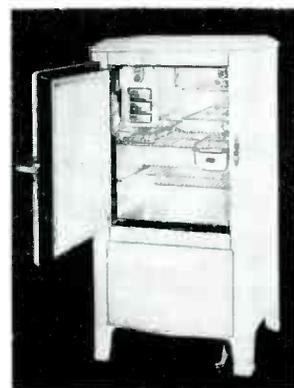
HYDRELECTRIC

*Welsbach Co.,
Gloucester City, N. J.*
No. of models.....4
Capacities.....4 to 10 cu.ft.
Lowest price\$210.00
Highest price\$460.00



KELVINATOR

*Kelvinator Corporation,
Detroit, Michigan.*
No. of models.....17
Capacities....3 1/4 to 22 1/2 cu.ft.
Lowest price\$180.00
Highest price\$830.00



GE

*General Electric Co.,
Hanna Bldg., Cleveland, Ohio.*
No. of models11
Shelf area...8 to 30 1/3 sq.ft.
Lowest price\$200.00
Highest price\$720.00

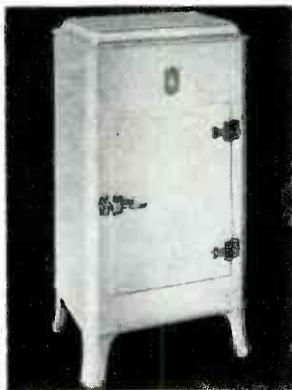


LEONARD

*Leonard Ref. Co., 14260
Plymouth St., Detroit, Mich.*
No. of dom. models.....7
Capacities.....4 to 7 1/2 cu.ft.
Lowest price\$179.50
Highest price\$319.50
(Please turn to next page)

and DOMESTIC MODELS

Electric REFRIGERATION DIRECTORY (Continued from previous page)



MAJESTIC

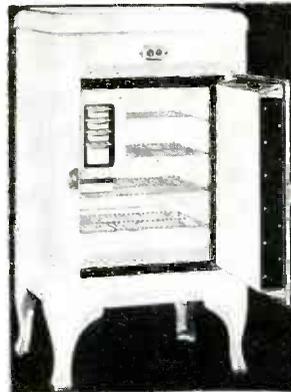
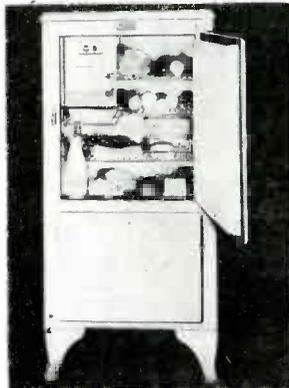
Grigsby-Grunow Co. 5801
Dickens Ave., Chicago, Ill.

No. of models.....6
Capacities.....4 to 12 cu.ft.
Lowest price\$159.50
Highest price\$450.00

MOHAWK

All American Mohawk Corp.,
N. Tonawanda, N. Y.

No. of dom. models.....11
Capacities.....4 to 10.6 cu.ft.
Lowest price\$149.50
Highest price\$345.00



SPARTON

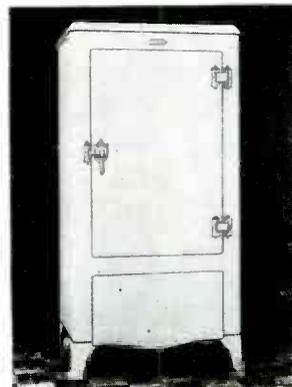
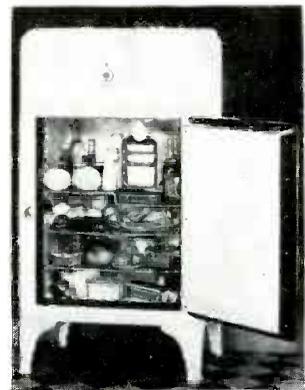
Sparks-Withington Co.,
Jackson, Mich.

No. of dom. models.....3
Capacities.....4½ to 7 cu.ft.
Lowest price\$186.50
Highest price\$284.50

WESTINGHOUSE

Westinghouse Elec. & Mfg.
Co., Mansfield, Ohio

No. of models.....8
Capacities....4½ to 18¼ cu.ft.
Lowest price\$180.00
Highest price\$625.00



MAYFLOWER

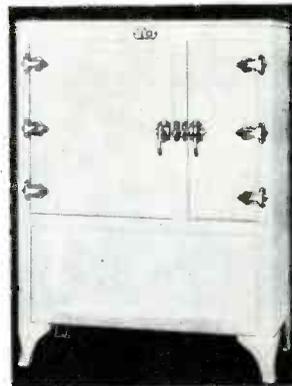
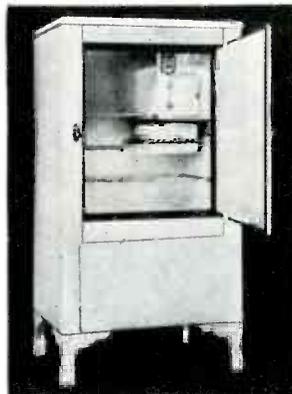
Trupar Manufacturing Co.,
140 Davis Ave., Dayton, O.

No. of models.....10
Capacities.....4 to 9 cu.ft.
Lowest price\$169.50
Highest price\$375.00

NORGE

Norge Corp., 670 E.
Woodbridge St., Detroit, Mich.

No. of models.....4
Capacities.....5 to 10 cu.ft.
Lowest price\$179.50
Highest price\$279.50



STARR FREEZE

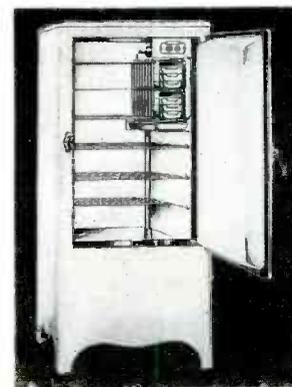
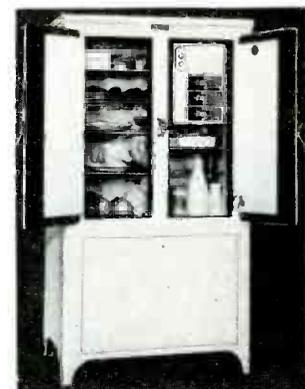
Starr Co., South 1st St.,
Richmond, Ind.

No. of models.....12
Capacities.....5 to 15 cu.ft.
Lowest price\$195.00
Highest price\$395.00

WHITE MOUNTAIN

Maine Mfg. Co., 46 Bridge St.,
Nashua, N. H.

No. of dom. models.....7
Capacities....4½ to 11 cu.ft.
Lowest price\$198.00
Highest price\$449.00



M & E

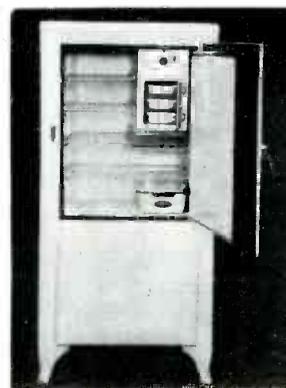
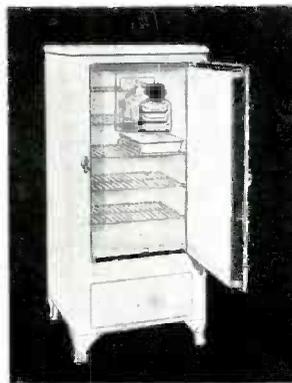
Merchant & Evans Co., 21st
and Washington Ave.,
Philadelphia, Pa.

No. of dom. models.....4
Capacities.....4 to 7½ cu.ft.
Lowest price\$149.50
Highest price\$275.00

SERVEL HERMETIC

Servel Sales, Inc.,
Evansville, Ind.

No. of Models.....6
Capacities.....3 to 11 cu.ft.
Lowest price\$187.50
Highest price\$455.00



UNIVERSAL

Universal Cooler Corp., 7424
Melville Ave., Detroit, Mich.

No. of dom. models.....8
Capacities.....3 to 8 cu.ft.
Lowest price\$170.00
Highest price\$300.00

ZEROZONE

Zerozone Corp., 939 E. 93rd
St., Chicago, Ill.

No. of Models.....8
Capacities.....4 to 7 cu.ft.
Lowest price\$179.50
Highest price\$269.50

Fast Moving

Within the next six months many new models will be announced, prices will be revised and new refrigerator concerns will make their bow.

Our New Merchandise department, a regular feature of each issue of *Radio Retailing*, will keep the reader in close touch with these current developments.

WORKING the CLUBS

Editor's Note: There are some 400 social clubs in New York's colorful Harlem district with from 10 to 50 members each. The leading groups sponsor four well patronized dances a year, thus affording a particularly fertile field for public address equipment rentals. G. B. Valentine, who services radios during the daylight hours, tells how he is exploiting this field, building up a business which should quickly develop into a full-time proposition by virtue of his ever-widening circle of acquaintances among club officials.

By G. B. Valentine

RADIO manufacturers have been putting out such good sets that the past July I found it necessary to find some method of increasing my earnings. The last straw was the widespread adoption of "Free Tube Testing" service by retail stores—a move which eliminated one of the most profitable sources of profit for me. So I decided to try public address work.

I laid out a system to be built in a home-constructed carrying case. The following equipment was considered:

1. Automatic record-changer and pick-up (Allen-Hough)
2. Pre-amplifier using 2-'27 tubes and an '80 (Samson)
3. Two-button carbon microphone (Samson)
4. Power amplifier using a '27, two type '50 tubes and a rectifier (Samson)
5. Portable dynamic horn speaker (Racon) and field current rectifier
6. 300 watt auxiliary motor generator for 110 volt d.c. work

Then, with this data in hand, I went to see a local politician. At various times during the year each member of his political organization was called upon to contribute to the campaign funds, some making cash donations and others paying in the form of work among district voters. I convinced him that he could render his party a valuable service by donating the use of a portable public address system during the primaries and later during election week and that he could also make money with it before and after the campaigns.

He agreed to advance \$400 for the equipment with the understanding that I was to receive \$50 for each week that my time was taken up traveling with campaign speakers and, at other times, 50 per cent of the rental charges. The equipment proved of great value in securing votes during the week of the primaries and later during the drive just preceding November election.

I have rented the equipment 28 times in 5 months, "takings" totalling \$644 with charges per evening averaging \$23. Most of my rentals have been to local social clubs, although I have used the equipment at three store open-

ings, an auction and a church bazaar. I make it my business to rub elbows with club officials. Most of them know me and know that I have public address equipment for rent. Long before they give their dances I secure permission to be present at a business meeting and lay before them a simplified drawing of my equipment, telling them how it can be used to make their affair an even greater success.

These are my usual sales arguments:

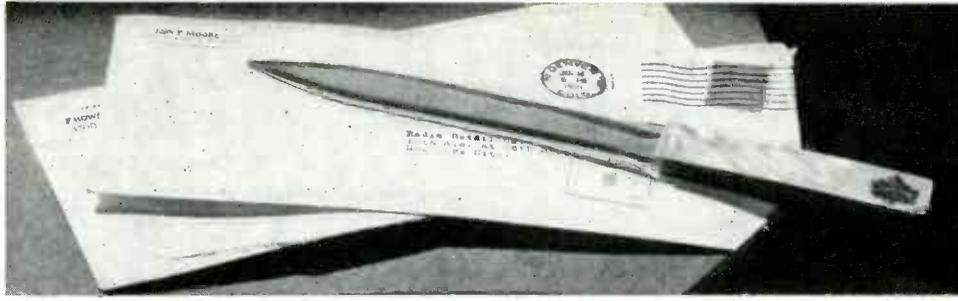
1. The orchestra can use the microphone to feature vocal and instrumental solos to great advantage, irrespective of how noisy the hall may be.
2. The master of ceremonies or the club president can make special announcements much more effectively.
3. During the orchestra's rest periods the audience may be entertained with record selections, or, if they wish, may dance to recorded numbers.
4. The speaker, placed on the side of the hall opposite the orchestra, will break up "bunching" of the dancers around the orchestra.

I secure new business by inducing clubs to print this announcement on their program: "Due to the growth of the Pleasure Bound Social Club we have engaged the WILLIAMS AMPLIFYING SERVICE for the evening. You will be able to hear every word spoken by the Master of Ceremonies, Mr. Alvin E. White, and also the orchestra's special solo numbers. Club officials having a need for the service at their own affairs should see Mr. G. B. Valentine, chief operator, before the evening is over." A sign bearing our company name and address is always suspended beneath the horn.

Most clubs give me complimentary tickets in advance of their affairs. I in turn distribute these among the officers of other clubs and so give my prospects a perfect demonstration of the system in use. Public address equipment, I think, will soon be demanded by club members who have seen it used by rival organizations.

I have fixed \$20 as my standard charge for one evening's service at a dance. This is low, but I am more interested in expanding my field at the present time than I am in getting all I can out of each individual job. Five clubs, each giving four dances annually, have signed contracts to use my service throughout the year. They give three "paid" affairs and then one "free admission" dance to swell their membership. I get them to sign a contract by offering free public address service for their free dance if the other dances are also given to me. In this way my future business is assured.

I never try to cut a club's throat financially by overcharging as it is their continued patronage rather than the one affair that interests me. It is obviously better to make \$60 over a period of a year than to collect \$30 just once. As my contracts increase my revenue rises.



VOICES

from the

MARKET PLACE

When some distributor will ship me a battery set on a thirty-day consignment basis, I believe that I can sell some of them. Until then, as far as I am concerned, they can continue trying to re-educate the man without electricity by magazine advertising, and expect him to buy unseen and unheard. Apparently this method is meeting with very small success. I for one refuse to tie up my money in what might be considered a brand new article. In other words, I want someone to help me hold the bag.

Putney, Vt.

H. E. MONROE.

An Answer to Our Question

EDITOR, *Radio Retailing*:

IN YOUR January issue you ask the question, "Whose Fault is It" that battery sets are not being sold? I will not hesitate to answer: "It is the distributor's."

I am doing radio work where there are a lot of unwired houses, and it looks as though there should be a sale for the new type battery sets. But the prospective customer has heard about all of the drawbacks of the old type battery sets, and the new air cell battery or the new type tubes mean nothing to him. Possibly he is the same man that someone offered to give a battery set to yesterday if he would lug it off, and today I am trying to sell him a battery set for around a hundred dollars.

The man in the rural district must be educated all over again and I believe that it is up to the distributor to assist. Why not let the dealer have one set on consignment? I dare say that a large number of dealers, myself included, have never had one of the new battery sets demonstrated to them, and I, like the prospective customer, would like to be shown before buying.

Noise at the Expense of Tone

Editor, *Radio Retailing*:

ARE we supposed to be making progress in radio receiver-design? If we are, what is the excuse for the present exploitation of pentode tubes in everything but the very cheapest of sets?

Of course, a lot of theory can be set down on paper proving they are better in spite of the fact that many of their characteristics are against them. But sit down, compare the tone quality of the best pentode set against any ordinarily good set of last year using 245's and you will make up your mind that we are getting nowhere fast.

It seems that this year, noise is our goal—more volume than anybody wants or can use at the complete expense of tone.

Naturally, I am always for something new, provided it offers improvement, but if the new method is worse than the old, why in the name of common sense do they all go for it like a lot of sheep?

Utica, N. Y.

YATES M. HOAG.



Solve Claremont (Continued from page 21)

ister an artificial stimulus to their own business by hurrying obsolescence without considering its effect upon the retailer's respiration.

THIS concludes our picture of radio's present status in a typical small town, presented herewith for "laboratory" study. Solve Claremont and you have solved the problems of 16,222 other towns. If, in reporting the thinking of these New England dealers, we have appeared to be unduly recriminatory with respect to the policies of distributors and manufacturers it is because we fail to see how the retailers themselves can be held accountable for the ills here outlined.

Claremont will continue, in spite of its troubles, to sell radio, for basically the town still affords a good market. It should, in the words of one dealer, ". . . be good for at least 5 more years, even if no major development such as television is introduced in that time."

Time nicely solves many problems in its own way. But time moves slowly. Meanwhile dealers, plus the distributors who supply them, plus the manufacturers who supply these distributors, suffer the loss of considerable business. The processes of nature should be speeded up if we would put the countless Claremonts of this country on their fet.

EDITORIALS

Dumping . . . Less Damaging

TWO manufacturers who find it necessary to move excess stocks are offering these to franchised dealers at better than usual discounts; sets to be advertised at full list, the additional margin being applied against trade-in allowances.

It is too bad that these companies find it necessary to liquidate (excessive allowances constitute one form of price-cutting) but laudable that this method has been resorted to instead of the more destructive practice of dumping among cut-price outlets.

Dumping of any kind is injurious but there is this to be said for the franchised-dealer method: It permits dealers who constitute the backbone of the radio business to make a little money in the process. Furthermore, attractive trade-in offers will encourage replacement set business which would ordinarily be difficult to obtain.

For Service . . . A New Deal

THE complexion of radio service is rapidly changing—for the better. Usually a liability in the past, service is now a definite asset to most dealers who still maintain shops, for these reasons: (1) Because of the continued depression many people are having their old sets fixed instead of buying new, and (2) many dealers have sought to reduce operating costs by dispensing with servicemen, making salesmen install and

paying outside repairmen by the job when service requirements demand expert attention.

There is probably more service work to be had than ever before and certainly fewer dealers to do it. This is the time, then, for dealers who are going to stay in business to strengthen, rather than to discard, their service organizations. Properly managed, they will pay their way, and when the depression clouds blow over will emerge as a source of profit that no radio store will be able to ignore.

Radio . . . in Every Office

COINCIDENT with the plans of the big broadcasting companies to begin to broadcast special business men's programs during certain morning and afternoon hours, new office buildings are being designed with a view to operating radios in each office.

First of the new buildings to be so equipped is the 33-story structure now being built in Philadelphia for the Philadelphia Savings Fund Society. A special antenna receiving system is being installed for the operation of receiving sets in each of its 425 offices.

Thus the radio dealer has opened to him a new field of selling. Two antennas on the roof will supply programs to all of the offices, without impairing the efficiency of each receiver or limiting reception to any particular station. Intercepting radio impulses far aloft, this system eliminates the electrical interference usual in business districts with large steel buildings.

This Never Would Have Happened If . . . (see page 29)

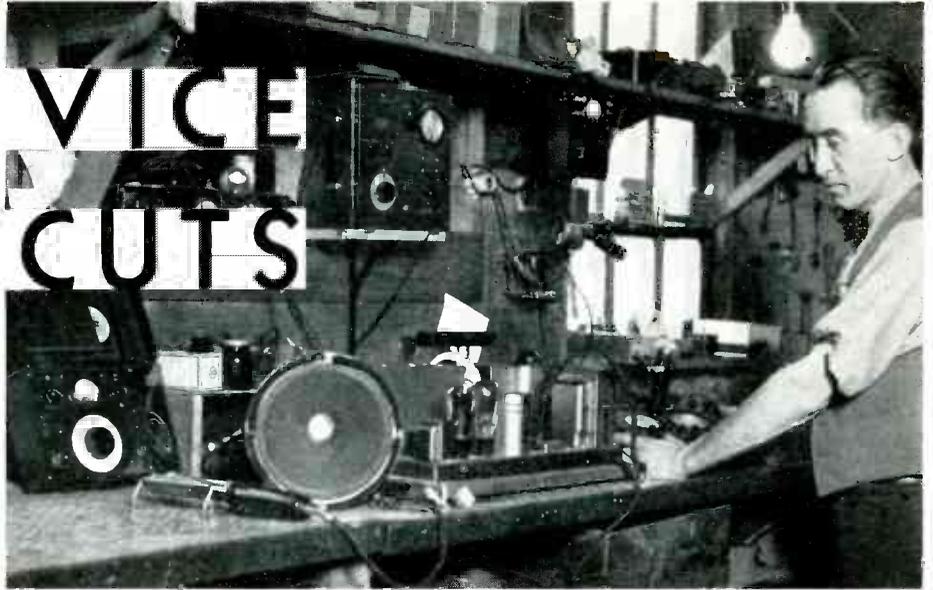


Courtesy, Chicago Daily News

SERVICE SHORTCUTS

"Plug and Jack" Analyzer

By J. R. Kearns*



I have built a set analyzer which combines the efficiency and convenience of commercial types with the extreme flexibility of "plug and jack" equipment. Plug and jack design is extensively used in telephone and public address work and, in my estimation, its incorporation in my instrument safeguards it against obsolescence through the introduction of new tubes.

The instrument uses a plug and cable terminating in a panel equipped with a four and five-prong socket with pin-jacks for each socket terminal. Three meters are used: a 1,000 ohm per volt d.c. voltmeter with full scale ranges of 10, 50, 100, 500 and 1,000 volts; a 1,000 ohm per volt a.c. voltmeter of the rectifier type with full scale ranges of 3, 9, 30, 150 and 900 volts; and a d.c. milliammeter, 10 and 100 mils. full scale. The switches used are for range changing only, rotary tap types being used in connection with the voltmeters and a momentary snap switch for the milliammeter. In the case of the milliammeter the 100 mil. shunt is normally in the circuit for safety, depression of the button permitting smaller readings.

The d.c. voltmeter is also used as an ohmmeter, a small battery and zero adjustment resistor being included in the circuit for that purpose. The a.c. voltmeter is designed for use in checking line and filament voltages but also serves as an output meter. For this reason it is built into a separate compartment, which may be removed from the analyzer without disconnecting wires.

It is possible to design an instrument of this type using only two meters, with one d.c. meter being used for both current and voltage readings. I like to obtain simultaneous readings. The 10 mil. instrument included to permit this is relatively inexpensive and easily worth the extra cost.

The method of obtaining current read-

*Rock Valley, Iowa.

ings is simple. Closed circuit jacks are included in all leads to the sockets but the filament leads. The milliammeter has leads terminating in a 'phone plug which may be inserted in the jacks to give plate, screen, grid, cathode, 2nd plate of 80 rectifier, raytheon and other current readings. Voltage readings between any two tube elements are obtained by inserting short test cords from a voltmeter in the two proper socket terminals tip jacks.

An especially desirable feature of this



method of voltage reading is that the voltages between any tube element and the grounded chassis can be obtained by clipping one of the leads to the chassis and inserting the other in a tip jack. I have found this particularly useful in the case of modern circuits incorporating isolating resistors in grid and plate circuits and variable grid biases. A chassis to plate reading is more reliable in such cases than grid to plate or cathode to plate check.

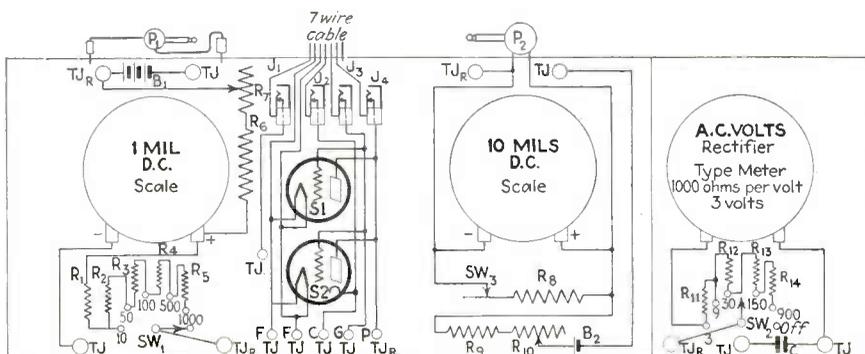
This tester cannot go out of date as

long as only four and five prong tubes are used, no matter what terminal changes are made in new tubes. In case voltages higher than 1,000 d.c. or 900 a.c. are later employed, which is unlikely, additional resistors will extend the range of the meters easily. While it might not appear that operating this tester would be as rapid as with push-button types actually I find that it is just as easy to slip a cord into a pin jack as it is to push a button or rotate a switch.

Following is a list of parts used in the construction of this particular instrument. Trade names are given to fully identify each part. Similar equipment made by other companies could be used. Servicemen are cautioned against the use of cheap resistors as multipliers, however.

- 1 mil. d.c. milliammeter (Jewell)
- 10 mil. d.c. milliammeter (Jewell)
- 3 volt a.c. voltmeter, rectifier type (Jewell)
- SW1, SW2—6 point tap switches (Yaxley)
- SW3—Push-button switch (open when depressed)
- R1—10,000 ohm resistor (IRC wire wound)
- R2—40,000 ohm resistor (IRC wire wound)
- R3—50,000 ohm resistor (IRC wire wound)
- R4—400,000 ohm resistor (IRC wire wound)
- R5—500,000 ohm resistor (IRC wire wound)
- R6—4,000 ohm resistor (metallized)
- R7—1,000 ohm variable resistor
- R8—Shunt resistor (depends on meter resistance)
- R9—10 ohm resistor, wire wound
- R10—10 ohm rheostat, midget type
- R11—6,000 ohm resistor (IRC wire wound)
- R12—21,000 ohm resistor (IRC wire wound)
- R13—120,000 ohm resistor (IRC wire wound)
- R14—750,000 ohm resistor (IRC wire wound)
- J1, J2, J3, J4. Closed circuit jacks
- TJ—Tip jacks
- TJR—Tip jacks, insulated type (Yaxley)
- S1—4 prong socket
- S2—5 prong socket
- P1, P2—Phone plugs
- B1—4½ volt C-battery
- B2—1½ volt flashlight cell
- C—1 mfd. fixed condenser

The cable contains 7 wires, one of which provides connection for r.f. pentodes, should these be introduced. The jack and tip jack for such tubes has not yet been included on the panel but could easily be mounted should this become necessary; only six wires are used at present. Two



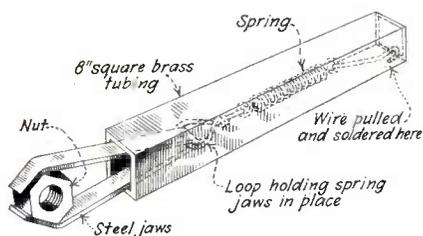
heavy wires are used for filament current. The plug was turned from wood in a lathe and fitted with an old tube base, the adaptor being made from a 5 prong socket and a 4 prong tube base. Test cords are short for connection to the panel, long for other tests.

The analyzer panel is 7 x 10 in. and the output meter panel 3½ x 6½ in.

Escutcheon Plate Tool

By F. W. Seaton

A handy tool for holding nuts fastening escutcheon plates to the panel in place may be made of an 8 in. length of square



brass tubing. Form a pair of "pincers" shaped to hold the nut from clock spring of the proper width and hold this within the rod at a tension with a small spring caught to the other end of the tube as shown. The tension should be great enough to hold the nut securely but not quite enough to cause the pincers to disappear within the tube when the nut is removed.

This tool is particularly useful when working on Stewart-Warner models and may be used in fastening other chassis nuts as well as escutcheons.

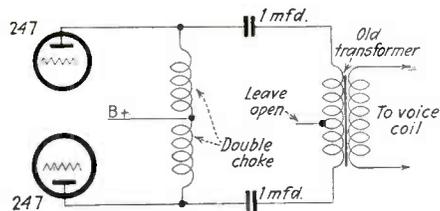
Dope on New Tubes

By M. G. Goldberg

If our business is any criterion, then other servicemen must be interested in changing over sets using 245's to 247's for customers who wish their sets modernized. When we have a job of this kind we secure a double filter choke from a discarded B eliminator (Philco) and connect the two windings in series. The remaining two ends are connected to the plates of the pentodes as shown in the diagram, using blocking condensers of 1 mfd. capacity and 400 volts breakdown rating to feed the regular output transformer originally used in the set. It is surprising how this improves the tone on some jobs. This procedure can even be followed to improve tone quality of sets equipped with 247's but having cheap output transformers.

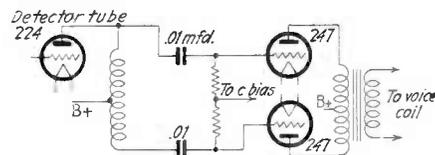
We have had two cases lately where one pentode in a push-pull amplifier would burn out after a short time in use. After replacing the 247 things would be alright for awhile but the new tube would also burn out after a comparatively few hours of use. It was always the same side of the push-pull circuit that was affected. Upon investigation we found that the

push-pull circuit was fed through blocking condensers, with grid resistors to furnish bias. These grid resistors were of the order of 1 megohm or more. The resistance of one had gone up to 5 megs,



practically opening the grid circuit, and the tube drawing excess current. This condition did not show up at once but only after the set had been in operation for several minutes. Even then, the difficulty could not be detected by ear although an analyzer showed one tube drawing 31 mils and the other drawing 50 mils. This trouble was remedied by replacing the defective resistor with a value that balanced the plate current of both.

Certain cases have come to our attention where servicemen have installed multi-mu or vario-mu tubes in sets originally designed for 224's as r.f. amplifiers. Some multi-mu tubes take the same plate current as the 224 type and no change is required in the circuit. But the RCA 235 and similar types, while requiring the same minimum bias as the 224, have a plate drain approximately double. Where it is desired to replace 224's with multi-mu



tubes of this later type the fixed bias resistance must be approximately halved. Without this change sets designed for 224's and using 235's will lack pep.

Auto-Radio Interference

By Albert W. Dugan

When installing an auto-radio the dash, if metal, should be grounded to the motor block with a flexible pigtail. Also the spark, gas and choke controls should be grounded with flexible pigtails. When this has been done touch the antenna lead from the receiver to the various controls on the dash and motor with the motor running and then ground those which cause interference.

Condenser Testing

By Louis Wilkin, Jr.

Very often when outside the shop the serviceman finds it necessary to check small by-pass condensers for leakage. This can be done with a simple adaptor. Take an old tube base such as a '45 and solder two flexible leads, one to the plate and another to a filament terminal, inside. Fill the base with sealing wax.

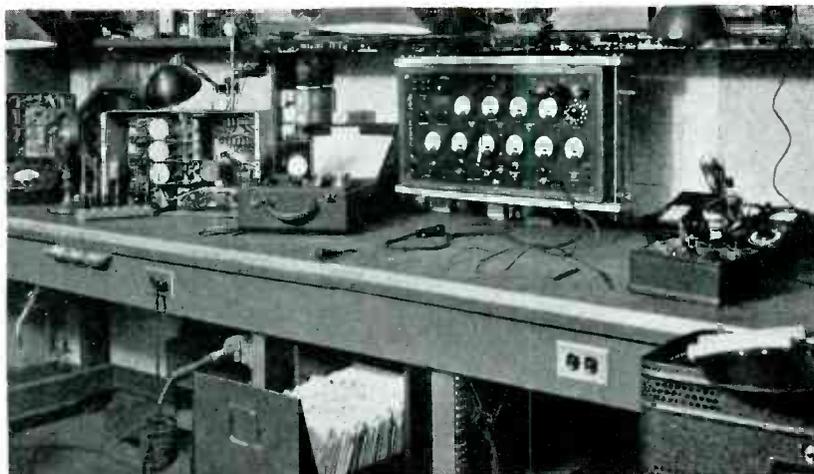
By plugging this adaptor into a '45 socket about 250 volt d.c. is available across its terminals for testing capacities. The leads should be heavily insulated and naturally, should not be directly shorted for more than an instant.

Chassis Lag Bolt Tool

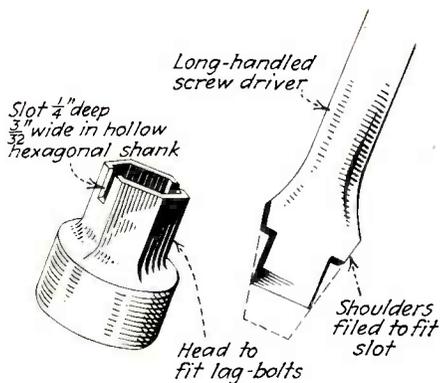
By Frank L. Bowers

Very often servicemen have trouble in removing lag bolts from console chassis due to the shortness of socket wrench handles. A special tool may be constructed at low cost for this work. Secure a long handled screw-driver and file the blade to provide two shoulders as shown in the drawing. Obtain a socket wrench head (most hardware stores sell heads of this type for use with a hexagonal handle) and

A "Rolling" Test Panel



The large analyzer panel in the center of this bench (Hickson Electric, Rochester, N. Y.) is suspended from the rollers of a 7 ft. garage door hanger and can thus be easily shifted along its entire length. The panel is held top and bottom between two wooden members coupled together at the ends by means of threaded metal bars and nuts. Note the handy file drawer in the foreground for circuit diagrams



file a slot $\frac{1}{4}$ in. deep and $\frac{3}{8}$ in. wide as shown, to permit the shoulders of the screw-driver to grip when the blade enters the hollow hexagonal shank.

The screw-driver may be used alone, or form part of the lag bolt tool, thus providing a two-in-one instrument which preserves valuable space in the portable kit.

110 Volt Trouble Lamp

By M. A. Porter

To construct a handy 110 volt trouble lamp get a flashlight case of the focusing type with a large three-inch reflector and lens, one 10 watt 110 volt carbon lamp with candelabra base, one bakelite socket such is used on Christmas tree lighting outfits, one cord spring from an old electric iron and lamp cord of the desired length, with plug.

Cut off the flashlight case about three or four inches from the bulb. Turn or whittle round wood cylinder from soft wood to fit snugly inside case, running its whole length. Bore $\frac{3}{4}$ in. hole lengthwise half through the length of the wood cylinder and finish with a $\frac{1}{4}$ -in. hole for the cord. Socket will fit snugly inside the $\frac{3}{4}$ -in. hole.

Connect cord to socket, running cord out through the small hole. When assembled in cylinder, insert in the case and adjust for focus. Remove the end cap from discarded half of lamp case and drill hole of proper size for cord spring. Place the spring and slip on the cap. Fasten with two small wood screws. Tape the handle.

Causes of Fading

By Harold C. Dey

In my experience as a serviceman I have found seven common causes of fading, cataloged herewith:

1. Opening of cathode-resistor by-pass condensers. These can usually be found by placing the set in operation and touching the cathode side of the suspected condenser with a screw-driver held so that one finger touches the metal blade. Touching after the set has faded will temporarily restore normal volume if that particular condenser is open.

2. Cathode-heater high-resistance short within tube.

3. Improperly grounded BX cables in house wiring. Make a trip to the cellar and observe whether any cables are against water pipes, moving all cables and listening for noise in set.

4. Leaky lightning arrestors. To prop-

erly check these, disconnect aerial and ground wires from radio and connect aerial through a 150 volt a.c. meter to the hot side of the a.c. line. If arrestor leaks a reading will be obtained.

5. Defective welds of tube elements.

6. Poor contact of wire to foil in filter condensers. Fading from this source is always accompanied by hum. Keep an eye on electrolytics and be sure the cans are properly grounded.

7. Temporary high resistance shorts in filter condensers. To check these, open the lead from condenser to ground and insert a d.c. milliammeter in series. When set is operating a reading will denote a leakage. This condition often shows up in radios over two years old.

Cheap "Output Meter"

By Ralph Benson

Where an oscillator but not an output meter is available, sets may be quite accurately aligned by using a 6 volt pilot light at the indicating instrument. Connect the lamp across the secondary of the output transformer, temporarily disconnecting one of the leads from this winding to the voice coil of the speaker and align for maximum brilliance.

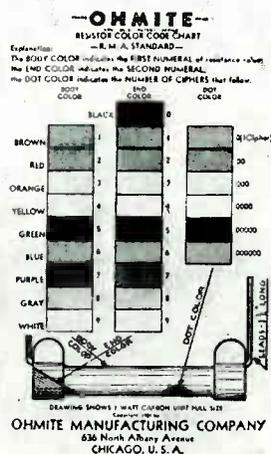
Where sets are equipped with resonance indicating meters to simplify tuning maximum deflection of the meter indicator may be used as a measure of output in aligning.

Trick Lead-in

By Fred Rippel

Where it is impractical to run a lead-in through a porcelain tube under a window sill, or to use an insulated strip between the window and frame, signal energy may be fed from antenna to receiver by gluing a square of tinfoil to the outside surface of the pane and another to the inside surface, forming a condenser. The antenna lead is connected to the outside plate and the lead to the set to the inside plate.

The size of the plates depends upon the sensitivity of the receiver and the efficiency of the antenna.

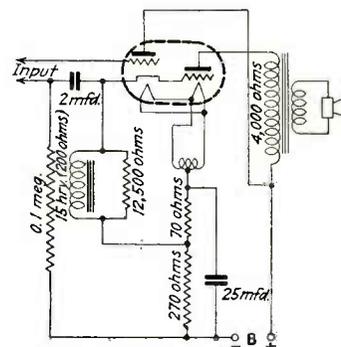


Servicemen may obtain one of these resistor color code cards, with a protective celluloid case, by writing to the Ohmite Mfg. Co., 636 N. Albany Ave., Chicago, on company stationery

"Triple-Twin" Tube Data

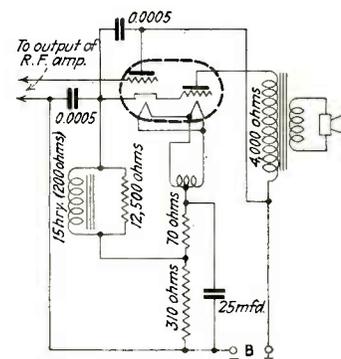
Tube type '95, better known as the "triple-twin" (first mentioned in the November, 1931, issue of Radio Retailing and

Typical Amplifier



pictured on page 21 of our January issue), has now been whipped into shape for commercial use. Its sensitivity and high power

Typical Detector-Amplifier



output make it suitable either as an a.f. amplifier or a combined detector and amplifier, according to the Cable Radio Tube Corp., sponsor.

The new "bottle" contains two sets of three elements; the first set handling the input and the second the output. The input section employs an indirectly heated cathode in order to electrically isolate itself from its heater and from the output filament. This cathode is internally connected to the output grid. Characteristics are as follows:

Heater volts..... 2.5 a.c.
Heater current..... 4 amps.

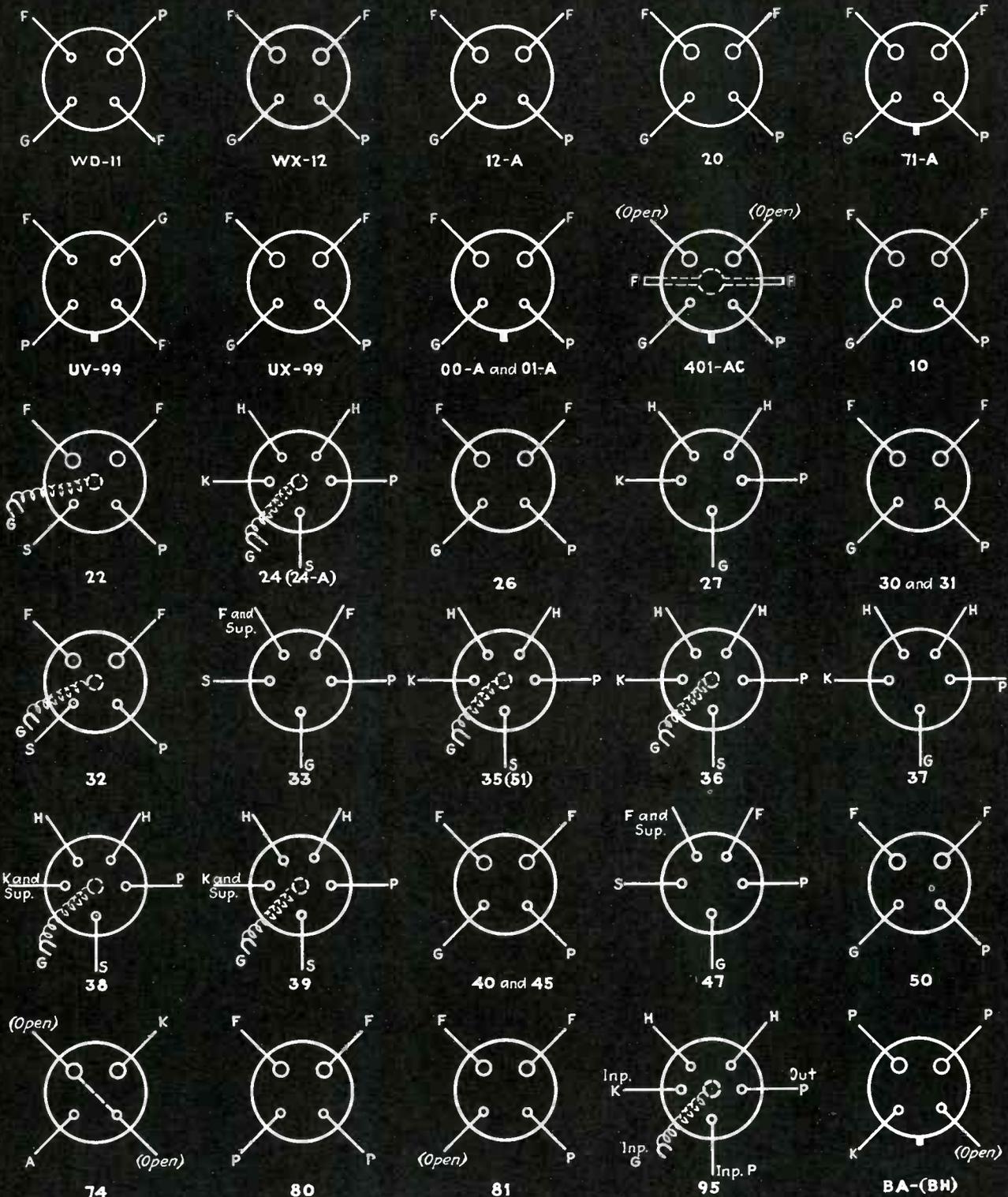
	Amplifier		Detector-Amplifier	
	Input Sect.	Output Sect.	Input Sect.	Output Sect.
Plate volt.....	180	250	180	250
Grid bias.....	-10	-14	-2.5	-3
Plate cur. (ma.)....	3	4	32	52
Amp. fact.....	14.4	14.4	13	13
Plate res. (ohms)...	12500	12000	3550	3000
Mut. cond. (mhos)...	1150	1200	3650	4350
Power out. (watts)...	2.25	4.5		
Sig. volts (full-power-rms).....	4.0	5.0		
Load imp. (ohms)...	12500	12500	4600	4000

	Input Sect.	Output Sect.
Plate volts.....	180	250
Grid bias.....	-12	-16
Plate cur. (ma.)....	1	2

† Output characteristics same as under "Amplifier"

Tube Socket Connections

As seen from beneath sub-panel



Symbols — {

- F — Filament
- H — Heater
- K — Cathode
- G — Grid
- P — Plate
- S — Screen
- Sup. — Suppressor Grid

*This
Radio Retailing Chart
will enable servicemen to rapidly
trace receiver circuits*

Many Innovations at

February, 1932

Swift Surveys of

FEDERATION OPPOSES GOVERNMENT CONTROL OF BROADCASTING

Changes Name to National Federation of Radio and Electrical Associations—Fred Wiebe President

Senator Couzens was soundly criticized for his attitude toward broadcasting at the opening sessions of the annual conventions of the Radio Wholesalers Association and the National Federation of Radio Associations held in connection with the 10th Annual Chicago Radio-Electrical Show, by Paul Klugh, vice-president, Zenith Radio Corporation.

"Perhaps the distinguished Senator knows what he is stepping into and perhaps not," declared Mr. Klugh. "At any rate he can receive an emphatic answer from almost anyone who has spent some time in Great Britain, which is the broadcasting system the Senator has in mind, I assume, by the form of his questions. Americans find British programs largely uninteresting and 'deadly.' If we want radio listeners to lose interest in radio, the British system will do it in the shortest space of time.

"There is nothing wrong with our broadcasting system. Limitation of advertising controls itself automatically. The advertiser who presses too hard on advertising finds that there are no ears to listen to his talk. There is no need to have any government regulation of this matter. It regulates itself."

Following Mr. Klugh's talk, Federated and WRC unanimously adopted a resolution which opposed "any fundamental change in our broadcasting methods, systems or control."

"Sell only nationally advertised merchandise," said Powel Crosley, Jr., head of the Crosley Radio Corp., Cincinnati. "Trade names mean more than ever before."

Gardner Howland, chairman, Merchandising bureau, National Electric Light Association, said that there is a potential market for electrical appliances of \$1,000 per household, all of which merchandise can be used with economy. A total of 30 billions of dollars is therefore available in the wired homes of the United States. The utilities will sell less than 30 per cent of this business, independent dealers should get the lion's share.

Louis Ruthenburg, Detroit, chairman, refrigerator division, National Electrical Manufacturers Association, and president, Copeland Products, Inc., envisioned the radio and electrical appliance dealer of the future as one who would also handle apparatus which controls indoor temperature of the American homes. He predicted that controlled temperature for homes would, within a relatively few short years, be as common as electric refrigerators are today. The Wednesday morning session of the association was well attended and an "open forum" on distributors' problems took place. Leading distributors from all over the

United States participated in this discussion which centered chiefly on refrigeration—the possibilities for retail sales—the possibilities for contract departments—the 25c. a day meter—three year guarantee—a very important consideration of the refrigerator industry.

Dealer and Jobber Organizations Change Names to Broaden Activities

By action of the boards of directors of these associations they are now known as the National Association of Radio, Refrigeration and Electrical Distributors, and National Federation of Radio and Electrical Associations. These two associations and the Institute of Radio Service Men will hold their next national meetings in New York City concurrent with and as a part of the 9th annual Radio-Electrical World's Fair this September.

Fred Wiebe, St. Louis, Mo., of the Brown Supply Co., was elected president of the National Federation of Radio and Electrical Associations; and James Aitken, Toledo, Ohio, of the Aitken Radio Corp., was elected president of the National Association of Radio, Refrigeration and Electrical Distributors.

WWVA, WHEELING'S, West Virginia modern station, limits advertising announcements to 50 words. Its best pulling advertisement ran 33 words. Wheeling is blest with a mighty fine local broadcasting plant, Columbia chain.

New Responsibilities



E. A. NICHOLAS
now
vice-president
in charge of sales
RCA Victor
(left)



ROBERT
ARNOLD
Returns to
Sentinel As
Chief Engineer
and V.P.
(right)

RCA Victor and Photophone Consolidate

As a further step in the unification of activities of the Radio Corporation of America in the radio and electrical entertainment fields under the RCA Victor Company, Inc., at Camden, N. J., David Sarnoff, president of the Radio Corporation, announces the consolidation of RCA Photophone, Inc., with the RCA Victor Company.

The unification joins two closely associated lines of radio and electrical development. It will mean a closer association of sound motion picture recording and reproducing with the radio laboratory and should give impetus to the introduction of sound reproducing equipment.

Bears for Punishment



The world's keenest convention hounds! Individually and collectively this "yard of daisies" hasn't missed a radio banquet, exposition or convention since the days of '23. Here they are, giving the model for the electrical buildings, "Century of Progress" fair the once over. "We'll be there," say: Pete Sampson, Art Haugh, Dave Trilling, Nick Carter, Bob Himmell, Harry Alter, Harold Erstrom, Max Shore, Harold Wrape, Harry Fox and Louis Buehn—all tried men and true. This picture was taken while these "war horses" were doing the recent Radio Show and Federated Convention at Chicago.

January Show, Chicago

the News Bombardments

New York, N. Y.

McDonough New RCA Victor President

The board of directors, RCA Victor Company, at its Jan. 15 meeting, elected J. R. McDonough as president of this corporation, to succeed E. E. Schumaker. The latter's resignation became effective Dec. 31, 1931.

Mr. McDonough, who is thirty-seven years old, entered the employ of the Radio Corporation of America in 1924 and has acted in various capacities since that date. He has been assistant to the president of the Radio Corporation. During 1931 he assumed the duties of executive vice-president of RCA Victor Company, the company to the presidency of which he now succeeds.

AUTO-RADIO AT AUTOMOBILE SHOW

60 Per Cent Closed Cars Now Provide Built-in Antennas

Automobile manufacturers have been forced to take cognizance of auto-radio but so far generally avoid its inclusion in stock cars in order to keep lists down. Radio will be considered extra equipment by most factories this year. These are impressions gained by *Radio Retailing's* reporter at the Thirty-Second Annual National Automobile Show held in New York last month.

Only two closed models exhibited at the show had radios and in neither case was the set included in the F.O.B. price. On the other hand nearly 60 per cent of all closed cars had built-in antennas and about 35 per cent of the manufacturers at Grand Central Palace informed us that they could arrange to have a set installed either by the factory or by their local distributor on short notice. Chrysler, DeSoto and Plymouth hard-top models, in addition to built-in aeriels, had floorboards already cut out for battery boxes and dashboard drillings for easy chassis mounting of one particular receiver.

The following auto-radio manufacturers had booths on the "accessories" floor: Atwater-Kent, Galvin, RCA-Victor, Bosch, Philco and Van Sicklen. Delco was exhibited by United Motors at the Hotel Commodore. P. R. Mallory, by way of decoration, had sets made by Universal, Grand Rapids Radio, Automatic, Sparton, Crosley and Majestic at its booth but no merchandising or technical information regarding these lines.

B-eliminators were shown by Mallory (Elkon), Pines Winterfront (Transverter) and Bosch (Magmotor). The first device consists essentially of a vibrator, transformer, tube rectifier and filter; the second is a d.c. motor driven rotating converter with mechanical rectifier and filter,

TRADE AND PUBLIC PARTICIPATE REFRIGERATION SHARES INTEREST

Short Wave, Dual Speakers, Battery Sets, New Tubes, in Spotlight —Electrical Appliances Prominently Displayed at Coliseum



On the Edge

The first time that a broadcast of an active volcano was ever attempted was when Mt. Kilauea, the famous volcano on the island of Hawaii, broke into one of the most violent eruptions of its stormy career. The announcer stood on the edge of the crater and the description was sent out over Station KGU from where it was picked up in the United States and re-broadcast over a national network.

while the third is a small permanent magnet generator set with filter. For further details concerning these devices and also the new auto-radio receivers exhibited at the show refer to New Products department in this issue.

An important trend reflected by the New York exhibits is the tendency toward the use of the superheterodyne circuit. Sensitivity, all important in sets of this type, will undoubtedly be more satisfactory in 1932 models. Several sets also use permanent magnet dynamic speakers, which should improve tone quality and to further perfect tone a few models use a.c. power tubes in audio stages. Where high-drain tubes are used, manufacturers evidently assume that the consumer will not object to replacing B-batteries oftener if quality is materially improved. One make of set used "Class B" audio amplification which has the advantage of materially reducing plate current drain and the disadvantage of prohibiting use of the set with existing eliminators.

Forty-two new models of radio receivers, new tubes, many electrical refrigerators and other household appliances were well displayed at the Radio-Electrical Show which closed Jan. 24, at the Coliseum, Chicago.

Great diversity in design and finish of radio furniture was noted. The Majestic line, entirely new, contained ten models. Eight types of sets were seen at the RCA Victor booth. Zenith's 14-tube, automatic tuning job attracted considerable attention while Bosch, with four new superhets, featured beautiful furniture. The smallest set at the show was produced by Phelps Radio Company, Chicago. It weighed but 15 pounds.

Caphart's automatic record-changer now has two speeds. Crosley won the number of models prize with a total of twenty. The new sets in Echophone's line were six-tube "supers." Universal Auto Radio offered a "B" eliminator as optional equipment. Prices for all lines at the show ranged from \$27.50 to \$1,095.

The suitability of exhibiting electrical appliances and radios together received the approval of trade and public alike. One Chicago newspaper called the show the "wedding of appliances and radio," an idea to which thousands of dealers and jobbers subscribed.

What convinced the refrigerator manufacturers of interest in their particular products was the fact that so many visitors carried folding rules with which to measure the outside dimensions of refrigerators, to see if they would fit into a particular spot in their kitchens.

A total of 215,491 persons attended the show, it was announced by G. Clayton Irwin, Jr., General Manager. This figure exceeds by 21,101 the number that attended the 1931 affair.

Sterling, Kansas City, Active

Enthusiasm was manifested by nearly 200 dealers at the pre-showing of the 1932 Majestic radios at the annual dealer convention of Sterling Radio Co., held at the President Hotel, Kansas City, Jan. 12-13.

"Motor Majestic," together with an outline of the short wave sets, attracted more than usual attention. Speakers at the luncheon were: H. C. Bonfig, vice-president; Earl Mackey; C. M. Willis and L. C. Truesdell.

Zone dealer meetings were also held in the following cities: Joplin, Mo.; Topeka, Kan.; Sedalia, Mo., and Chillicothe, Mo.

Space was devoted to Altorfer Bros. home equipment laundry line, also distributed by Sterling.

SPARTON'S PLAN

*Offers Elaborate Training
Courses for Dealers
and Salesmen*

The Sparks-Withington Company announces a plan in retail salesmanship and store management which, for primer-like thoroughness, is claimed to be outstanding in the history of radio merchandising. It is presented in the form of text books, bulletins, sales portfolio and other accessories which cover the entire range of radio dealer and salesman problems.

To prepare the groundwork for such a course, trained investigators visited radio stores of all types, all over the country, interviewing dealers. They reported the results of their findings to a business counselor service and to Jackson, Mich. Based on this data the "Sparton Plan" was made up.

The equipment includes a series of six books, which cover every important phase of the retail salesman's activities; a portfolio which presents in dramatic form the facts that every radio prospect wants to know; a series of six programs for sales meetings—each one a complete "scenario" of the type of meeting that holds the salesman's interest and improves his methods of operation; and a complete handbook on retail sales management. The plan is available to dealers through their jobbers. It is designed to sell quality radios against cut-throat price competition, to maintain price and make a fair profit to prevent excessive trade-in allowances, to close sales when customers are "just looking around," to get at a profit, a full share of the business of each territory.

AND NOW A \$4.00 TUBE ON MARKET

*CeCo Announces "Citation"
Line of Super-Quality*

In October, last year, RCA Radiotron cut its tube prices approximately 25 per cent. Champion followed, a month later, slashing its 245, for example, from \$1.40 to 75 cents—RCA's present price is \$1.10. Now comes CeCo, reversing these policies, with the announcement of a line of "super-quality" tubes—224A, 247, 227, 235, 245, and 280—all at \$4. "You pays your money and you takes your choice."

Profit for the trade and better service for the user are, of course, the objects of this radical move. Commenting on it, Ernest Kauer, president of the CeCo Manufacturing Company, Providence, R. I., says:

"Since profit is the goal of all business the CeCo Citation carries a list price that guarantees a satisfactory profit to retailers. It is now apparent that both retailers and manufacturers of radio tubes have been misled by the glamor for lower prices. Since this stampeded action has not demonstrated any corresponding increased volume in sales dealers have been left high and dry with reduced volume and reduced profits."

"Citation" tubes will have an amber bulb to distinguish them from other makes and to help the display man.

Many Manufacturers Hold First-of-Year Conferences with Dealers and Jobbers

Concurrent with the January announcements of new models or complete new lines by many set makers, comes an epidemic of factory conventions. Protests of certain dealers to the contrary notwithstanding minor and major engineering innovations have actuated this calling of jobbers and dealers to headquarters for new shots of "pep." Much genuine inspiration, however, has resulted from these meetings and all concerned have gone back to work with new ideas and better equipped to cooperate. Conspicuous among these conclaves were the following:

Atwater Kent

With practically 100 per cent representation, AK's distributors welcomed the new circuits and lower prices revealed at the Bellevue-Stratford the middle of January. More tubes, an additional condenser and sharp tuning by means of a neon light were featured technical developments. For further product details covering new model specifications of this and other lines please turn to the "New Merchandise" department of this issue.

Sparks-Withington

Presentation of new short-wave receiving sets featured the annual mid-year convention of Sparton distributors and dealers at Jackson, Mich., on Jan. 4 and 5. In addition, two new superheterodyne console models at substantially lower prices were introduced.

Capt. William Sparks' address of welcome sounded a keynote of aggressive confidence and optimism, based upon the unbiased and candid analysis of present conditions within the Sparton organization and the industry.

Other highlights of the convention business sessions included the presentation of a new selling and merchandising program for Sparton radio dealers and the initial showing of the new line of products which heralds the entry of Sparks-Withington into the electric refrigeration field.

Philco

"Sell Up—or Sell Out," was the slogan behind which 125 Philadelphia Storage Battery Company distributors rallied, at the Ben Franklin Hotel, Philadelphia, Jan. 5-6. The new Philco models were headed by an 11-tube, \$150 highboy. The top executives of this concern all stressed higher unit sales as well as materially increasing the number of orders for the coming year—the latter goal being "one-half of all the radios sold."

American Bosch

This corporation held a special radio division conference at its factory, Springfield, Mass., during the week of January 16. District managers from all over the country heard vice-president Morris Metcalf discuss new merchandising plans to speed the acceptance of a new line of radio receivers. The new motor car set also was reviewed at length.

Gross-Brennan

As an example of close working contact with dealers, the technique of Gross-Brennan, New York, is outstanding.

Sunday morning breakfast rallies, for example. At the most recent one, held Jan. 10 at the Biltmore, over 400 retail representatives of G-B and of the line these boys handle, Stromberg-Carlson, received their seventh annual "bible study" in the elements of modern merchandising and in the talking points of Stromberg's new models. Per usual, Ben Gross handled the heavy end of the business practice lecture, while Roy McCanne, George Scoville and Ray Manson, representing the Rochester end of this close affiliation, did the extolling.

Clarion

Ross D. Siragusa, president of Transformer Corporation of America, exploded a bombshell of enthusiasm when he presented to his district managers the latter part of January the Clarion line for 1932. Delegates from every state in the Union applauded as each item made its bow: six, seven and ten tube chassis, midgets, consoles, all-wave and motor radio.

Another gloom-dispelling factor was seen in Clarion's financial statement for the three months ending Dec. 31, showing a clear net profit of \$47,867.

The motor radio was presented but secrecy remains as to its price. Mr. Siragusa remarked that rather than end the meeting with heart attacks he would refrain from mentioning its low price until each representative had returned to his territory, at which time a letter would follow giving complete details.

Utah Sponsors Research Laboratory

Establishment of an "Acoustical Laboratories" Institute to conduct research designed to improve acoustical properties of radio receivers, with an advisory board including two professors of physics and one professor of electrical engineering, is announced by W. A. Ellmore, widely known radio engineer, who will act as its director.

Members of the advisory staff are Dr. Harvey Lemon, head of the physics department of the University of Chicago; Dr. B. J. Spence, head of the physics department of Northwestern University; and C. A. Nash, associate professor of electrical engineering of the Armour Institute of Technology. The laboratories are sponsored by the Utah Radio Products Company, with headquarters in Chicago.

The research work of Acoustical Laboratories will center on improving tone quality by coordination of speakers and cabinet and by experiments on multi-speaker installations.

Brandis Heads Service Men

Fred A. Brandis, manager of the service department of the Jackson Furniture Co., and F. L. Hardy, service manager of H. C. Capwell Co., both of Oakland, Calif., have been elected president and vice-president, respectively, of the East (San Francisco) Bay Service Managers' Association.

the
NEWEST
 LINE
 in
RADIO



MODEL 36-A—The Personal Radio
 —Six tube superheterodyne. Solid mahogany. Full range tone control. Full vision tuning scale . \$45.00



MODEL 36-B—Console—Six tube superheterodyne. Cabinet of walnut and patterned veneers. Full range tone control. Full vision tuning scale . \$56.00



MODEL 91-H — Console—Seven tube superheterodyne. Full Automatic Volume Control. American and Oriental walnut veneer cabinet. Full range tone control . \$69.00



MODEL 40-J—Console—Eight tube superheterodyne. Duo-Diode tube. Automatic Volume Control. Beautiful cabinet of walnut veneers. Full range tone control . \$85.00



MODEL 40-G — Console—Eight tube superheterodyne. Duo-Diode tube. Automatic Volume Control. Full range tone control. Cabinet with sliding doors and walnut veneers . \$95.00



MODEL 40-L—Console—Eight tube superheterodyne. Duo-Diode Automatic Volume Control. Full range tone control. Beautifully designed sliding door cabinet of burl and striped walnut veneers . \$139.50

American Bosch greets the brand new year with a brand new line of radio. Six new sets—each one a superheterodyne. Five of them listing below \$100.00. One of them most compact in size but a marvel in performance. All of them brand new merchandise—new in chassis—new in performance—new in price. Full Automatic Volume Control, full tone control, new Duo-Diode tubes with new engineering and new performance features which make American Bosch the newest and best sales producing line in radio.

A new sales plan is ready for radio jobbers and dealers who are interested in new profits.

UNITED AMERICAN BOSCH CORP.
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.

AMERICAN BOSCH
RADIO for 1932

NEW MERCHANDISE



Bosch 9:20 Auto-Radio Receiver

THE New York Automobile Show occasioned the announcement by the United American Bosch Corp., Springfield, Mass., of a superheterodyne motor-car radio, designated as the "9:20," because of 20 outstanding features, 9 of which are engineering developments.

First among the new things is the "Magmotor" for the elimination of B-batteries. This device is contained in a compact metal case measuring 10x13x5½ in. The manufacturer points out that the Magmotor is not a motor-generator. There is a single armature with commutators on each end. No current from the car battery which drives the Magmotor is required to excite the field. A permanent magnet is employed.

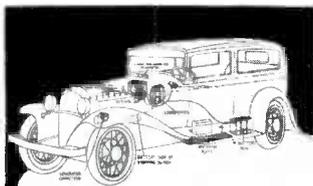
The new 9:20 radio can be operated with either the Magmotor or 135-volts of B-batteries.

Five times the sensitivity of the previous model auto-radio is claimed for this new model through the employment of the double-detection superhet principle. Seven of the new special automobile-radio tubes are used, including one as diodetriode in which one tube is made to perform the function of three ordinary tubes.

Full automatic volume control is furnished. The speaker is an improved electro-dynamic.

The roof type antenna, installed in many cars at the factory, or the new plate type antenna may be used.

The list price is \$88.50, including speaker and tubes. The antenna plate is \$5, and the Magmotor is \$25.—*Radio Retailing*, February, 1932.



RCA Victor Auto-Radio

A 9-TUBE superheterodyne circuit is incorporated in the Type M-30 automobile radio introduced at the Automobile Show by the RCA-Victor Co., Inc., Camden, N. J. The 6-volt auto radio tubes are used for r.f. and detection and oscillator, while 112 A's are used in a class "B" audio amplifier, giving high gain at low milliamperes drain.

The speaker is a permanent field dynamic, about which there has been talk for some months, but which is just now coming

into use. Automatic volume control is provided.

The receiver is divided into three major components: the chassis, speaker and control unit.

The set requires less than 3 amp., the manufacturer claims. The price is \$74.50, which does not include B-batteries, battery box or installation.

For cars not wired for automobile radio, a capacitor antenna of the plate type may be had for \$2.50. A battery box can be obtained for \$3.75 extra.—*Radio Retailing*, February, 1932.

Pines "Transverter" B-Eliminator

PINES Winterfront Co., 1135 N. Cicero Ave., Chicago, had on display its "Transverter," consisting of a 6 or 12-volt motor in combination with a rotary transformer. It receives its operating current from the



regular vehicle battery, which, through the medium of a rotary transformer, is stepped up to the required high a.c. voltage, and rectified to supply a smooth d.c. voltage to the radio set. It becomes part of the radio, and is turned on or shut off simultaneously with the set.

The 6-volt input, 180-volt output, 30 MA unit draws less than 3 amperes from the battery.

It can be quickly installed to replace the present B-batteries and requires an opening of only 5½x8 in., and is 6½ in. deep, requiring approximately one-third of the space required for ordinary B-batteries.

While the Transverter is regularly supplied in three models, it can be made up to required specifications.

Model 6331, 135-volt output, 6-volt input, 30 MA; Model 6332, 180-volt output, 6-volt input, 30 MA; and Model 6333, 180-volt output, 6-volt input, 30 MA with 90-volt tap, are available. Each lists at \$30.—*Radio Retailing*, February, 1932.

New Delco 1932 Auto-Radio Receiver

AT the Hotel Commodore, the Delco Corp., Dayton, Ohio, demonstrated its 8-tube superheterodyne auto-radio, with removable chassis for service. This set uses a 237 oscillator, a 236 in the r.f., first detector and i.f. stages, a 237 for automatic volume control, a 237 in the second detector, and two 247's in push-pull. The price is \$99.95 installed, which price includes the chassis, tubes, B-batteries and case, but not the antenna.—*Radio Retailing*, February, 1932.



Elkton B-Eliminator

LESS than half the space required for batteries is taken up with the B eliminator which the Elkton Division of P. R. Mallory & Company, Inc., Indianapolis, Ind., exhibited. This model retails at \$24.50 complete with all necessary fittings and ready for installation. It operates off the regular automobile battery to which it can be easily attached and installed in any convenient space. This converter is entirely automatic, turning off and on with the operation of the radio set switch.—*Radio Retailing*, February, 1932.

Van Sicklen Auto-Radio Set

RUSHED to New York just in time for the Show, complete details on the new model auto-radio developed by the Van Sicklen Corp., Elgin, Ill., are not available. This set has 7 tubes, while the former model had 6, and the speaker is a magnetic. It is priced at \$89.50, including B-battery, speaker and tubes, ready for installation.—*Radio Retailing*, February, 1932.



Clarion Model 160

New Clarion Sets

TCA district managers were shown the new Clarion sets last month by the Transformer Corp. of America, Ogden and Keeler Ave., Chicago. There are six sets in the 1932 line.

Model 100 is a six tube superhet in a mantel type cabinet listing at \$39.95, complete.

Model 120, also a table set, has 7 tubes and variable tone control. \$49.95.

Model 101 console with six tube chassis lists at \$52.50.

Model 121, a seven tube superhet in a carved cabinet of the console type, is priced at \$67.50.

Model 140, all-wave set, is described as the "round-the-world air cruise" receiver. It has nine

tubes in a superheterodyne circuit. The converter has three tubes. \$79.50.

Model 160 comes in the popular six legged cabinet. It has automatic volume control, super-sensitive selective feature, phonograph attachment and super-size speaker. The price is \$89.50 complete with the ten tubes.—*Radio Retailing*, February, 1932.



Clarion Model 140

Television Transmitter

AMATEURS can now make their own pictures with the new "Junior" television transmitter, the product of the Western Television Corp., 400 W. Madison St., Chicago. This transmitter is not a toy but a practical device and received its first public showing at the January Chicago Show.

This equipment offers to the large group of amateurs a transmitter whereby they can transmit their own pictures as well as voice. It is to be sold at a reasonable price.—*Radio Retailing*, February, 1932.

New Atwater Kents

THE late winter 1931-32 line of the Atwater Kent Mfg. Co., Philadelphia, Pa., as presented at its January convention, includes:

Model 96, an 8-tube set with 3-35's, 2-27's, a 24, a 47 and an 80. A feature is the neon-light tuning indicator which shows when the set is tuned exactly to the wave length of a



AK Model 99 Lowboy

station. This set has automatic volume control, and an electro-dynamic speaker. In a highboy cabinet the price is \$99, in a lowboy, \$89.

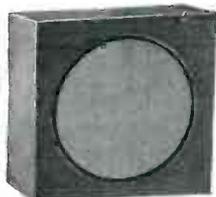
Model 99 has a 10-tube



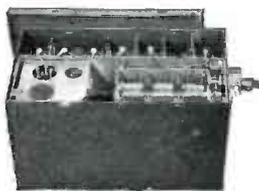
a common-sense Profit Program for 1932



The American Bosch Motor Car Radio is conveniently controlled from the steering post. The dial is illuminated with Line-o-lite tuning.



American Bosch uses a full dynamic loud speaker which is installed under the instrument panel.



The engineering of the American Bosch Motor Car Radio reflects the corporation's unique combination of radio and automotive electrical experience.



The American Bosch Magmotor forever eliminates "B" batteries and noiselessly supplies constant 180 volt "B" current . . . \$25.00 extra.

A LOT of dealers are complaining that the volume in the line they handle is steadily decreasing . . . in units, in dollars, in profits. It's probably true in your business too.

Will you study anew—and without prejudice—the possibility of boosting profits by adding a logical extra line? Will you discuss with us or your jobber, motor car radio . . . the rapidly rising market . . . its profit possibilities . . . the unprecedented performance achieved by the American Bosch 9:20 Motor Car Radio?

9 Most Vital Features of Radio combined exclusively in the 20 major developments of the American Bosch Motor Car Radio.

The American Bosch Motor Car Radio is a finer set than most people have in their homes. It represents the unique resources and engineering experience of Bosch in automotive electrical equipment and radio manufacture. It employs 20 points of superiority listed at the right—9 of them especially vital features combined for the first time in motor car radio. The result is a motor car radio at last that compares favorably in performance with household radio . . . that excels the performance of most home radio sets.

Remember that *this* set can be installed easily, simply and cheaply. Remember also that the price is right for the public and that discounts are right for the dealer.

See your jobber or write us direct. Then demonstrate American Bosch Motor Car Radio to your customers and get some easy sales now — in 1932 — when you need them most.

UNITED AMERICAN BOSCH CORP.
 Springfield Massachusetts
 Branches: New York Chicago Detroit San Francisco



MAJOR DEVELOPMENTS

**9 of them combined for the first time in any motor car radio set.*

- *1. Over 500% greater sensitivity
- *2. Full automatic elimination of fading and overloading
- *3. Magmotor which forever eliminates "B" batteries
- *4. Double-detection superheterodyne
- *5. Knife edge selectivity
- *6. Power-saving tubes save 16% battery drain
- *7. Home-like reception
- *8. Improved dynamic speaker
- *9. Diode-Triode tube
10. 3 Pentode Power tubes
11. Completely armored against ignition interference
12. Internal filtering of extraneous noises
13. Under-car plate antenna with matching coil
14. Double-quick-heating tubes
15. Removable or replaceable in 30 seconds
16. Plug-type connections
17. Rugged construction
18. Illuminated dial
19. Steering post station selector
20. Low cost



\$88⁵⁰

Complete with tubes and all accessories (except "B" batteries and antenna); ready to install.

AMERICAN BOSCH 9:20 Motor Car RADIO

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

chassis with an extra 27 and 47. It has the same features as the 96, including the automatic indicator light. \$122 in the highboy and \$112 in the lowboy.

Model 94 employs 7 tubes (3-35's, a 27, a 21, a 47 and an 80). This is the lowest price console in the line. It does not have automatic volume control nor neon light station indicator. \$69 in a lowboy cabinet.

Model 92, a compact, in the same cabinet as the former Model 80, is an 8 tube set, with automatic volume control \$59.50.

Model 90, a 7-tube set is \$49.50. Same features and cabinet as the Model 92, with the exception of automatic volume control.

The d.c. and battery models remain unchanged. The automobile radio set is unchanged electrically, but units have been provided for convenient installation in various types of cars. —*Radio Retailing*, February, 1932.



CeCo "Citation" Tubes

CeCo MFG. CO., Providence, R. I., has introduced a new line of radio tubes, with the trade mark "Citation," each with a list price of \$4. The following types are included: 224A, 247, 227, 235, 245 and 280. These tubes are enclosed in an amber bulb, partly to distinguish them from other makes and partly to make them conspicuous from a merchandising display standpoint. They are made in a separate department of the CeCo factory, and each is subjected to a 24-hour, continuous operating test under actual receiving set conditions. They are later re-tested on special meters before being packed. —*Radio Retailing*, February, 1932.



Apex Model 10-C

EQUIPPED with the regular 10-tube superheterodyne receiver, Model 10-C has just been placed on the market by the U. S. Radio & Television Corp., Marion, Ind. This set has matched twin speakers. The cabinet is of the six-legged type, standing 42½ in. high. —*Radio Retailing*, February, 1932.



GE Model J-85

Three GE Receivers

GENERAL Electric Co., Bridgeport, Conn., is in the market with three new, inexpensive superhets: Model J-70, a 7-tube table model, priced at \$46.75; Model J-75, a 7-tube console to sell at \$66.50; and an 8-tube console, Model J-85, with automatic volume control, at \$79.50.

The midget has a 6-in. dynamic speaker and the cabinet is of the modified, Gothic arch type.

Model J-75 is housed in a full sized cabinet, and has 8 in. dynamic speaker.

Model J-85, has the improved "stand-up vision" dial, which makes it possible to read the figures from a forty-five degree angle above it, as well as from a seated position. —*Radio Retailing*, February, 1932.



GE Model J-70

Trav-Ler Superhets

THE new line of the Trav-Ler Radio & Television Corp., 1818 Washington Ave., St. Louis, Mo., comprises a 10-tube chassis which may be obtained in two models—mantel with standard 8-in. dynamic speaker and full-size lowboy with 10 in. speaker. Both are equipped with the new visual tuning meter.

The tubes used are two 235's, two 247's, a '24, four 227's and an '80. They have automatic volume control, full vision vernier dial, meter tuning and pentode-matched dynamic speaker.

Model S-10, the midget, stands 19 in. high by 16½ in. wide, and lists at \$69.95.

Model S-10 lowboy, 39 inches high, is \$89.95.

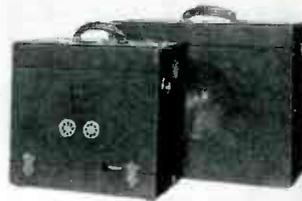
Trav-Ler is also putting out an 8-tube superheterodyne auto-radio set with automatic volume control. This set has steering gear remote control with illuminated dial and lock-switch, and is designed for "under the floor-board" installation, the receiver and B-batteries or B-battery eliminator being encased in dust and water proof metal housing. The distributors' price, with tubes, spark plug suppressors and generator filter condenser (B-batteries or B-battery eliminator, aerial and installation not included) is \$38, net. —*Radio Retailing*, February, 1932.

Photophone "Sound on Film" Projector

FOUR years of intensive work has culminated in the development of a new a.c. operated 16 mm. sound-on-film motion picture projector.

Manufactured by the RCA Victor Co., at its plant in Camden, N. J., and referred to as the "RCA Photophone Junior Portable."

It consists of a projector-amplifier unit and a small speaker unit. The entire equipment is operated from any 110



volt, 50 or 60 cycle a.c. circuit.

The projector-amplifier unit is 14½ in. long, 13½ in. high, 8½ in. wide and weighs 43 pounds. During presentation of sound pictures, the case is closed to reduce to minimum, extraneous noise. Pictures varying in size from 22x16 in. at a distance of from 10 ft. to 67x50 in. at a distance of 30 ft. can be projected.

The exciter lamp is a 4 volt, .75 ampere, Mazda lamp and the tubes used in the amplifier are one 868 photocell, one 224, one 227, three 345s, and one 280. All power for the operation of the loudspeaker is obtained from the projection-amplifier unit.

The speaker is mounted in an individual carrying case. Space is provided for the storage of eight film cans for 400 ft. film reels. The speaker is of the flat baffle type. Sufficient volume is available to meet the requirements of rooms having a cubic content up to 10,000 ft. The 16 mm. film contains sprocket holes on one side only. —*Radio Retailing*, February, 1932.



Sparton Model 12

Sparton Sets

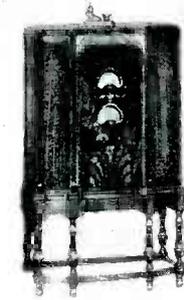
MULTI-WAVE receivers have been added to the new line of the Sparks-Wittington Co., Jackson, Mich.

Model 60 is a 4-tube short-wave converter fully a.c. operated with its own voltage and current supply system. Housed in a compact, table type cabinet, the price is \$49.75.

Model 16 AW is a 13-tube superheterodyne multi-wave receiver with two separate tuning controls. \$155.

Model 26 AW, priced at \$195, combines the Supersonne 26 chassis, with the advantages of short wave reception. The automatic control functions when either the broadcast receiver or the short-wave unit is in use.

In the regular line there are these new sets: Model 12, with a 5-tube chassis, \$64.50, and the 9-tube Model 16 is \$114. Both are superhets. —*Radio Retailing*, February, 1932.

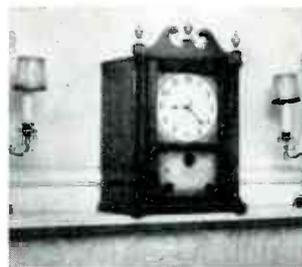


Sparton Model 16 AW

Philco Mantle Clock Radio

AN exact reproduction of the Eli Terry colonial clock is used to house the new Model 551 set of the Philadelphia Storage Battery Company, Philadelphia, Pa. The only change is the placing of a 5-tube radio in the pendulum chamber, which the use of an electric clock movement has made available.

The cabinet is genuine mahogany, hand-rubbed. Intended retail price, \$60. —*Radio Retailing*, February, 1932.



Midget Radio

RADIO Products Corp., 518 S. 11th St., Newark, N. J., announces that it has entered into a contract with Television, Inc., to manufacture a very small radio embodying the use of a new circuit, tiny tubes, and new type of speaker.

The set is so small that the entire assembly, including tubes and speaker, may be placed within the case of an electric mantel clock approximately 6x6½x10 in., without interfering with the clock mechanism. It may be sold as an electrically-operated mantel clock with radio set concealed within, and may be fitted for short wave reception. In spite of its size, the volume and quality is said to be splendid.

It is planned to place the set on the market within a price range of \$15 to \$25.

Radio Products also proposes to engage in the commercial development of television and picture transmission apparatus, equipment for broadcasting, the supplying of vacuum tubes for radio and technical purposes, lamps for television, rectifier tubes, and is now developing a set for automobiles to sell at a low price. —*Radio Retailing*, February, 1932.

Fada Electric Refrigerators

ENTRY of F. A. D. Andrea, Inc., Long Island City, N. Y., into the electrical refrigeration field, was announced the end of January. This follows closely the introduction several weeks ago of a new wireless electric iron. The prices will run from \$179.50 to \$265.

Six models are now being manufactured in the Long Island City factory. Among the features embodied are the abolition of the noise-making drive belt, fewer moving parts, and no expansion or float valve on the evaporator.

Other highlights of the line include new style cabinets with concealed door catch, full length piano hinges, porcelain shielded cooling unit, electric light and the usual accessories. A pressure control eliminates all moving parts on the cooling unit such as float or expansion valves.

Photograph will be found in the Electrical Refrigerator Directory in this issue.—*Radio Retailing*, February, 1932.



"Moraine" Line of Frigidaires

THE new Moraine line of Frigidaires just announced will be sold through present Frigidaire outlets and by many new dealers who will be given franchises in the near future.

The three Moraine models, priced from \$160 f.o.b. Dayton, will supplement the standard all-porcelain line. They include many of the characteristic features that distinguish the higher priced models. The mechanical unit carries a three-year guarantee.

Although the new units take less floor space, proportionately they afford more food storage space. The smallest has 6.8 sq.ft. of shelf area and the largest 12.2 sq.ft. They range in storage capacity from 4 to 6 cu.ft.

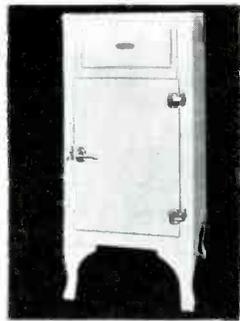
Five coats—two prime and three finishing—of white Duco are used on the steel exterior. The interior finish is the same as in all Frigidaires.

The smallest model will make 30 cubes at a time and the larger model, 42 cubes.

The top shelf is a flip-over type, providing for the storage of tall bottles.—*Radio Retailing*, February, 1932.

Condenser Kit

TO FACILITATE the replacement of worn-out condensers in radio sets, the Dubilier Condenser Corp., 4377 Bronx Blvd., New York City, announces a "service kit." It contains 25 assorted sections for by-pass and filter block repair work, ranging from .1 to 2. mfd. and from 200 to 400 volts. The sections are thoroughly impregnated and provided with handy leads for connections.—*Radio Retailing*, February, 1932.



Crosley Refrigerators

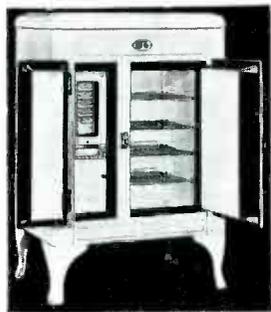
A HOME unit with $4\frac{1}{2}$ net cu.ft. of food storage space at a price under \$100 was shown at the Chicago Show by the Crosley Radio Corp., Cincinnati, Ohio. Crosley has just entered the refrigeration field with this and a larger model priced at \$139.50.

Model C-12, selling at \$99.50, has the following outside dimensions: 57 $\frac{1}{2}$ in. high by 23 $\frac{3}{4}$ in. deep. The unit is housed in a cabinet with white lacquered steel exterior, white porcelain interior, broom high legs and chromium hardware.

Both models are provided with walls and doors of 3 and 3 $\frac{1}{2}$ in. thickness, filled with "Dry Zero" insulation material. The compression and condenser units are suspended from four springs. The former is of a slow speed, reciprocating type. All movable parts are lubricated in a bath of oil. The unit is powered by means of a $\frac{1}{2}$ hp. repulsion-induction motor which holds a 3 years' supply of oil.

The three trays in the smaller model have a capacity of 63 cubes; the larger unit makes 105 cubes.

Among the other features are a "cold control" thermal cut-out; defrosting switch and removable top.—*Radio Retailing*, February, 1932.



Sparton Electric Refrigerators

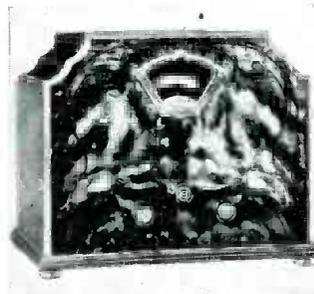
SPARKS-WITHINGTON CO., Jackson, Mich., is placing on the market three electric refrigerators in the 7, 5 $\frac{1}{2}$ and 4 $\frac{1}{2}$ net cu.ft. sizes. They have flat tops low enough to be easily reached, semi-concealed hinges, and a new type of sure-closing door-latch. The roomy interiors are ingeniously arranged for convenience. Bar-type shelves throughout assure that dishes may be pulled out easily without spilling, and the main food shelves in the two larger models have supports that permit their being pulled out 10 $\frac{1}{2}$ in. without danger of tipping or dropping. Ample room is allowed for beverage space, and a generous-sized fast freezing unit assures a plentiful supply of cubes.

Sparton refrigerators have the eight-graduation cold-control dial and separate start-and-stop button.—*Radio Retailing*, February, 1932.

Majestic Line

SIX, eight and ten tube Majestic superhets, a short wave converter and two all-wave consoles are now on the market, according to a release from the Grigsby-Grunow Co., 5801 Dickens Ave., Chicago.

Model 11 short-wave converter in a table type cabinet will work with any set from the old 1924 neutrodyne to the



Majestic Shortwave Converter

latest superheterodyne. It has three tubes, one of which is a G-80. The wave lengths covered are from 15 to 200 meters. \$38.50 complete.

Model 58 "Viking" all-wave set in a lowboy cabinet (6-tube



Majestic "Ardmore"

radio chassis), is \$84.50 complete, and Model 204, "Explorer," 8-tube radio chassis, is \$94.50.

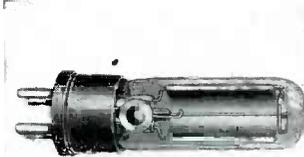
In the regular line with 6-tube circuit (one 47, one 27, one 24, one 24S, a 51 and an '80) there are the "Ardmore," Model 56, a table set, \$44.50; and the Berkshire, Model 57, a lowboy, \$59.50.

With the 8-tube chassis, there is a midget, "Sheffield," listing at \$59.50 and a lowboy, "Fairfax," at \$69.50.

Three 10-tube sets are included: "Whitehall," Model 211, in a Jacobean highboy, \$89.50; "Stratford," Model 214, in a modernistic cabinet, \$99.50, and "Croydon," Model 215, in a highboy of 18th century Early English design, \$119.50. The latter has two coordinated speakers, and, like the other 10-tube sets, automatic volume control.—*Radio Retailing*, February, 1932.



Majestic "Whitehall"



Type 868

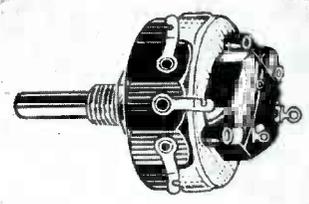
New Tubes

E. T. CUNNINGHAM, INC., New York City and RCA Radiotron Co., Inc., Harrison, N. J., have just made available to experimenters a photo-tube designated as type CX-868. It is of particular interest because of its use for sound movies in the home, and because of its adaptability to many novel experimental uses with light.

These two companies have also brought out type 841 voltage amplifier for amateurs and experimenters. It is a three-electrode, high vacuum tube which resembles the type 10 in general appearance and filament characteristics, but has a high amplification factor. It is designed primarily for use as a voltage amplifier in resistance or impedance coupled circuits. In addition, it may also be employed in amateur transmitters as an oscillator, a crystal-controlled oscillator, an r.f. power amplifier, and a frequency doubler.—*Radio Retailing*, February, 1932.

Clarostat "Ad-A-Switch" Control

AS A further convenience to jobbers and service-men, Clarostat now has available a new "Ad-A-Switch" line of volume controls. These controls are made up in the general style and design of the present wire wound potentiometers, and are obtainable in any taper or resistance up to 50,000 ohms. They have the added feature



that a switch may be slipped on any of them without the use of tools.

The Ad-A-Switch arrangement enables the dealer to simplify the line-up of his stock to a point where duplication of resistance on controls will no longer be necessary. Any Ad-A-Switch volume control without switch can be converted at will into a complete unit with switch by replacing the usual dust cap with the special snap-on switch. They are Underwriters' approved for 3 ampere 110 volts. Clarostat Mfg. Co. Inc., 285 N. 6th St., Brooklyn, N. Y.—*Radio Retailing*, February, 1932.

Replacement Fluid

UNCLE Sam Products Co., 6 Market St., Akron, Ohio, makes replacement fluid for Willard A, Philco B, Exide B, Balkite A and B, and Abox A eliminators.—*Radio Retailing*, February, 1932.

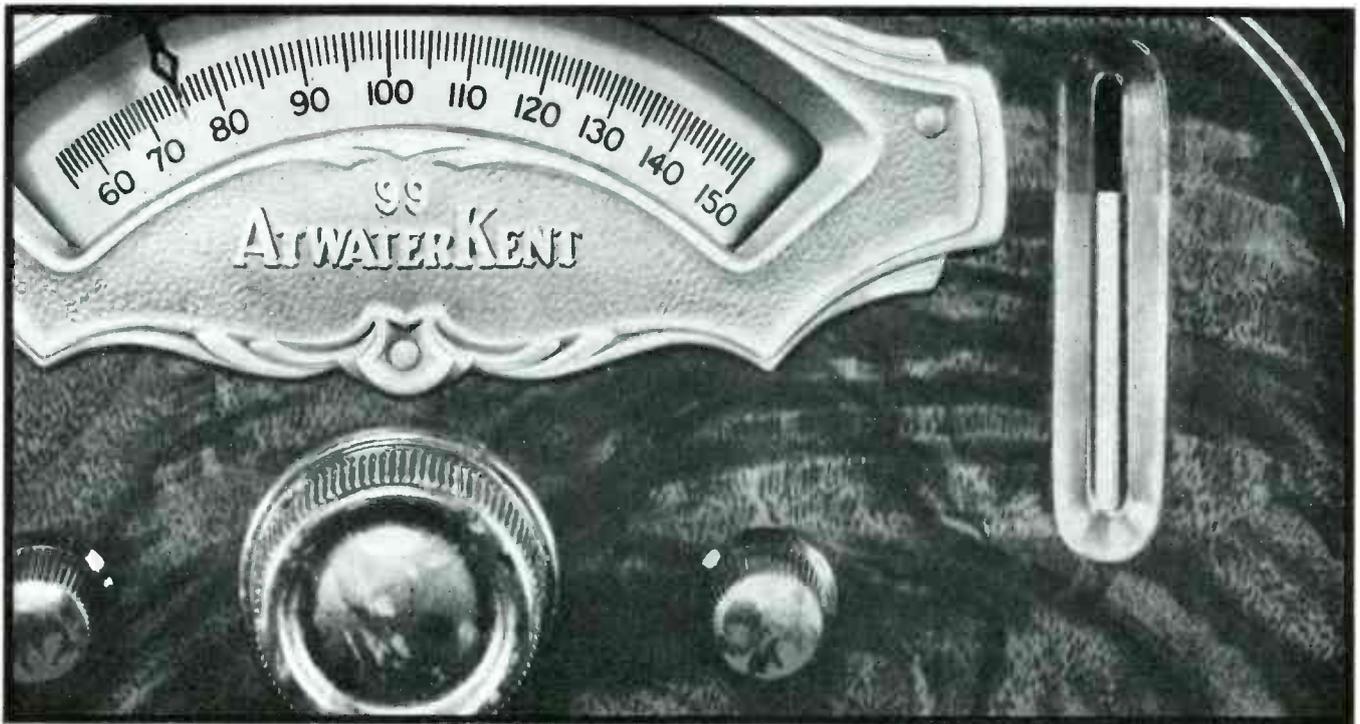
ATWATER KENT

RADIO

Announcing THE NEW

NEON TUNING LIGHT

*... And many other refinements, including more tubes,
at new low prices!*



A New ATWATER KENT

ATWATER KENT RADIO

A STARTLING IMPROVEMENT which your customers can see—at a glance!

The new Neon light indicator for accurate and silent tuning! Its rise and fall tells anyone—even a child—when the receiver is precisely tuned to the wave-length of any station.

It's on Model 99 (ten tubes) and Model 96 (eight tubes). Here's *another* Atwater Kent advantage—a sensational one. With all the other Atwater Kent improvements on all new models—and the new, lower prices.

You can't match these features!

NEW CHASSIS... 7, 8 or 10 tubes... four-gang condenser in every A. C. model, including lowest-priced Compact... new sensitivity switch assuring maximum performance on either local or distant stations... automatic volume control... tone control and static reducer... pentode and variable-mu tubes... Quick-Vision Dial... improved electro-dynamic speaker... every model a super-heterodyne... priced complete with tubes... cabinets genuine American walnut—nothing cheap or "faddy," but beautifully designed for long-time home satisfaction.

Watchmaker-precision Workmanship

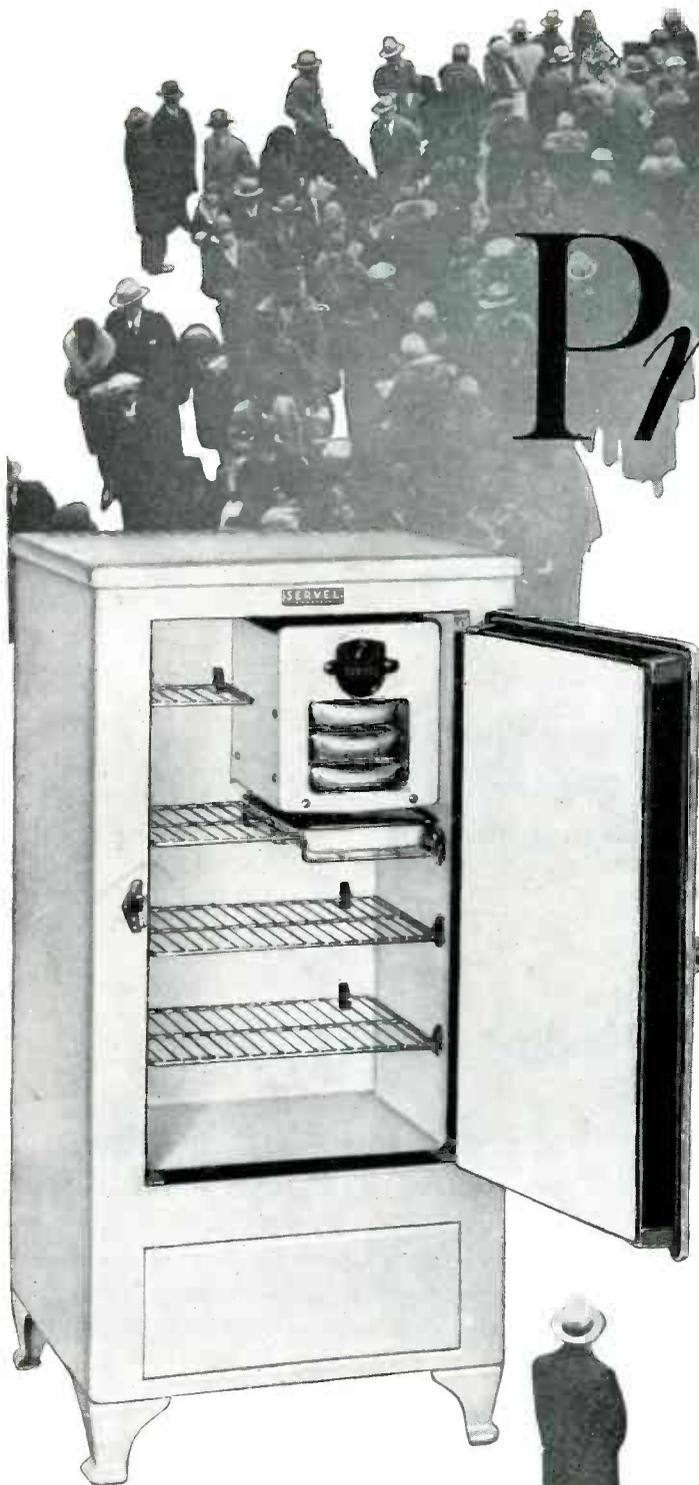
Every unit carefully made within extremely close limits, to permit flawless accuracy in operation. The touch of a finger convinces anyone of the superior operation of an Atwater Kent—without "drag" or "wobble." Radio as nearly perfect as it is possible to produce.

FOR CARS—The New Atwater Kent Motor Car Radio—rugged, vibration-proof, powerful, sensitive—quickly installed without mutilating car.

ATWATER KENT MANUFACTURING COMPANY
A. Atwater Kent, *President* • 4700 Wissahickon Avenue, Philadelphia, Pa.

\$ 112 \$ 89 \$ 69 \$ 59⁵⁰ \$ 49⁵⁰

PRICED FOR EVERY PURSE



*The refrigerator
that fits your business*

*... most advanced electric
refrigerator on the market today!*

Hermetically sealed unit . . . No kitchen repairs . . . No intricate adjustments . . . No replacement of parts . . . Fewer moving parts . . . No moving parts exposed . . . Costs less to operate . . . Handy temperature control . . . More usable shelf space . . . Beautiful, graceful, cabinets . . . Flat, usable top . . . No installation problem.

Profits

*from electric refrigeration
kept thousands of dealers
in business in 1931*

While other industries fought to cut their losses, electric refrigeration piled up sales increases.

The pioneering years are now over. Women know they want electric refrigerators. And the saturation point is many years away. So we have many busy and profitable years straight ahead.

We offer you an electric refrigerator that fits smoothly and easily into your present business—excellently adapted to your methods of selling and delivery—to give you a new source of sales in 1932.

The Servel Hermetic is the most advanced electric refrigerator on the market today. The working unit is highly simplified. It requires fewer moving parts, fewer sources of friction and wear. And all moving parts are hermetically sealed in a permanent bath of oil.

No costly and complicated Service Department to handle kitchen repairs. For the Servel Hermetic is a “package job”—comes complete in one crate, ready to set the cabinet in place and plug it in.

WRITE NOW for the full details of our attractive Dealer Plan—a bold and aggressive merchandising and selling program complete in every detail.

SERVEL SALES, INC., Evansville, Indiana

Makers of a complete line of household and commercial refrigeration

SERVEL

HERMETIC

Simplified Refrigeration

Would you like to receive a copy?
Write to The American Weekly,
959 Eighth Ave., at 57th Street,
New York City.



Here's how to make your
business pay greater profits—

- 1—Look at **THE AMERICAN WEEKLY**
every Sunday
- 2—Note the products advertised on
its pages
- 3—Display those products in your
windows and on your counters

. . . because this mighty magazine, with its
5,500,000 circulation, influences the buying habits
of nearly twice as many families as any other
magazine in the world.

G-E ANNOUNCES



GENERAL ELECTRIC J-70 TABLE MODEL—A new cabinet style in full-size table models. An improved 7-tube superheterodyne with 2 super control tubes and Pentode output. Floating chassis—rubber mounted. Full range tone control. Dynamic speaker. New, distinctive two-tone cabinet with beautiful glossy finish. Instrument panel finished in dark burled walnut. Dimensions 17 1-4" high, 14 3-4" wide, 10 1-4" deep.

\$46⁷⁵
with tubes



GENERAL ELECTRIC J-80 TABLE MODEL—The most brilliant performance and beauty yet achieved in table model design. *Automatic volume control!* 8-tube, screen-grid superheterodyne. 2 super control tubes. Pentode output. Floating chassis—rubber mounted. Tone control. 8" dynamic speaker. Handsome Gothic cabinet—with two-tone walnut velvet finish. Dimensions 18 31-32" high, 14" wide, 10 19-32" deep.

\$59⁹⁵
with tubes



GENERAL ELECTRIC J-75 CONSOLE MODEL—7-tube screen-grid superheterodyne with two super control tubes and Pentode output. Floating chassis—rubber mounted. Full range tone control. Large size 8" dynamic speaker. Superb new cabinet of outstanding beauty, enhanced by rich two-tone effect. The graceful column design is enriched by liberal use of burled walnut finish. Dimensions 38 1-2" high, 23" wide, 11 9-16" deep.

\$66⁵⁰
with tubes



GENERAL ELECTRIC J-85 CONSOLE MODEL—One of the most beautiful sets in the new G-E line. An 8-tube screen-grid superheterodyne with 2 super control tubes and Pentode output. Floating chassis—rubber mounted. Large size 8" dynamic speaker. *Automatic volume control.* Full range tone control. Cabinet with rich two-tone panel flanked by graceful fluted columns. Dimensions 40" high, 23 3-4" wide, 11 15-16" deep.

\$79⁵⁰
with tubes

new 1932 models at new prices

—a complete line...a wide price range

Here are four brand-new reasons why wise dealers will build their success in 1932 on General Electric Radio!...four new sets with brilliant performance at the lowest price levels in G-E history.

Backed by the powerful,

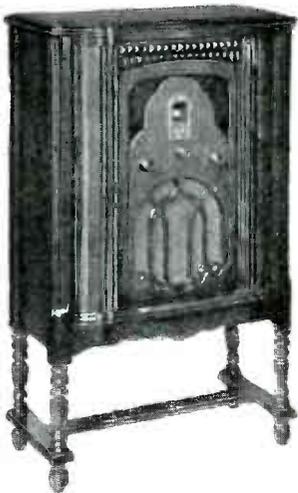
month-after-month "Believe your own ears" national advertising, the G-E Radio franchise will be a constantly increasing profit-maker! For information write your distributor or General Electric Co., Merchandise Dept., Section R-682, Bridgeport, Conn.

GENERAL  ELECTRIC
Radio

From "RADIO HEADQUARTERS"



4 "Naturals" for 1932



THEY'LL SCRAMBLE FOR THIS! Model R-6. 7-tube Super-Heterodyne console model. Cabinet with waxed lacquer walnut finish—hand stippled decorations. Tone control and Pentode power. And another pace-setting price \$66.50



ANOTHER "STEP AHEAD" VALUE! The Model R-12—console edition of the New Superette. 8 tubes, Pentode power, automatic volume control! Cabinet with waxed lacquer walnut finish—hand stippled decorations . . . Only \$79.50 complete!



WHAT A VALUE! The new Model R-4. Cabinet with waxed lacquer walnut finish—hand stippled decorations. 7-tube chassis, with Super control and Pentode. Rubber mounting. Tone control . . . Only \$46.75 complete!



BIGGER VALUE—SMALLER PRICE! Here's the new Superette! Model R-8—8 tubes, including Pentode! Automatic volume control! Cabinet with waxed lacquer walnut finish—hand stippled decorations. Complete with tubes Only \$59.95

Look at these Sets! Look at these Prices! That's the way RCA Victor is "Stepping Ahead in 1932"!

SURE-FIRE sellers, every one. The all-time Big Four of radio values. Performance as only RCA Victor knows how to provide it. Prices that will cause a sensation in and out of the trade!

And—get this. It's just a beginning of the good things Radio Headquarters has coming. This year RCA Victor is *stepping ahead*—going places. If you want to go along—see your RCA Victor distributor. The RCA Victor Company, Inc., "RADIO HEADQUARTERS", Camden, N. J. A Radio Corporation of America subsidiary.



RCA Victor

RADIOS . . . PHONOGRAPH COMBINATIONS
VICTOR RECORDS

Designers of Successful Sets Specify Centralab Equipment

Designers, engineers, and executives are sold on CENTRALAB VOLUME CONTROLS and CENTRALAB FIXED RESISTORS for constant, unfailing and uniform performance.

Servicemen as well as radio dealers everywhere appreciate that CENTRALAB equipped receivers demand a minimum of service.

Centralab REPLACEMENT UNITS are available at new low prices from distributors at all important points.

Centralab has published two worthwhile and important booklets. The Centralab VOLUME CONTROL Guide which sells for 25c. and the BAPTISM OF FIRE describing the process of manufacturing FIXED RESISTORS which may be had FREE for the asking.

Send for these two booklets today.

Centralab

CENTRAL RADIO LABORATORIES



MAIL COUPON NOW

Central Radio Laboratories
920 E. Keefe Ave., Milwaukee, Wis.
Please send booklets as requested below

BAPTISM OF FIRE—FREE
Volume Control Guide—25c.

Name

Address

City State

Rad. Ret.

DO THESE **22** NAMES mean anything to YOU?

McGregor's Inc.,
Memphis, Tenn.

Frank M. Brown Co.,
Portland, Maine

McWhorter-Weaver Co.,
Nashville, Tenn.

Boren Bicycle Co.,
Little Rock, Ark.

Electric Supplies Dist. Co.,
San Diego, Calif.

Howe & Company,
Boston, Mass.

Midwest Timmerman Co.,
Dubuque, Iowa

Chanslor Lyon Stores, Inc.,
San Francisco, Calif.

Ozark Motor Supply Co.,
Springfield, Mo.

J. J. Dougherty Co.,
Milwaukee, Wis.

D'Elia Electric Co.,
Bridgeport, Conn.

Capital Paper Co.,
Indianapolis, Ind.

National A. & E. Corp.,
Syracuse, N. Y.

Hendrie & Bolthoff Mfg. &
Supply Co.,
Denver, Colo.

Vermont Hardware Co.,
Burlington, Vt.

Southern Wholesalers, Inc.,
Washington, D. C.

North Coast Electric Co.,
Seattle, Wash.

B. W. Smith, Inc.,
Cleveland, Ohio

E. S. & E. Co., Inc.,
Albany, New York

A. A. Schneiderhahn Co.,
Des Moines, Iowa

Interstate Electric Co.,
Shreveport, La.

Columbus Ignition Co.,
Columbus, Ohio

These Distributors know *MERCHANDISE*

THEY PICKED **LEONARD**

TYPICAL of the alert, successful, established business men attracted by the 1932 Leonard franchise are the 22 listed above, who have joined the Leonard organization as distributors in the past few weeks.

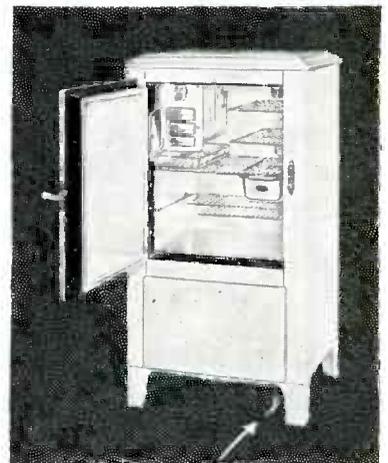
After careful investigation of *all* makes of electric refrigeration, they chose Leonard—for its quality, for its extra values, and for the immediate profit opportunity it presents.

The new Leonard Electric is proving

the "refrigeration hit" of the year—and the LEN-A-DOR tops the list of refrigeration selling features. Leonard, with 8 "plug-in" models (2 electric lighted, all-porcelain), offers you a compact, complete line of package merchandise which will level the valleys of seasonal business, and make money for you *now*.

This franchise deserves your prompt investigation, as territories are being rapidly closed.

LEONARD REFRIGERATOR COMPANY
14259 Plymouth Road, Detroit, Michigan



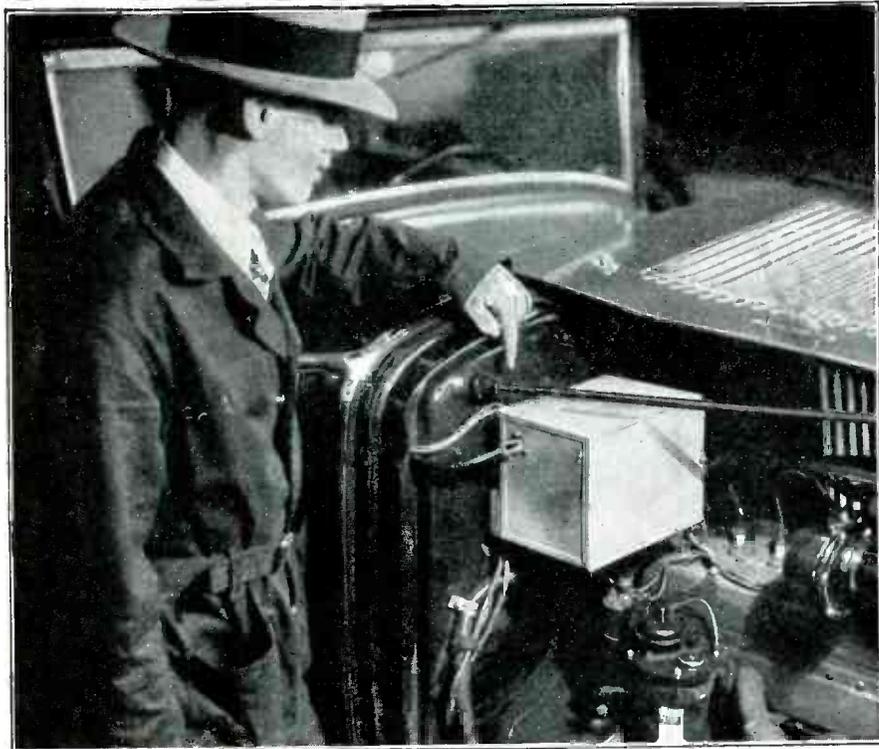
A touch of the toe and the door swings open

LEONARD

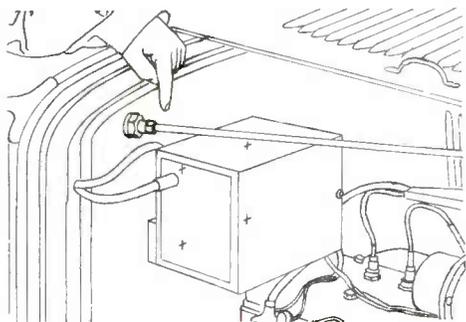
ELECTRIC REFRIGERATOR



Motorola simplifies



**the
installation
problem of
Auto Radio
Only 4 tiny
holes in the
bulkhead.**



MOTOROLA ALL ELECTRIC SUPERHETERODYNE

It takes only 2 hours or less to install a MOTOROLA—only 4 tiny holes in the bulkhead—no change in the car—the most compact Auto-Radio made. And there's an *extra* profit for YOU in its simplified installation.

Add to this feature the fact that MOTOROLA *All-Electric Superheterodyne* gives everything in an Auto-Radio that the finest Home-Radio can offer—eliminating "B" Batteries and "B" Battery troubles; affording perfect reception, clear tone, automatic volume control—and you'll see why motorists everywhere are demanding MOTOROLA—why YOU should sell and install MOTOROLA.

Write us today—we'll put you in touch with your nearest MOTOROLA distributor.

GALVIN MFG. CORPORATION
847-851 West Harrison Street, Chicago, Illinois

1932 MOTOROLA

SUPER-DeLUXE — All Electric Superheterodyne 7 Tubes. Eliminates "B" Batteries. Automatic Volume Control.

DeLUXE — Same model with "B" Batteries instead of All Electric. 7 Tubes — Superheterodyne. Automatic Volume Control.

Mail this
Coupon for
full details

GALVIN MFG. CORPORATION, 847-851 W. Harrison St., Chicago.
Send details of MOTOROLA All-Electric Superheterodyne. R

Name

Address City

1932... the year for Bigger PROFITS in Servicing

Today 3 out of every 4 radio receivers are over one year old. They need servicing—at least new tubes. Aggressive energetic service men and dealers can make a mighty nice income this year by going after this business intelligently.

Hard work, knowledge of the different receivers... and good servicing equipment are fundamental requirements.

For this work, Weston Model 566, type 3, is the outstanding equipment. Complete, compact, handy—it makes all the necessary and required tests on any receiver. Checks all type tubes with voltages supplied by the set—easily and quickly. Extra wide instrument ranges plus an ingenious arrangement of switches and pin jacks speed up tests and cut out errors. Equipment designed for quick, accurate and profitable servicing.

SERVICE MANUAL FREE

With every Weston Model 566, type 3, a Complete Service Manual is furnished free. A practical handbook, it tells the causes of poor reception, how to locate and fix them. It gives many helpful tips—information that builds your profits.

WRITE TODAY FOR BOOKLET J



NEW FEATURES

MODEL 566—TYPE 3

- Tests Pentodes without aid of adapters.
- Double range, highly sensitive rectifier type Output Meter—5/100 volts.
- Double range Ohmmeter—100,000/10,000 ohms—battery voltage adjuster.
- Automatic "lock-arm" tester-plug adapter for U. X. tubes.
- Pin-jacks throughout.
- Large, easy-to-read dial plate for 24 point switch.

WESTON

ELECTRICAL INSTRUMENT CORP.

581 FRELINGHUYSEN AVENUE... NEWARK, N. J.

NEW PROFITS FOR LIVE DEALERS

12 MILLION PROSPECTS



- *—3 Tube—Self Powered
- *—No Complicated Connections
- *—Easily installed by Consumer
- *—20 to 200 Meters
- *—Clear vision high ratio vernier dial
- *—2 gang Condenser with Trimmer for fine tuning
- *—Attractive walnut Cabinet
- *—Turn a switch for S-W or regular broadcast reception

Every set owner, tired of the ballyhoo and monotony of broadcast programs is vitally interested in modernizing his radio with a short wave converter... The thrills of receiving Police—Aviation—Amateur and Foreign Stations can now be had with the new simply installed—easily operated—inexpensive ERLA Converter...

Capitalize on this existing demand by offering your trade the ERLA S-W Converter which incorporates all of the desirable features and the same efficient performance available, until now, only in higher priced models...

Your price complete with RCA tubes \$12.50, enclose cash or money order with your order. \$5.00 deposit required on all C.O.D. shipments.

ERLA S-W CONVERTER

ELECTRICAL RESEARCH LABORATORIES INC.

1731 W. 22nd St., Chicago, Ill.

Only Reliable
Products Can Be
Continuously Advertised



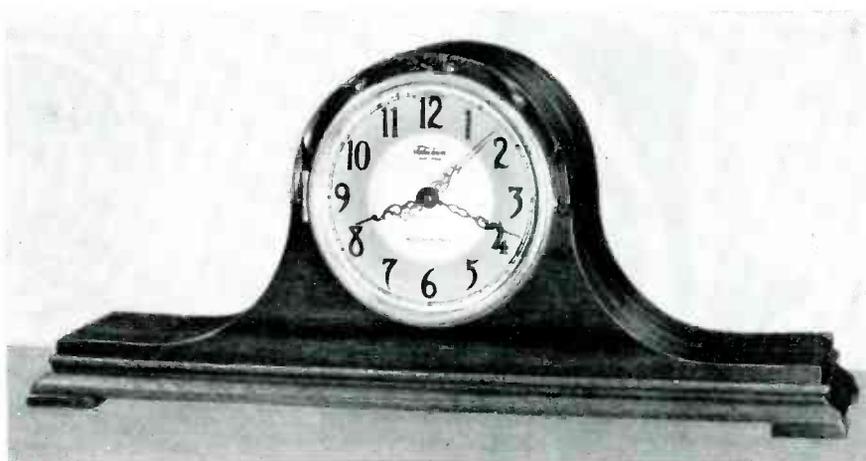
ALTERNATING CURRENT CAR GENERATOR FOR SOUND EQUIPPED CARS OR TRUCKS

PATENTS PENDING
put 3 amps. at 115 volts—Lowest operating cost—Continuous power available—Dependable—Built for years of service.

A-C Cargen Generator Model S.E. 1A. List \$195.00.

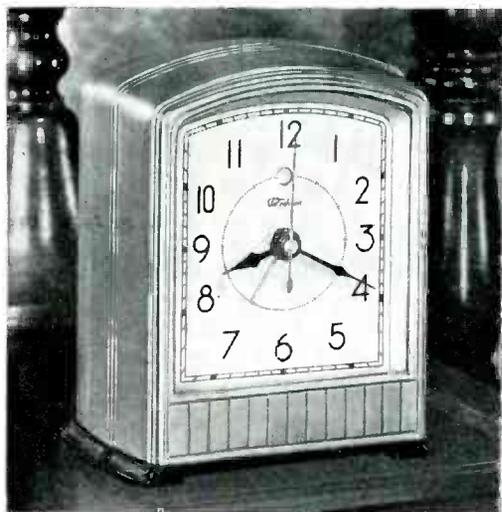
Mfgd. by BARR-THORP ELEC. CO., 509 E. 16th St., Kansas City, Mo.

AT RIGHT is R-816, a sensational new model by Revere—one of the most outstanding values ever offered! Sheraton-Colonial design. Walnut case. 18 inches wide. 8 inches high. Raised numerals. Westminster chimes. A sale-maker to shout about—**\$35** retailing for only



FOLLOW THE PIONEER!

**play safe and sure,
with Telechron in 1932**



No. 711—TELALARM. Metal case, electric alarm, illuminated dial. Retail, \$9.95.
No. 715—TELALARM. Same model without illumination. Retail, \$8.50.



No. 327—SALISBURY. Mahogany case, satinwood panel, 7 1/4" high. Retail, \$7.50.
No. 727—ALDEN. Same model with alarm added. Retail, \$10.

LIKE any pioneer, the man who blazes business trails, keeps always ahead of the crowd. . . . Henry E. Warren made modern electric time possible when he invented Telechron, the first self-starting synchronous clock. He made it possible by developing the Telechron Master Clock used in power houses. And from the first, his company has dominated the industry.

Last year, in spite of general business conditions, Telechron sales surpassed the best previous year. Telechron dealers shared handsomely in the profits produced by attractive models, built right, priced right, backed by a famous name and full-page national advertising.

Get aboard the bandwagon for 1932! Reap profits from your clock department with the rich variety of design, the wide range of price only Telechron can give. Cash in on the current advertising campaign. Play safe with a product proved salable! The coupon below will show you how.

The Revere Clock Company, of Cincinnati, Ohio, manufactures strike and chime clocks with Telechron motors, priced up to \$650.

WARREN TELECHRON COMPANY • Ashland, Massachusetts
THE REVERE CLOCK COMPANY • Cincinnati, Ohio



Reg. U. S. Pat. Off. by Warren Telechron Co.

WARREN TELECHRON COMPANY, 32 Main Street, Ashland, Massachusetts
Please tell me all about your Authorized Dealer Franchise

Name _____

Address _____

BIG



*things are in store
..... for all who attend*

**RMA SIXTH ANNUAL
TRADE SHOW
EIGHTH ANNUAL
CONVENTION**

CHICAGO

• STEVENS HOTEL •

RADIO'S BIG ANNUAL CONCLAVE

EXHIBITING ALL NEW LINES AND THE LATEST RADIO AND TELEVISION PRODUCTS.

ELECTRICAL PRODUCTS ALSO IN TRADE SHOW AND MANUFACTURERS' DEMONSTRATION ROOMS.

EVERYBODY IN RADIO (NEARLY 25,000 RADIO TRADESMEN LAST YEAR) ATTENDS THIS ANNUAL NATIONAL RADIO GATHERING, THE BIG INDUSTRY MEETING EACH YEAR.

Better business early in 1932

The RMA event this year is advanced to start sales early. In June, a few weeks after the RMA exhibits of manufacturers' latest products, there will come the big Republican and Democratic national conventions in Chicago to nominate presidential candidates. In June also another heavyweight championship match between Schmeling and Sharkey is scheduled.

GO TO CHICAGO MAY 23, SEE THE LATEST RADIO AND ALSO ELEC-

TRICAL PRODUCTS OF RMA MANUFACTURERS, AND GET IN EARLY ON THE 1932 TRADE.

This is the big and only national industry radio show, sponsored by the RMA and under its management, for RMA members, jobbers and dealers.

All exhibitors required to show current merchandise—no vacant booths.

Electrical products also displayed. Thirty thousand (30,000) square feet of radio and electrical exhibits in the official hotels—the Stevens and Blackstone.

ADMISSION TO THE TRADE ONLY. PUBLIC NOT ADMITTED.

Reduced railroad rates—special trains—one and one-half fare for round trip to Chicago from everywhere.

Official hotels—Stevens and Blackstone—together on Michigan Avenue. Regular rates. Make your reservations early.

Important and interesting business meetings of industry and allied organizations.

Invitation credentials for the trade show will be mailed about April 15th.

REMEMBER THE DATE—MAY 23—AT CHICAGO.

Official Hotels—

• • •

Stevens Hotel

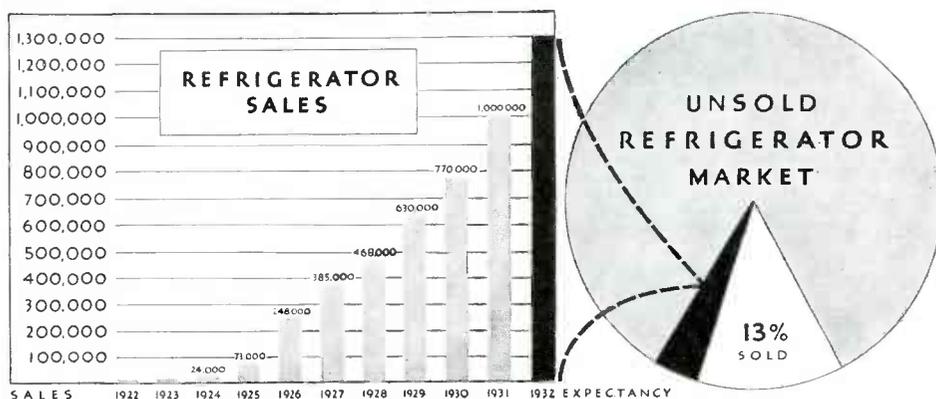
Blackstone Hotel

**MAY 23-26
1932**

RADIO MANUFACTURERS ASSOCIATION
11 WEST 42nd ST. N.Y. CITY • 32 W. RANDOLPH ST. CHICAGO

SELL THE SPARTON LIFETIME REFRIGERATOR

... and get in NOW on the greatly increasing refrigerator PROFITS



Study the charts—see for yourself the profit OPPORTUNITIES

Look at these charts carefully. They show one of the most dramatic business successes of the modern age.

Electrical refrigeration business has grown by leaps and bounds. It has gone forward without a break, making enormous sales increases every year—till in 1931 it topped a million units. And every prediction is that it will go still higher in 1932.

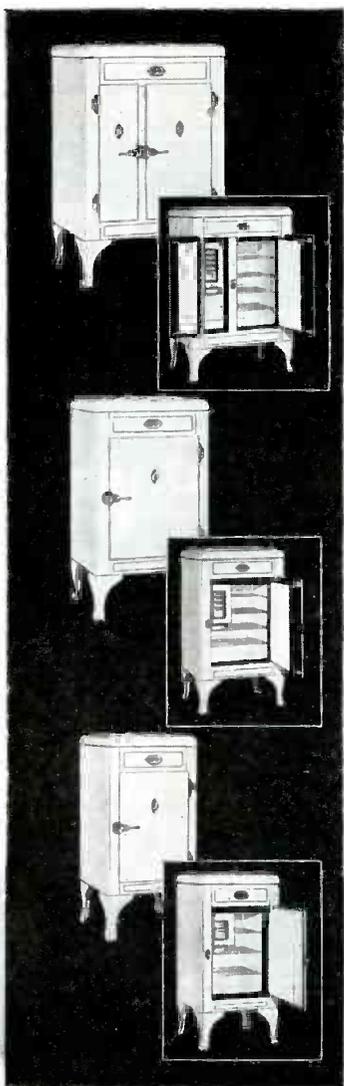
Opportunities for sales are tremendous. There is a country wide acceptance for this great household convenience. Every family wants one and you can see by the charts that the market is almost untouched. The solid black in the two charts shows the 1932 expectancy. Note what a small percentage of the unsold market is expected for 1932. Yet this means more than a million units and refrigeration dealers will make big profits.

Cash in on refrigeration profits with Sparton—the Lifetime Refrigerator. This new re-

frigerator presents to the American woman the composite of everything she has wanted in electrical refrigeration. *Beauty* worthy of the most delightful kitchen. *Dependability* and *mechanical precision* long associated with the name Sparton. In this new Lifetime Refrigerator, the science of protecting food has been raised to a new high level. Extra heavy insulation and unit efficiency combine to offer surprisingly greater economy.

In addition to these important advantages, the modern woman finds so many convenient features in the new Lifetime Refrigerator that Sparton is known as the Refrigerator of **EXTRA-CONVENIENCE**.

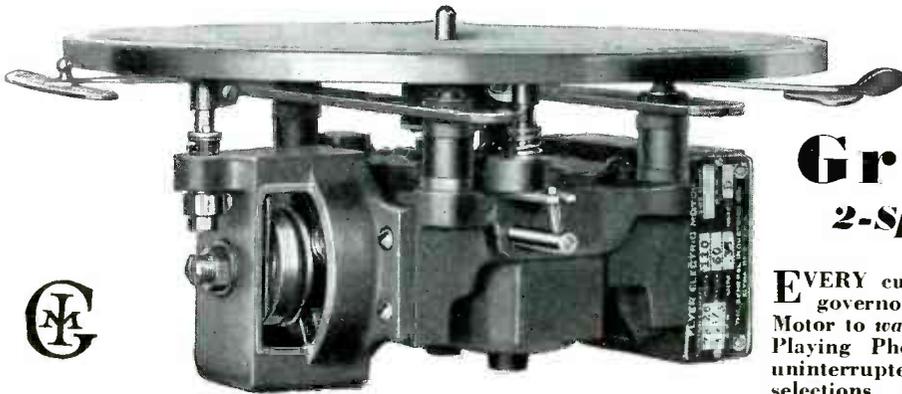
Investigate Sparton immediately. Write us for details of the Sparton opportunities. Do it now and you will cash in on the greatest business opportunity of 1932. The Sparks-Withington Company, Jackson, Michigan. Sparton of Canada, Limited, London, Ont.



SELL THE SPARTON Lifetime Refrigeration

NEW PROFITS

On Radio-Phonograph Motors



33 1/3 and 78 r.p.m.

MODEL D Green Flyer, made for all voltages and frequencies; also supplied for direct current, either 110 or 220 volts. Self-starting induction type, with ample power. Governor control permits 10% range of speed adjustments. Pulls all New Long Playing 33 1/3 r.p.m. and Regular 78 r.p.m. Phonograph Records. Complete and ready to go to work with any good pick-up.

In ordering, please specify voltage and frequency.

The GENERAL INDUSTRIES CO.

3214 Taylor Street, Elyria, Ohio

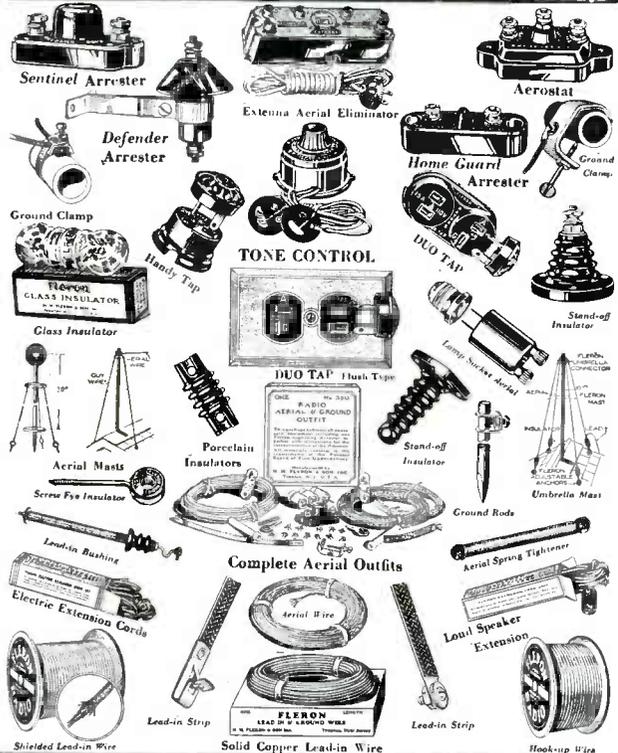
The NEW POPULAR Green Flyer 2-Speed Motor for \$15

EVERY customer you show this new two-speed governor-controlled electric Radio-Phonograph Motor to wants it. To play the new slow-speed Long Playing Phonograph Records. For dancing, and uninterrupted enjoyment of uncurtailed good musical selections. To also play favorite regular-speed records, old and new.

Speed is shifted by pushing a handy lever. Equipped with 10" turntable (slight extra charge for 12"), speed regulator dial and speed-change escutcheon. Automatic stop is optional. Retail list price, \$15.00.

Specially designed for perfection of dual service. Backed by nearly twenty years of leadership in making Phonograph Motors, and over a quarter century of successful electrical manufacturing. Quality and performance the best. Responsibly guaranteed. A good profit-maker for you. Order a sample NOW, from any reliable jobber, or direct from us.

FLERON RADIO AERIAL ACCESSORIES



The Complete Line From One Source
M. M. FLERON & SON, Inc.
 TRENTON, NEW JERSEY

DE WALD RADIOS

LICENSED BY R.C.A.
 MAKERS OF FINE RADIO SETS FOR TEN YEARS
 A Radio Chassis for Every Purpose
 Tell us your needs
PIERCE-AIRO, Inc.
 510-518 6TH AVE., NEW YORK



THE ANSWER to your D.C. PROBLEM!

The sensationally low price of the **JANETTE Rotary Converter** makes it easy to sell A.C. sets to the thousands of D.C. users on farms and in cities. You profit on both receivers and converters.

Write for dealer discounts and bulletins.

JANETTE MFG. CO.
 555 West Monroe St., Chicago, Ill.

Singer Bldg., 140 Broadway, New York, N. Y.; Real Estate Trust Bldg., Philadelphia, Pa.; Harrison Sales Co., 314 Ninth Ave., N. Seattle, Wash.; Lombard Smith Co., 324 N. San Pedro Ave., Los Angeles, Calif.

The handwriting is on the wall, Mr. Dealer. You can't live much longer if you continue to make sales without making profits . . . *real* profits. You can't expect to get out of the "red" unless you get out of the habit . . . and that's just what it is . . . of selling low-priced radios. As a matter of fact, haven't you really permitted the bugaboo of price to undermine your sales efforts? Haven't you let the "bargain" radio strangle your livelihood?

The public may have become price-minded during these days of depression, but, by the same token, people have become more insistent in demanding *real* value. And they recognize *real* value in radios, as in anything else . . . but only so far as you, Mr. Dealer, will take steps to enlighten them. Feature merchandise

that has something more than price to talk about. Sell radios that command prices with enough profit to make your business prosper.

WHAT PRICE PRICE

?

*A message to
the radio dealer
who wants to
stay in business*



ZENITH RADIO CORPORATION, CHICAGO, ILL.

HERE'S THE NEW HANDY KIT

that gives
all the
values
you
want

\$6
LIST PRICE

Coupon below
entitles you to
a price of \$3.50



with

20 RESISTORS

With this certified Kit you can take care of *any* resistor problem in *any* radio set. For besides the 20 most popular values in the kit, you can obtain thousands of others by using the simple formulas that go with it. Here are the ranges in the kit:—

500 ohms	25,000 ohms	200,000 ohms
1,000 ohms	50,000 ohms	1 meg.
2,000 ohms	60,000 ohms	2 meg.
5,000 ohms	70,000 ohms	1 meg.
10,000 ohms	75,000 ohms	1½ meg.
15,000 ohms	100,000 ohms	2 meg.
20,000 ohms		3 meg.

This new Certified Kit, with the *new low prices* of I.R.C. Metallized Resistors, has created a sensation in the radio field. It fills a long felt want—has speeded up the work of repair men everywhere, and will do the same for you. Be sure the gold seal is unbroken, for this Kit is

Factory-Sealed, Factory-Tested, Factory-Guaranteed

No matter what set manufacturer supplies you with resistors, you need this I.R.C. Handy Kit for emergencies. Shipments are sometimes delayed. The kit will take care of you in the meantime—supplies any value you want. The I.R.C. Resistor Guide and R.M.A. Color Code Chart go with it, **Free**.

INTERNATIONAL RESISTANCE COMPANY
Philadelphia Toronto

I R C
Metallized
RESISTORS

International Resistance Co.,
2006 Chestnut St., Philadelphia

Gentlemen: E-2

I enclose check money order—for \$3.50 for which please see that I receive Certified Kit of Metallized Resistors—also Resistor Guide and Color Code Chart.

Name

Address

City State

Jobbers—Dealers—Servicemen!

New! LYNCH RESISTOR Replacement Manual FREE

with purchase of 10 Lynch Metallized Resistors, or it may be bought for \$1.00

All the RESISTOR INFORMATION you will ever need. Saves TIME and experimenting. Useful, authoritative, invaluable. More than 200 circuits—nearly every popular make of radio receiver. Gives value, code and position of each resistor in the circuit. Also includes complete schedule on RMA Color Code.

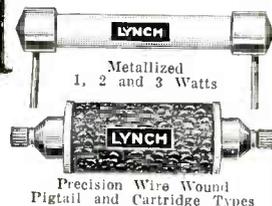
LYNCH RESISTORS

New Low List Prices

1 Watt 30c; 2 Watt 40c; 3 Watt 50c.

Send order today for manual or write for descriptive catalog.

LYNCH MFG. CO., Inc.
1775 R Broadway, New York City



FULCO RADIO COVERS



"FULCO" Radio Covers insure deliveries in perfect condition—without scratches or broken parts. Well padded, strongly sewed, and made to give maximum service at minimum cost. Also Dust Covers. Write for prices.



Fulton Bag & Cotton Mills

Manufacturers Since 1879
Atlanta St. Louis Dallas
Minneapolis Brooklyn New Orleans - Kansas City, Kan.



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

A. C. Electric Plants

ALTERNATING CURRENT ELECTRIC PLANTS now available in sizes from 500 to 10,000 watts. Ten models of modern generating units furnishing the SAME CURRENT as SUPPLIED BY POWER COMPANIES—A.C. 110/220 volt, 60 cycle, single or three phase. Ideal standby units.

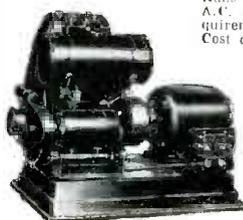
OPERATES A.C. RADIO, PUBLIC ADDRESS AND SOUND CAR EQUIPMENT

Runs Washing Machines, Water Pumps, Refrigerators, A.C. motors. For all Household and Commercial Requirements. All models complete and ready to run. Cost of operation and upkeep very low.

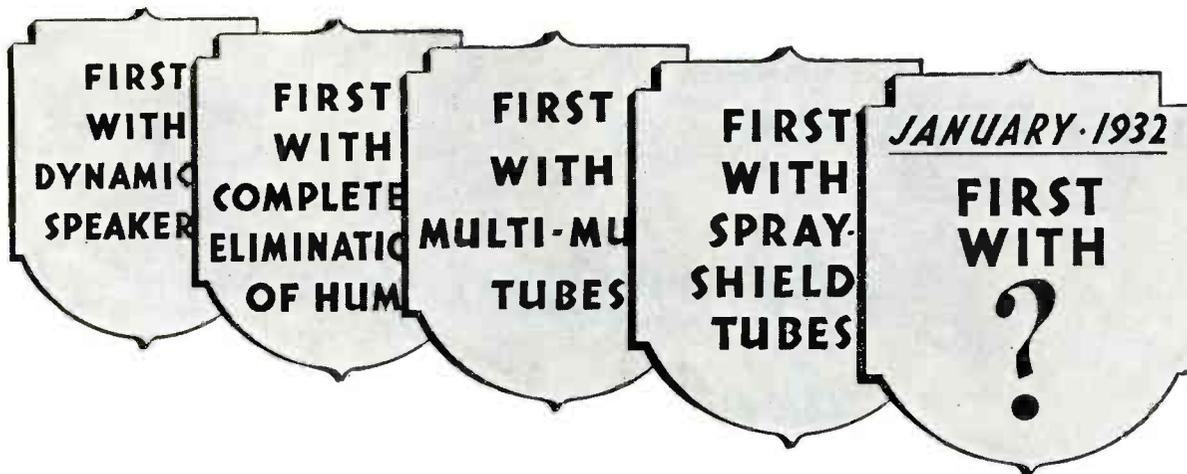
D.C. MODELS AS LOW AS \$99

Direct Current models in 110 or 32 volt, sizes 300 to 1500 watts, ranging in price \$99 and up.

ONAN High-grade, less expensive ELECTRIC PLANTS offer opportunity for many sales of plants, wiring and appliances. Write for details.



D. W. ONAN & SONS
268 Royalston Ave., Minneapolis, Minn.



Don't fail to see the latest Majestic developments *before you buy!* New sensational engineering...striking new cabinets...values unapproached in the industry.

A great new line of superheterodyne models, all-wave sets and a Short Wave Converter. A new word in the industry...Duo-Diode...and, of course, Spray-Shield, Multi-Mu, Pentode and Automatic Volume Control. You owe it to the success of your business to see, hear, inspect this great line. Have a talk with the Majestic distributor.

GRIGSBY-GRUNOW COMPANY, CHICAGO

World's Largest Builders of **COMPLETE** Radio Receivers

Majestic
Superheterodyne
RADIO

Here's more evidence that
manufacturers recognize
RADIO RETAILING as

The greatest force in the sale of Radio Merchandise

As the year 1932 starts, fresh evidence is presented that *Radio Retailing* is recognized by manufacturers as the leading trade publication in the field of radio and allied home entertainment merchandise.

Evidence . . . Figures have just been released on the advertising expenditures of manufacturers in radio trade publications during the year 1931. Taking these total advertising expenditures in the first four magazines as 100%, the advertising was divided as follows:

Radio Retailing		44.6%
2nd Magazine		21.8%
3rd Magazine		20.0%
4th Magazine		13.6%

More Evidence . . . A prominent radio manufacturer made, late in 1931, a test and asked his dealers what trade publication they preferred. Here is how the dealers cast their votes:

Radio Retailing		52%
2nd Magazine		9%
3rd Magazine		8%
4th Magazine		5%
All other publications combined		16%
No preference		10%
		<hr/> 100%

Manufacturers, distributors and dealers continue to show their decided preference for *Radio Retailing*—a tribute to its editorial, circulation and advertising practices. Now that manufacturers are scrutinizing their advertising expenditures as never before, *Radio Retailing* is getting an even larger share of their advertising appropriations than in years past.

Superheterodyne Servicing Demands these Instruments



The Jewell Pattern 563 Test Oscillator provides complete facilities for adjusting r. f. circuits of all modern receivers. Now Jewell quality is available at low cost.

Jewell Pattern 563 Oscillator

1. Output adjustable to any frequency in three bands: broadcast 550-1500 K.C., low intermediate 125-175 K.C., and high intermediate 160-280 K.C. These are fundamental waves—not harmonics.
2. Metal case effectively shields entire instrument, including self-contained batteries.
3. Calibration curves for each frequency range and complete operating instructions are carried in the cover.
4. Separate high volume output is provided for neutralizing adjustments.
5. Volume continuously variable from maximum to zero.
6. Any much used intermediate frequency may be "spotted" at a convenient point on the dial.
7. Jewell traditional sturdy construction assures long-lived dependability.
8. Furnished complete with batteries, shielded output lead, and '30 type tube.



The Jewell Pattern 444 Set Analyzer allows rapid servicing of receivers employing even the most complex circuits.

Jewell Pattern 444 Set Analyzer

1. Tests sets using every type of tube, including variable- μ and pentodes.
2. Any circuit test requires only one switch setting.
3. A. C. and D. C. tests selected by separate switches.
4. Self-contained, triple-range receiver output meter for over-all gain measurements.
5. Self-contained, triple-range ohm-meter with battery voltage compensator on panel.
6. Twenty-four instrument ranges for use with test leads.
7. Non-shatterable meter glasses.
8. Socket test cord removable at analyzer panel.
9. Complete accessory equipment.
10. Jewell receiver data charts.

Get the New Jewell Catalog

32 YEARS MAKING INSTRUMENTS
JEWELL

JEWELL SERVICE INSIDE
Jewell Electrical Instrument Company,
1642 A Walnut Street, Chicago, Ill.
Please send me literature describing the new
Jewell instruments, Patterns 563 and 444.

Name

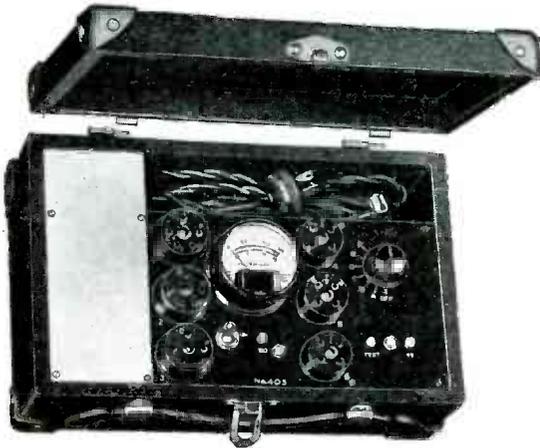
Address

City

State

COUNTER TUBE TESTER

No. 406



\$15.00 DEALER'S PRICE
(60 Cycle)

SOMETHING NEW

*A Simple A.C. Tester
with only one button to press*

Readrite

ILLUMINATED DIAL—easy to read.
REMOVABLE METER in tip jacks.
RENEWABLE FUSE attached to bottom of meter.

Tests all tubes, including rectifier (both plates) pentode, power and screen grid. Handy card—lacquer covered—shows reading of all tubes, no adapters, with removable cover, in a strong leatherette covered case. Rubber feet and leather corners.

A tester for new and old tubes you can always rely upon. Fully guaranteed. Get yours today at your jobbers. If not available remittance must accompany order for direct shipment.

Readrite Meter Works

Established 1904

16 College Ave.

Bluffton, Ohio

Cut Your Expenses.

Save money by using only the *best* methods.

More than ever is "money saved, money earned" this year.

Here is your opportunity to put "economy" and "better service" to work for you.

We all know that this is going to be a "tight" year. This year, more than ever before, we will have to keep our eyes peeled for economies that can be effected without hurting the efficiency or quality of our work.

The best way to do this is to use only tried methods that have proved best in practice. These books give you the best methods known in the field of radio construction and repair. Now is the time for action. Send for them today.

Only what you do to help yourself and your own business is going to help you in 1932.



MOYER AND WOSTREL'S

RADIO CONSTRUCTION LIBRARY

(3 volumes—1119 pages—615 illustrations)

FREE EXAMINATION

Send for these books and examine them FREE for 10 days at our expense. We pay the postage, even if you send them back. But send for them and see if you do not agree with us that having them in your home or shop is like having another first-rate radio man to advise and help you.

WHAT THE BOOKS CONTAIN

Volume 1. **Practical Radio.** 410 pages, 236 illustrations and diagrams. Presents the fundamental principles of radio so clearly and simply that anyone of average training will be able to understand and apply them. Deals with recent developments in television, including devices for its practical application. The latest types of photo-electric cells and neon glow tubes for television services and the difficulties of "scanning" are fully explained. Contains full information needed to understand newer types of receiving tubes, especially those for operating with alternating current.

Volume 2. **Practical Radio Construction and Repairing.** 386 pages, 179 illustrations and diagrams. Discusses fully all the elemental principles of radio construction and repair. Includes such subjects as: Sources of electricity for radio tubes—Audio frequency amplifiers—Construction of impedance coupled and "Universal" four type receiving sets—Short wave receiver—The television receiver—and many others.

Volume 3. **Radio Receiving Tubes.** 323 pages. More than 203 illustrations and diagrams. Clearly explains the essential principles underlying the operation of vacuum tubes. Includes complete information on the newest types of radio tubes and improvements which have been made in tubes already in general use. Gives complete descriptions of apparatus required for radio receiving sets and for industrial equipment; also of devices utilizing radio receiving tubes as essential parts, particularly in the field of radio surgery, where applications of the radio needle have met with success.

SMALL PAYMENTS

Examine these books for 10 days FREE. Then, if you keep them, just send us \$1.50 at that time and \$2.00 a month until the small price of \$7.50 has been paid. But do it now and start the New Year right.

McGraw-Hill FREE EXAMINATION COUPON

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

Name

Home Address

City and State

Name of Company

Occupation RR 2-32

To insure prompt shipment, write plainly and fill in all lines.

Fish-or-Cut-Bait... It's getting late for delay. The radio dealer who is thinking about electric refrigerator profits must decide soon. His 1932 profits depend on what he decides. To decide wisely, he must compare the four or five leading lines and see for himself which offers him the biggest profit possibilities — the strongest selling points—the most aggressive sales counsel and cooperation—the kind of plan that has been successful in his own field. He will learn that Copeland dealers took the profits last year on more Copeland sales than in any other year of Copeland history — that this sweeping increase in sales was built on the foundation of a complete line that led all competition in convenience features — a line that includes commercial refrigeration applicable to the grocer, the butcher, the restaurant, the delicatessen and others — a line that also includes water-coolers and room-coolers — plus a specialized dealer plan that includes thorough practical help in closing sales. Copeland's dealer-profit record stands proved.

Copeland

FOR FINEST ELECTRICAL REFRIGERATION

COPELAND, Mt. Clemens, Mich.

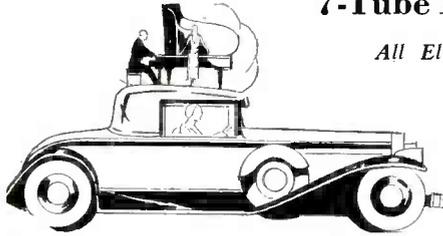
Please send me details of your specialized dealer plan.

Name _____

Firm Name _____

Address _____ R

NEW! Universal's 7-Tube Auto Radio!



All Electric Feature

Here it is! The new 7-tube Universal receiver with all the latest features: Steering wheel remote control, high sensitivity—extreme selectivity—strong volume—uniform reception—Super-

Dynamic speaker—free automatic volume control—no fading under viaducts and other shielded spots—Coast-to-coast reception—A-1 quality—and only \$79.50. Uses 3 No. 236, 2 No. 237 and 2 No. 238 tubes! Investigate immediately the big profits in this sensationally performing—sensationally-priced 1932 leader in auto radio sets!

Other Quality Sets at Low Prices! Backed by a Strong Company!

Again, we lead the lower-priced field! The new, improved 6-tube set at \$69.50 gives you coast-to-coast reception—Super-Dynamic speaker, automatic volume control, remote control, and 6 tubes. The Standard 5-tube set has same features and sells for only \$59.50. All Universal receivers are compact, light, easy to install, and carry the Universal Guarantee! Write us at once!

UNIVERSAL AUTO RADIO

DEALERS! DISTRIBUTORS! Get Our Liberal Franchise Offer

A few choice territories open now, but won't be long! Get details of our very attractive franchise which is backed by firmly established, nationally recognized company. Get these new big profits!

WRITE to us immediately. It will pay you. National Chain of Service Stations being established. Applications being considered now. Write for details. Hurry!

UNIVERSAL AUTO RADIO CORPORATION

1239 S. Michigan Ave., Chicago

WE ARE ESTABLISHING NATIONAL CHAIN OF SERVICE STATIONS!

MAKING A BIG HIT! with Dealers and Service Men everywhere " "

because they insure customer satisfaction and mean a real profit to you.



MORRILL CONDENSERS

eliminate comebacks, stand up under extreme voltage shocks—exceptionally compact—convenient for stacking.

MORRILL CARBON RESISTORS

Accurate and maintain their accuracy under severest conditions—Stay noiseless—moisture proof—generously rated.

FREE! Our new circular H-1 on request. State whether you are a jobber, dealer or service man.

MORRILL and MORRILL 30 Church Street
New York, N. Y.

Sole U. S. A. Distributors of the Siemens & Halske Condensers and Resistors.

AUDIOLA

"Known for Its Tone"

SUPERHETERODYNES AND MIDGETS

High Grade Set Builders
Since 1921

AUDIOLA RADIO CO.

430 So. Green St.

CHICAGO

Ready To Help YOU . . .

Operator, service man, experimenter or plain radio fan, you'll swear by this handy reference help, once you've seen it. A complete, up-to-date digest of radio information that tells you in an instant what you want to know on anything from theory to television, with descriptions, definitions, design, data, practical methods, tables and illustrations in profusion.

Moyer and Wostrel's

RADIO HANDBOOK

Including Television and Sound Motion Pictures

886 pages, 5½ x 8, 650 illustrations, flexible, \$5.00

Makes instantly available the answers to thousands of radio questions, both theoretical and practical. Explains things thoroughly; groups them for easy reference. Covers newest types of apparatus; super-heterodyne and short-wave receivers; testing meth-

ods and equipment; latest vacuum tubes; industrial applications of vacuum tubes; photo-electric cells; television, etc. Fully illustrated; many circuit diagrams. A complete radio library in one compact volume.

Examine this handbook for 10 days free examination.

McGRAW-HILL BOOK COMPANY, Inc.

330 West 42d Street, New York City

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:

Positions Wanted, 5 cents a word, minimum \$1.00 an insertion, payable in advance.

Positions Vacant and all other classifications, 10 cents a word, minimum charge \$2.00.

Posposals, 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

POSITION WANTED

YOUNG man, 24, desires placement with distributor, wholesaler or manufacturer. Graduate commercial high school, electrical engineering course and scholarship Radio course. Experience includes clerical engineering, radio service and sales work. Connection with reliable concern where advancement may be earned more important than salary. Best of references. Hold commercial radio operator's license, Commission U. S. Signal Reserves and Associate Member Institute of Radio Engineers, PW-162. Radio Retailing, 330 West 42d St., New York.

SALESMEN WANTED

Radio Jobbers Salesman Wanted
To carry side line high grade kindred specialties on straight commission basis. SW-161. Radio Retailing, 330 West 42d St., New York.

REPRESENTATIVES WANTED

Important Firm Wants Representation
Of good radio line for Switzerland. Write at once to Fernand Lutz, P. O. B. 397, Neuchâtel (Switzerland).

BUSINESS OPPORTUNITIES

Incorporate Liberal Delaware Laws
Preparatory financing inventions, business. Secure organizers perpetual control. Reasonable. Booklet, forms free. Universal Charters, Dover, Del.

Radio Retail Shop

Choice district, San Francisco. Beautiful shop with apartment. Good business man and wife. Sacrifice, illness. \$500. 58 West Portal Ave., San Francisco, Calif.

YOUNG EXECUTIVE

Now engaged in the Wholesale and Retail radio field, desires to establish himself with going radio manufacturer or jobber, capable of taking charge of sales, will make moderate investment, interviews invited.

BO-160. Radio Retailing
330 West 42d Street, New York City

Agents and Representatives

can be secured through the

SEARCHLIGHT SECTION

Responsible Agents and Representatives consult the Searchlight Section for new lines to handle.

Surplus Stocks

When you have surplus stocks of radio equipment to sell—coils, tubes, sets, speakers, cabinets, insulators, etc., or when you are in the market to purchase such surplus stocks of other dealers—

Use a "Searchlight" Ad.

BB-5

SPECIAL NOTICE:

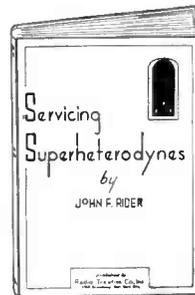
To the Radio Industry

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.

PROFITABLE SERVICING



John F. Rider's
Servicing
Superheterodynes

is the book you need to cut superhet servicing time in half. This new book will give you all the information you require about superheterodynes in order to rapidly and profitably repair this type of receiver.

Not only does the book give you a complete and thorough explanation of the principle of the superheterodyne, starting with beat notes and ending with variable mu and pentode tube replacement—but it contains actual trouble shooting information—the troubles which cause certain symptoms and the analysis of the troubles.

161 pages, type set, pocket size, bound in stiff canvas cover—Sold With A Money Back Guarantee.

Price \$1.00 postpaid.

RADIO TREATISE CO., Inc.
1440 Broadway, New York City

For Sure, Quick Money, Sell Portable Sound-on-Film



to Theatres, Schools, Churches, Clubs.

Write for manufacturers' prices on Soundheads, Photocells, Optical Systems, Rectifiers, Amplifiers, Horns, Faders, Synchronous Motors, Projectors, Lamps, Screens, Microphones, etc.

S.O.S. CORP.

(Dept. R. R.)

1600 B'way, N.Y.C. Cable "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.

RADIO DEALERS RADIO SERVICEMEN NEW Radio Handbook

CONTAINING:

Technical Information.
Volume Control Guide.
Transformer and Condenser Guide.
Radio Replacement Parts Catalog.

Sent postpaid anywhere for only

25 Cents

Hard To Get Parts—We have them. Send us your repair work for estimate.

Grant Radio Laboratories
6521-R South Halsted Street, Chicago, Ill.



THIS IS A
Profitable **TUBE**
 for **DEALERS and JOBBERS**

Every customer of yours who owns or operates any of the following sets, must use Kellogg 401 A.C. tubes for replacements:

KELLOGG Sets—510, 511, 512, 514, 515, 516, 517, 518, 519, 520, 521. McMILLAN Sets—26, 26PT. MOHAWK Sets, Spartan 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. CLEARSTONE 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.

Get your share of business from this profitable market by stocking and displaying Kellogg tubes now. Write Dept. 59 for name and address of your nearest jobber.

KELLOGG
 SWITCHBOARD AND SUPPLY COMPANY
 1066 West Adams Street - - CHICAGO

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

2 combined **SHORT-WAVE** and **STANDARD BROADCAST** **CROSLEY** **SUPERHETERODYNES**



\$77⁵⁰
COMPLETE WITH 7 TUBES

The Crosley **DISCOVERER**

In the low price field there is The DISCOVERER, a seven-tube combination short-wave and standard broadcast superheterodyne for \$77.50. Foreign stations, police calls, and other short wave broadcasts, and the usual broadcast programs, can be brought in on this

remarkable radio receiver. The wave length change is effected by means of a panel switch — no coils to change. The cabinet is of unusual beauty. Your Crosley Distributor will supply you with full details. Dimensions: 40" high, 23 $\frac{3}{4}$ " wide, 11 $\frac{7}{8}$ " deep.

Other Crosley Radio Receivers Represent the Greatest Values in Radio Today . . . at Lowest Possible Prices

The radio-buying public has compared Crosley feature by feature and price for price with other radio receivers and has expressed its approval in terms of greater sales.

Consequently Crosley radio receivers are in demand today. The Crosley LITTLELLA at \$36.36 and the Crosley BIGFELLA at \$48.48, 5-tube Pentode Output, Variable Mu, Dynamic Speaker Superheterodyne are unusual radio receivers.

The Crosley 8-tube Push-Pull Pentode Output, Variable Mu, Dynamic Speaker Superheterodyne series, in table and console and Grandfather clock models priced from \$49.75 to \$95.00 are the talk of the radio world.

The Crosley 10-tube Push-Pull Pentode Output, Automatic Volume Control, Meter Tuning, Superheterodyne table model at \$69.50 and the six-legged console model at \$99.50 are outstanding values. Learn more about Crosley from your Crosley Distributor.

(Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.)

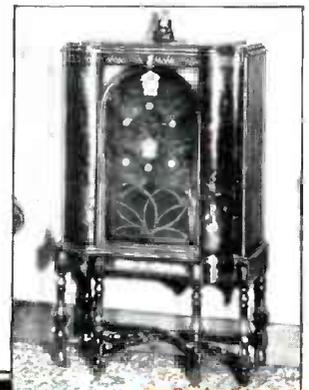
THE CROSLEY RADIO CORPORATION

Powel Crosley, Jr., President

CINCINNATI

Home of "the Nation's Station"—WLW

NOW, the thrill of romantic and daring adventure can be enjoyed in the midst of the family circle . . . with the new Crosley 7-tube or 12-tube combined short-wave and standard broadcast superheterodyne radio receivers. Foreign stations, mail and transport planes talking to airports, police calls . . . and many other interesting and unusual things which travel the short-wave bands can be easily brought in, when the atmospheric conditions are right. The wave length change is effected by means of a panel switch . . . no coils to change. The completeness of these Crosley superheterodyne short-wave and standard broadcast receivers, make them, we believe, the most sensitive, best performing and most up-to-date sets ever offered at any price for home reception. Get in touch with your Crosley Distributor to learn more about these splendid, super-performing and low-priced radio receivers.



The Crosley **ADVENTURER**

\$119⁵⁰
COMPLETE WITH 12 TUBES

In addition to being the last word in radio engineering, the Crosley ADVENTURER is the very latest thing in cabinet design. The front panel is of beautifully figured stump walnut veneer arched with burl maple in two tone effect and highlighted. Curved pilasters of selected stump walnut veneer. American black walnut

veneer top and sides. Six turned and fluted legs. The apron is panelled with zebra wood. The market for this sensational radio receiver is wide open. Considering the value received, it sells at a remarkably low price. Dimensions: 44" high, 26 $\frac{1}{2}$ " wide, 14" deep.

YOU'RE THERE WITH A CROSLEY
CROSLEY RADIO

PAUL WOOTON
1252 B C & D NATIONAL PRESS
WASHINGTON D. C. 3C

"The Radiotron Star Merchandiser Has Pulled My Tube Business Out Of The Doldrums,"



Says V. L. Birbeck, Proprietor of the Good Housekeeping Shop of Atascadero, Calif.

"From an almost unwanted, back-of-the-store, under-the-counter piece of merchandise, the Merchandiser has boosted tubes to the point where they deserve the most prominent display space in my store," writes Mr. Birbeck.

"My new-type tube tester is a wow — it has dramatized tube selling and induced many of my customers to bring in their tubes for testing, regardless of whether their radios were working well or not. Every customer watches the dial closely — intensely interested — it's naturally fascinating.

"This combination is a hot one. It is a dual purpose set-up that enables the small-town dealer to give exactly the same service as his big-town brother.

"Tubes are low in cost, larger volume is imperative, and the answer is better presentation. The Merchandiser does it."

Dealers everywhere who are making use of new Radiotron plans and equipment — like Mr. Birbeck — are experiencing similar upturns in tube volume.

RCA RADIOTRON CO., INC. ♦ ♦ HARRISON, N. J.

A Radio Corporation of America Subsidiary

RCA Radiotrons

THE HEART OF YOUR RADIO