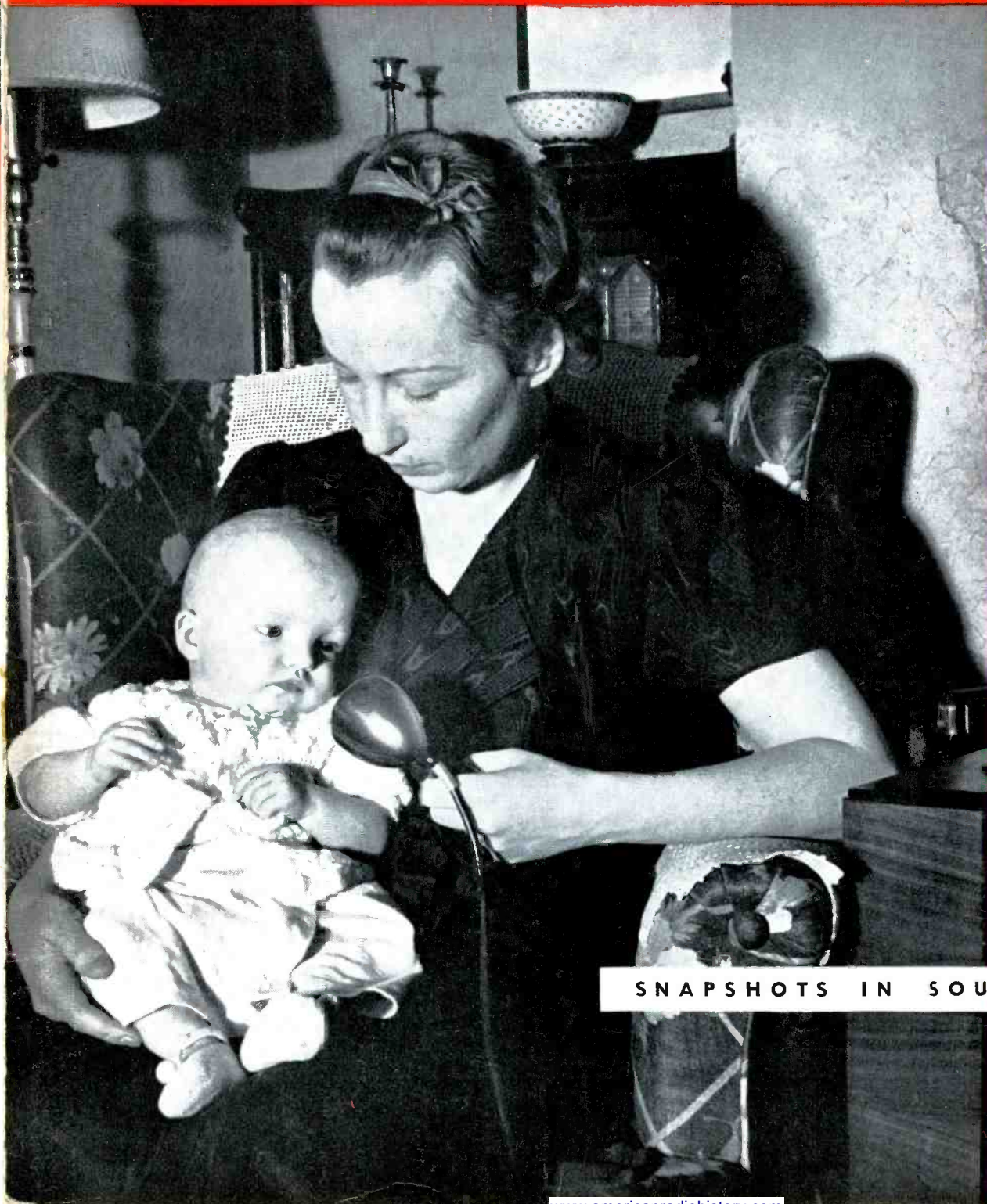


RADIO

MARCH • 1940

*and
Television*

RETAILING



HOME RECORDING
HIGHLIGHTS

MORE
"DESIGNING DEALERS"

AUTO RADIO
SPECIFICATIONS

F-M & TELE NEWS

BUSINESS ON A BUDGET

SOUND RENTAL CHARGES

SELLING APPLIANCES

CIRCUITS OF THE MONTH

PRODUCT PREVIEW

SNAPSHOTS IN SOUND . . . Latest Radio "Extra"

A
McGraw-Hill Publication
Price 25c

It's out!
the 1940
P. R. MALLORY & CO. Inc.
MALLORY
Replacement
VIBRATOR
GUIDE



...and it's
FREE!

- ★ Up-to-the-minute accurate vibrator replacement chart for all makes and models of auto radio and battery-operated household receivers.
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- ★ Vibrator connection charts.

*Get a free Copy from
your distributor
Today!*

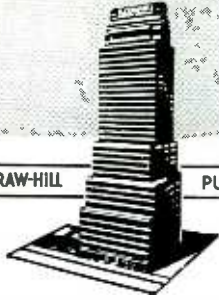
You can save time and money on every auto or battery-operated household radio service job with this Mallory Replacement Vibrator Guide. Don't put off getting your copy. You'll say it is indispensable.

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MALLORY
REPLACEMENT
CONDENSERS...VIBRATORS

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YAXLEY
REPLACEMENT
VOLUME CONTROLS

RADIO and Television RETAILING



A McGRAW-HILL

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MARCH 1940

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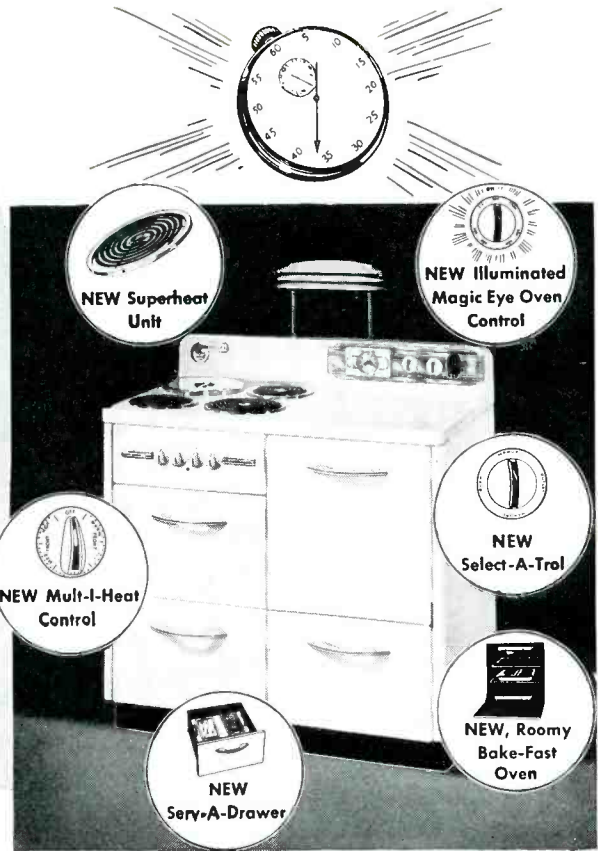
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SALES STATIC . . . "I know you radio men. You just want to take it to your shop so you can run the bill up"

SPEED TEST rings up UNIVERSAL range sales

New Superheat Units and
Bake-Fast Oven make the
1940 Universal—



The Nation's FASTEST... MOST AUTOMATIC ... MOST ECONOMICAL Electric Range!



Introducing the new
Superheat Unit—
fastest by test!

One big secret of Universal's superior speed—the new Superheat Unit. In addition to setting new cooking speed records, Superheat is proving itself durable, efficient and economical. Easy to clean—and keep clean.

For the first time on any range—UNIVERSAL'S Superheat Units with Multi-I-Heat Control give 101 different heats for top-of-stove cooking—UNIVERSAL'S Bake-Fast Ovens are larger, faster and more economical than ever. Add these to its startling new beauty and you have a sales making combination that's exclusively UNIVERSAL.

To help you build bigger profits, Universal is backing this electric range sensation with a nation-wide advertising and publicity campaign that invites 30 million American families to see, test and buy. *Wire or write for full details.*

SELL ON PROOF



Universal's Stop Watch Test *proves* new unit speed . . . *proves* new oven speed. Customers convince themselves.



PICTURE
FILMS AND
VISUALIZERS

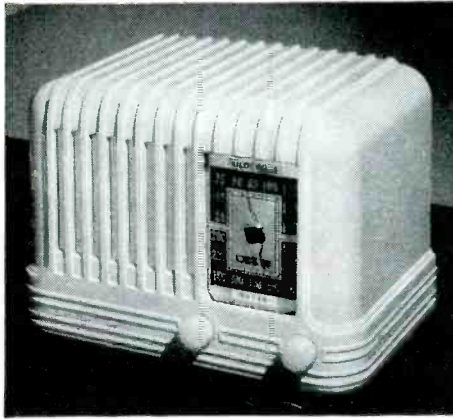
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RADIO AND
DIRECT MAIL
CAMPAIGNS

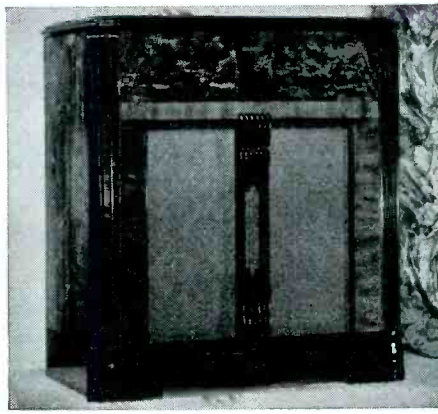
BILLBOARDS
AND
WINDOW
DISPLAYS

Universal ELECTRIC RANGE

Made by LANDERS, FRARY & CLARK • New Britain, Conn., U. S. A.



SMASH HIT WR-175-I A beautiful ivory plastic model. 5 tubes. Electro-dynamic speaker. Built-in loop antenna. For AC or DC.



SMASH HIT WR-476 A striking radio-phonograph combination. 6 tubes. 6 tuning buttons. 12" electro-dynamic speaker. Automatic record changer.



SMASH HIT WR-475 A fast-selling portable radio-phonograph combination. Electro-dynamic speaker. 10" or 12" records.

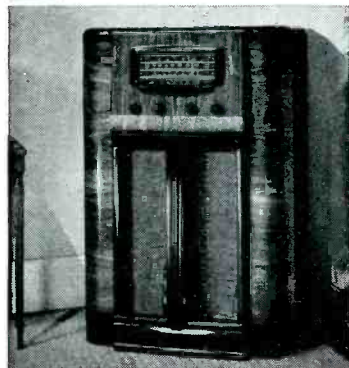
8 MORE SURE FIRE HITS[★]

★ *Sure fire hits because all 8 are styled, equipped and priced to sell fast like the 1940 models that established new all-time Westinghouse sales records!*

When public demand for a radio line cleans out factory and distributors' stocks . . . when orders for more radios keep pouring in, you've got a line that's clicking . . . models that are smash hits!

This unprecedented demand not only set a new all-time Westinghouse sales record, but proved that offering *outstanding radio value results in outstanding radio sales!* Here again are radios designed with "stopping" eye-appeal . . . equipped for remarkable performance, priced for quick turnover and fast profits.

Here's a tip for profits! When sales figures prove a radio line is clicking—*climb aboard!* Just write or phone the Westinghouse Distributor in your locality. You'll get complete details promptly.



SMASH HIT WR-375 1940's greatest console value! 6 tuning buttons. 3 bands. Rotatable loop antenna. 12" electro-dynamic speaker. 6 tubes.



SMASH HIT WR-173 AC-DC super-heterodyne model. Plastic in grained walnut or ivory. Electro-dynamic speaker. Loop antenna.



SMASH HIT WR-676 A strikingly finished portable radio. Operates on batteries or on AC or DC current. 5 tubes. Loop antenna. 5" speaker.

SMASH HIT WR-272-L Eye-compelling 5-tube superheterodyne set with two double-purpose tubes. 6 tuning buttons. Electro-dynamic speaker. 2 bands.

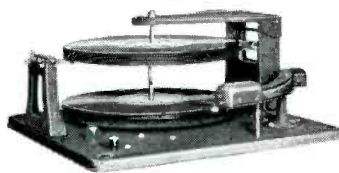
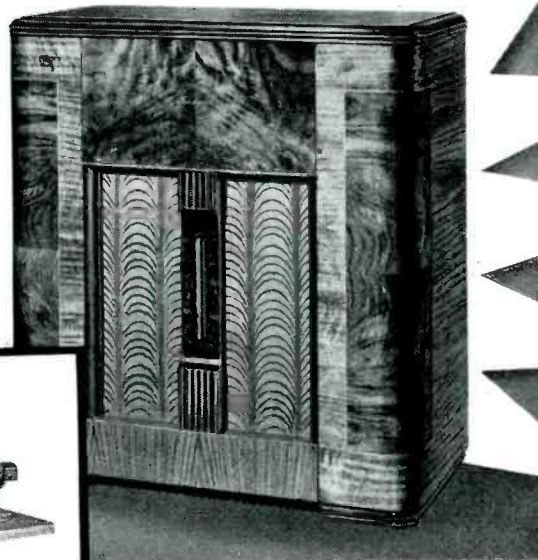


SMASH HIT WR-168-B Rich Walnut cabinet. Edge-lighted slide rule dial. 5" dynamic speaker. Built-in Loop Antenna. AC-DC. 2 bands.

Westinghouse Precision RADIO

SIZZLING HOT VALUES IN COMBINATIONS

by Farnsworth



THE FAMOUS FARNSWORTH-CAPEHART RECORD-CHANGER

Farnsworth has the selling advantage of the famous Farnsworth-Capehart record-changer. Easy to load. Guides each record to the turntable in a flat position . . . gently without chipping, cutting or scratching the record. Plays 12-inch or 10-inch records automatically. Let your customers see its amazingly smooth performance . . . and your Farnsworth sale is made.



Here's the now famous Model AK-59 . . . the unit that's making a WOW hit from coast to coast. No wonder! It has everything! Just read these features: A beautiful, semi-modern cabinet, outstanding 7-tube superheterodyne circuit, 2 wave bands, tone control, Built-In-Tenna, beam power output, push buttons, 12-inch symphonic speaker, phonograph with the famous Farnsworth-Capehart record-changer, television-sound connection. At a price that sends it right out on your delivery truck.

FARNSWORTH foresaw the sweeping trend to combinations . . . built a superb line of quality radio-phonograph units that *have cracked this new, big-profit market wide open.*

Every Farnsworth combination instrument is built to give customers what they're looking for . . . models and prices designed to suit *every prospect who enters your door!*

Model AK-59 — typical of the Farnsworth value parade

Here's the instrument that established the standards of performance and value for the industry . . . an instrument that makes customers' eyes pop out . . . purses pop open. They know a bargain in quality entertainment when they see and hear it! A *low-priced* unit with a *high performance rating*, the AK-59 is *packed* with features that make

your selling easy. One, the famous Farnsworth-Capehart record-changer, is a sure-fire sales clincher.

The Farnsworth heritage of fine musical reproduction

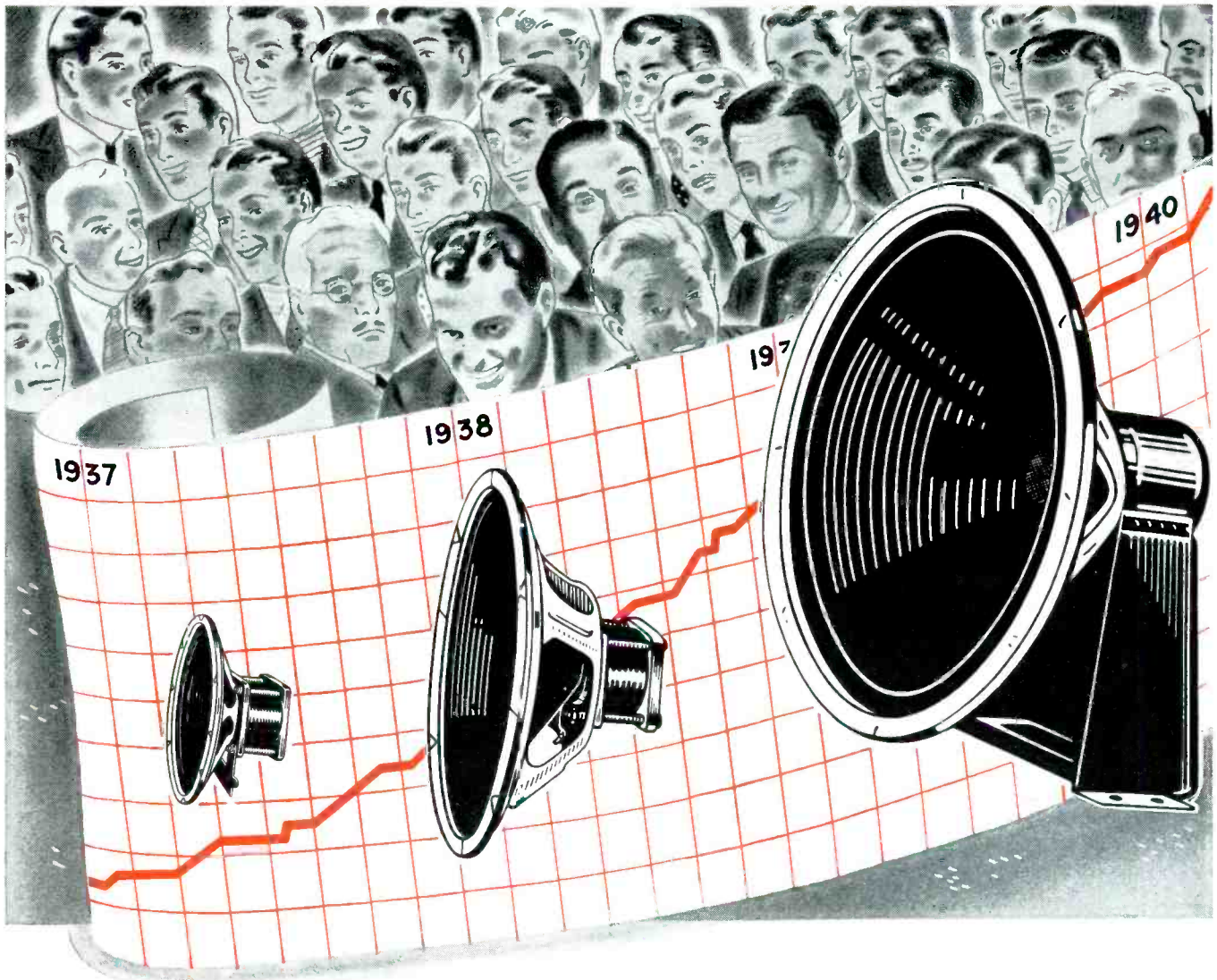
When the Farnsworth organization was formed, it inherited the experience of some of the ablest sound-engineers of the nation, together with the best merchandising brains the industry offered. For years, these experts have developed and helped dealers sell, *profitably*, instruments for fine musical reproduction. The Farnsworth Line, and the sales strategy back of it, benefit

immeasurably from this enviable background.

Join the Farnsworth parade to greater profits

The public has demonstrated that Farnsworth combinations are what it wants . . . proved it with fistfuls of money. Here is merchandise tailor-made to step customers up from low-unit sales to the high-profit combination brackets. And Farnsworth policies are designed to protect the *dealers'* interests. See your Farnsworth distributor immediately for the money-making facts. *Watch Farnsworth for '40!*

★ FARNSWORTH TELEVISION & RADIO CORPORATION . . . FORT WAYNE and MARION, INDIANA



Preference FOR UTAH SPEAKERS CONTINUES TO RISE RAPIDLY

The *balanced line* of Utah Speakers has won a continually increasing preference from every branch of the radio and sound equipment industries. It is a preference earned by time-proven dependability, uniformity and consistent high quality.

Last year 1,676,622 Utah Speakers were selected to meet the specific requirements of engineers and service men in every part of the country. Ruggedness and adequate power handling capacity are built-in characteristics of service-free Utah Speakers.

Utah engineering keeps abreast of the developments and improvements in both industries. Outstanding tone quality is obtained by the careful selection of high quality materials and the precision

manufacturing and treatment of each individual part—a special plasticizing process insures voice coils against mechanical failure or heavy overloads—cones are treated to give minimum absorption—heavier gauge metal assures ample overall rigidity—they are completely dustproof throughout—these and many other features assure “audience approval.”

There is a Utah Speaker to meet every requirement. Wherever speakers are used, you are assured of complete satisfaction with a Utah. Utah engineers will be glad to help you solve your speaker problems. Utah Radio Products Co., 810 Orleans St., Chicago, Ill. *Canadian Sales Office:* 414 Bay St., Toronto, Canada. *Cable Address:* Utaradio, Chicago.

Utah

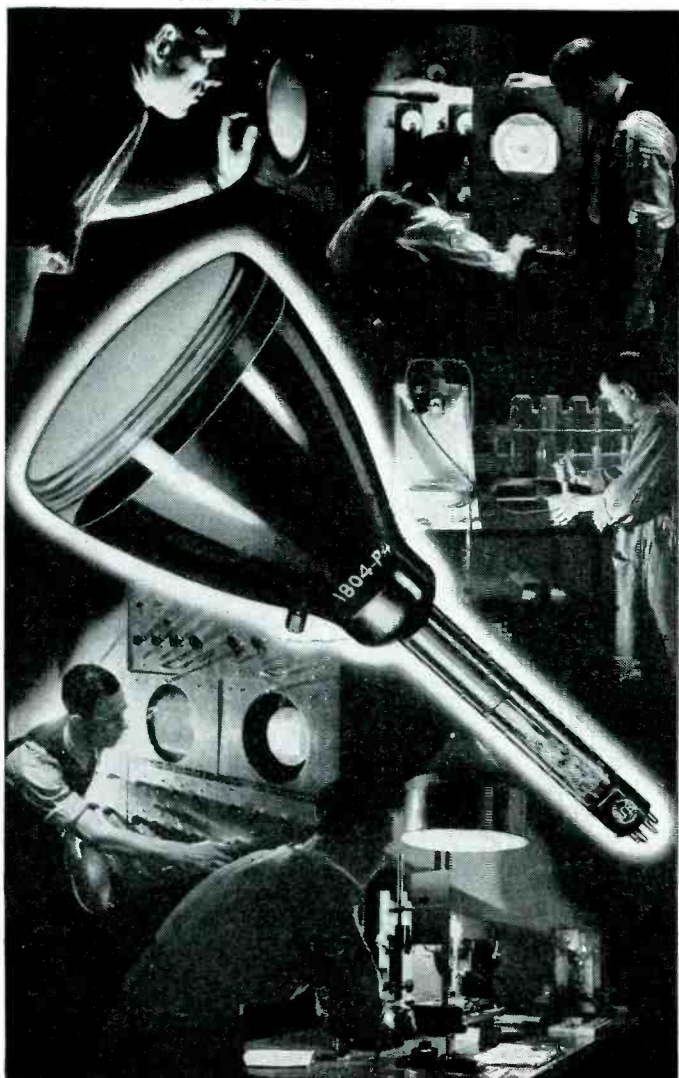
S P E A K E R S

VIBRATORS • TRANSFORMERS • UTAH-CARTER PARTS



National Association of

Forty-seven members of RCA among 572 industrial engineers and scientists given awards as "Modern Pioneers on American Frontiers of Industry."



SINCE its beginning, the Radio Corporation of America has held that *Research* in all fields of radio and sound is one of its major obligations to the public and to the future of radio.

Research is the keystone of every operation of RCA. RCA Laboratories are the fountain head of many of the spectacular radio and electronic developments of the past twenty years.

Back of these developments...back of the term *Research*, in fact...are men. Men make discoveries. And we at RCA are extremely proud of the man-power which has elevated RCA *Research* to a position of leadership.

We wish to add our own congratulations to the public recognition these men have already received. And, in addition, we extend equally warm congratulations to the many other RCA engineers and scientists whose brilliant work is contributing so much to the progress of their industry.

RCA Manufacturing Company, Inc.
National Broadcasting Company
RCA Laboratories
R.C.A. Communications, Inc.
RCA Institutes, Inc.
Radiomarine Corporation of America



Manufacturers Honors RCA Scientists

Of the 572 industrial engineers and scientists chosen by the National Association of Manufacturers to receive awards as "Modern Pioneers on American Frontiers of Industry," forty-seven were members of the RCA organization. The awards were given for original research and inventions which have "contributed most to the creation of new jobs, new

industries, new goods and services, and a higher standard of living."

Special national awards were given by the National Association of Manufacturers to nineteen of those receiving honors. Dr. Vladimir K. Zworykin of the RCA Manufacturing Company was chosen to receive one of these national awards.

47 RCA "Modern Pioneers on American Frontiers of Industry"

Randall Clarence Ballard	Glenn Leslie Dimmick	Humboldt W. Leverenz	Terry M. Shrader
Max Carter Batsel	James L. Finch	Nils Erik Lindenblad	Browder J. Thompson
Alda Vernon Bedford	Dudley E. Foster	Loris E. Mitchell	Harry C. Thompson
George Lisle Beers	Clarence Weston Hansell	Gerrard Mountjoy	William Arthur Tolson
Harold H. Beverage	O. B. Hanson	Harry Ferdinand Olson	George L. Usselman
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George Harold Brown	Harley A. Iams	Harold O. Peterson	Arthur F. Van Dyck
Irving F. Byrnes	Ray David Kell	Walter Van B. Roberts	Julius Weinberger
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Lewis Mason Clement	Fred H. Kroger	Otto H. Schade	Vladimir Kosma Zworykin
Murray G. Crosby	E. Anthony Lederer	Stuart W. Seeley	

RADIO CORPORATION OF AMERICA
Radio City, New York

Success Story...



Remember when you first heard that The Columbia Broadcasting System was going into the record business? You wondered then what would happen. Would success breed success? Well, a year has passed and what's the answer? Never before in the recording industry has there been such a spectacular triumph. As month has succeeded month, Columbia's gains have surpassed all others. It's the new success story of records. And to Columbia Dealers from coast to coast that means more and more customers, more and more sales, more and more profits. In 1940, climb with Columbia.

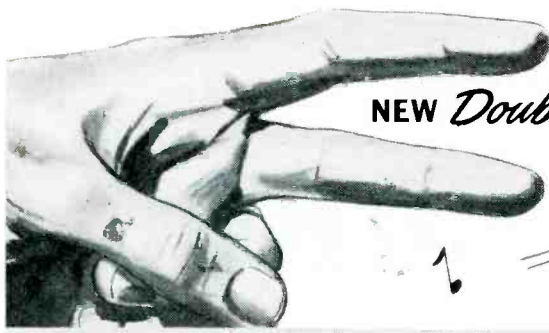
COLUMBIA RECORDS



TRADE MARK

a subsidiary of

The Columbia Broadcasting System



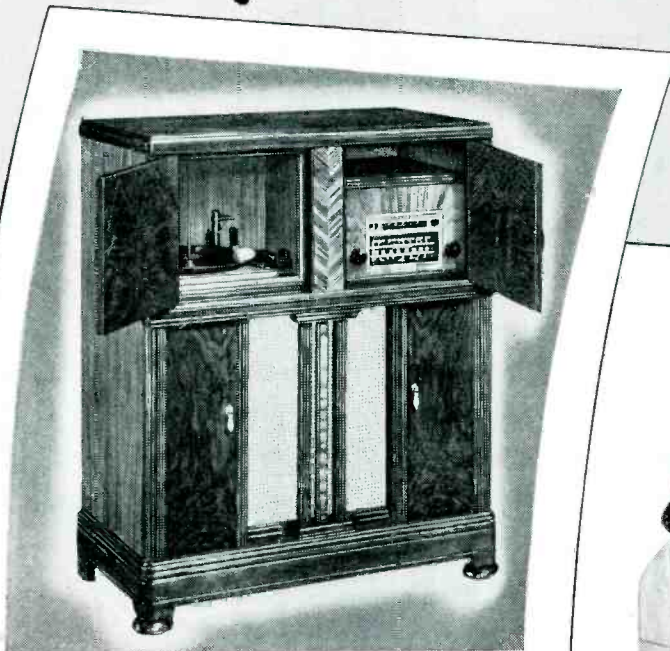
NEW *Double* ENTERTAINMENT VALUES FROM *RCA Victor*



HOT-Yes! And handsome, too, are these RCA Victrolas!

There are a lot of folks in your neighborhood who want the double entertainment—records and radio—that an RCA Victrola provides. And here are the instruments they've been waiting for!

Look at the features! Your own good judgment will tell you that here are a couple of real profit winners!



RCA VICTROLA U-45. It has Gentle Action, Automatic Record Changer . . . provides Push-Pull Audio System for greater volume and finer tone—12 watts output . . . Push-Button Tuning (6 stations) . . . Delightful Short-Wave Reception . . . Bass-and-Treble Tone Control . . . tuned radio frequency for supreme selectivity and amplification . . . 9 RCA Victor Tubes plus Magic Eye . . . Built-in Magic Loop Antenna. Model U-45 is designed for use with Television Attachment; provides record storage space in cabinet. One of the year's outstanding buys!

For finer radio performance, RCA Victor Radio Tubes, Trade-marks "RCA Victor," "Victor" and "RCA Victrola" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. Ask about the new RCA Victor Long Life Needle.



RCA Victrola

Combines Record and Radio Entertainment
A Service of the Radio Corporation of America



RCA VICTROLA U-43. Luxury is the keynote of this handsome, new 18th Century style RCA Victrola. Cabinet luxury to please your customers' eyes . . . performance luxury to satisfy their desire for fine music. Outstanding features such as Gentle Action Automatic Record Changer Plus Push-Pull Audio System, Bass-and-Treble Tone Control, Superb Short Wave Radio Reception, Push-Button Tuning (6 stations), Built-in Rotatable Loop Antenna, 7 RCA Victor Tubes plus Magic Eye, 12-inch Dynamic Speaker. Designed for use with Television Attachment.

A black and white photograph of a woman in a leopard-print dress lying on a beach. She is wearing sunglasses and has her legs raised. A large, ornate oval frame is superimposed over the image, containing the brand name 'Admiral' in a cursive font and the text 'AMERICA'S SMARTEST PORTABLE RADIOS for 1940'.

Admiral

AMERICA'S SMARTEST
PORTABLE RADIOS

for
1940

Featuring the Automatic Power Switch . . . New R. F. Circuit . . . Full Tone Speakers . . . Special Output Tube . . . Temperature Control Aperture . . . Aeroscope Magic Antenna.



Model 33-F5—5 tube AC-DC or 1½ volt battery operated superhet with tuning range 540 to 1550 K. C. Has AVC . . . P. M. heavy duty dynamic speaker . . . Aeroscope . . . automatic power switch . . . temperature control aperture . . . large output tube. Brown tweed cabinet with bakelite carrying case has rectangular grille.



Model 34-F5—Chassis same as Model 33-F5. Large handsome escutcheon combines speaker grille and tone chamber. Brown leatherette cabinet has leather carrying handle.



Model 37-G6—5 tube AC-DC or 1½ volt battery operated superhet with tuning range 540 to 1550 K. C. Has R. F. stage . . . AVC . . . 7 oz P. M. heavy duty dynamic speaker . . . Aeroscope . . . automatic power switch . . . temperature control aperture . . . extra large output tube. Large handsome escutcheon combines speaker grille and tone chamber. Cabinet has brown leatherette sides and top with carrying handle while front and back panels are of genuine butt walnut with scuff proof finish.

Model 35-G6—Chassis same as model 37-G6. Brown leatherette cabinet with detachable cover has leather carrying handle. (See radio in picture with girl).

See Your Jobber

**CONTINENTAL RADIO
& TELEVISION CORP.**

3800 W. Cortland St., Chicago
Export Office: 116 Broad St., N. Y.

NORGE is the BIG VALUE REFRIGERATOR

YOU CAN PROVE IT
right in your
SALESROOM
 YOU CAN SELL
NORGE
 ON THE BASIS OF
COST
 PER SQUARE FOOT OF
SHELF SPACE
and PROVE that
NORGE
IS THE
BIG BUY!



BIG VALUE FEATURES OF NORGE MR-6—

a typical volume and profit model

1. Oversize food compartment—6.65 cubic feet—nearly a "7" at the price of a "6."
2. 13.48 square feet of shelf area
3. 5 shelves with shelf insert
4. Stainless steel, sealed freezer.
5. Refrigerated shelf for fast freezing
6. 2 standard, 1 wide, ice trays with rubber grids, freeze 8 lbs. (72 cubes)
7. Ice tray release bar
8. Ice-O-Bar for instant cube release
9. Exclusive Norge Handfroster
10. Oversize crystal glass Coldpack
11. Porcelain interior, acid resisting bottom
12. Automatic electric floodlight
13. Sliding Hydrovoir under glass top
14. New Norgite insulating door panel
15. Heavy blanket-type insulation
16. Strikingly beautiful cabinet finished in white Norgloss
17. Beautiful chromium hardware
18. Royal Rollator Cold-Maker, permanently oiled, sealed, refrigerant cooled
19. 5-Year Warranty on Rollator Cold-Maker

This is an exceptional range of features in a low-priced, big volume, full profit refrigerator.

BIG VALUE FEATURES OF NORGE AR-6A—

a typical promotion model

1. Oversize food compartment—6.19 cubic feet
2. 11.95 square feet of shelf area
3. Stainless steel freezer
4. Refrigerated shelf for fast freezing
5. 2 standard ice trays with metal grids: 1 double-width dessert tray
6. Freezes 8 lbs. of ice at one time
7. Large cold storage tray for meats
8. Automatic interior floodlight
9. Lifetime white porcelain interior, acid resisting bottom
10. Steel cabinet finished in brilliant white Norgloss
11. Sparkling chromium hardware
12. Beautiful black base with toe room
13. New Norgite insulating door panel
14. Heavy blanket type insulation
15. Royal Rollator Cold-Maker, permanently oiled and sealed, refrigerant cooled
16. 5-Year Warranty on Rollator Cold-Maker

Compare these features with other lowest-priced models and realize what super values Norge offers.

On any basis of comparison, the Norge line has what it takes to make sales AND PROFITS. Promotion models are competitively priced, yet packed with features that build up into wonderful advertising—and are really great values. Big volume and profit models are so big, handsome and so full of luxury features

that they border on de luxe merchandise and the price tags make them a value sensation. Model illustrated is MR-6—nearly a "7" at the price of a "6" and a typical Norge value. A complete line including excellent promotion models and profitable volume models; a great advertising and merchandising program, new finance plans, overnight service on wanted merchandise make Norge worth investigating.

_____, 1940
 NORGE DIVISION BORG-WARNER CORP.
 670 E. WOODBRIDGE, DETROIT, MICH.
 Please give me details of the new Norge line, merchandising and financing plans, and advertising support given Norge dealers.

Name _____
 Firm _____
 Address _____
 City _____ State _____

RR-107

NORGE DIVISION BORG-WARNER CORP.
 DETROIT, MICHIGAN
 In Canada: Canadian Radio Corporation, Toronto
 Washers and Ironers - Gas and Electric Ranges
 Commercial Refrigeration

Send the Coupon for Details

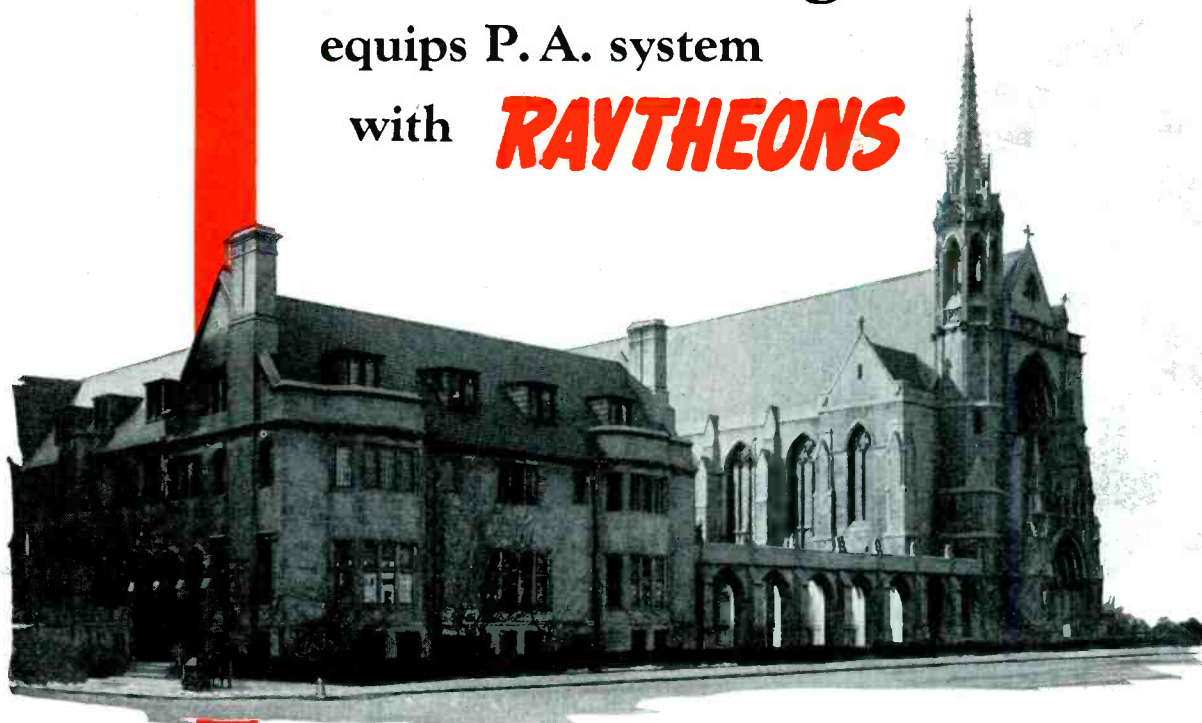
Investigate the complete line of Norge appliances . . . the opportunity for profit from matched unit sales.

The **NORGE** *for*
Oversize **1940**

Noted Chicago Church

equips P. A. system

with **RAYTHEONS**



THE Fourth Presbyterian, of Chicago, is known everywhere as one of the great churches of the Central West. With a membership including leaders in the business, civic and spiritual life of the city, its influence for good is a power which extends far beyond the limits of its own parish.

Being economically independent, nothing is left undone to provide the most modern buildings and equipment for service to members and visitors. Its P. A. System is no exception. But owing to the size, shape and acoustic qualities of the large auditorium, ordinary P. A. Systems wouldn't do. So W. P. Healy, the engineer in charge, in building one especially for this church, found that only the highest type of tubes would give the desired results. Facing this fact, he inevitably chose RAYTHEONS. For *performance*, not cost, was the only consideration.

This is typical of the way RAYTHEONS deliver where the going is hard. For these tubes are the development of engineers who have spent years in designing and perfecting tubes exclusively. When improvements are developed, tested, proved, they are embodied in the RAYTHEON line.

RAYTHEONS are always ONE QUALITY . . . the highest!



Not only one quality for every purpose, but one line that covers every tube need. For RAYTHEON makes them all . . . and they cost no more!

NEWTON, MASS. NEW YORK CHICAGO
SAN FRANCISCO ATLANTA

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

HERE THEY ARE!

Sonora's Fast-Selling

SPRING AND SUMMER

"WINNERS"!



Sensational "CANDID" PORTABLE

SONORA Scoops 'Em All! What a Radio! Just what "America-on-the-Go" has been waiting for! A powerful little portable 1.4 Volt Superhet with everything built-in, that carries just like a camera! Looks like a camera, too, in its beautiful strong black plastic case. There's nothing else like it: 4 Tubes; built-in "Sonorascope" antenna; 535-1720 K.C. Range; full-sized P.M. Dynamic Speaker; Full-Vision Molded Tuning Dial; Privacy Headphone Connection. Uses ordinary flashlight cells for "A" supply, regular portable battery for "B". A whiz for economy; a "honey" for tuning reach, power and tone. Size is only 8 1/4" x 5" x 4 1/2". Weighs only 5 lbs. Has leather carrying handle, with shoulder strap optional. A real "Thriller"—the set that will build profits for you—RIGHT NOW!

*Delivery on the "Candid" Portable—April 20.

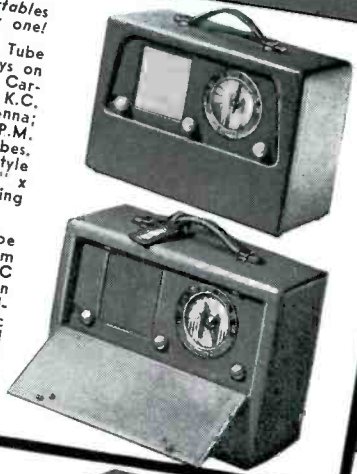


THE Serenade
PHONO-RADIO

And here are two other SONORA Portables—each a Sales-Getter if you ever saw one!

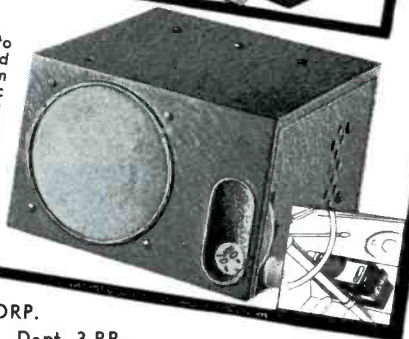
"TRIPLE-PLAY" MODEL KB-73. 5 Tube Superhet—a pace-setting "Leader". Plays on batteries or from 110 volts AC or DC. Carries anywhere; plays everywhere! 535-1720 K.C. Features: built-in "Sonorascope" antenna; "Speedometer" Dial; A.V.C.; 5" P.M. Dynamic Speaker; latest low-drain tubes. Beautiful new carrying case, with a style appeal that's 'way out in front! 14" x 9 1/2" x 6"; weighs only 13 lbs. complete. Nothing like it for Sales Appeal and Profit!

"TRIPLE-PLAY" MODEL KD-75. 6 Tube Superhet—deluxe in every detail. Works from self-contained batteries or from 110 volts AC or DC. Tunes 535-1720 K.C. Has built-in "SONORASCOPE" antenna; exclusive "Speedometer" dial; A.V.C.; 5" P.M. Dynamic Speaker; powerful Superhet circuit. A real beauty—new luggage-type case, with protective lid; 14" x 9 1/2" x 6"; weighs only 13 lbs. complete. The last word in Portables—styled and built to sell NOW.



THE NEW "CAR-PAL"

America's Lowest-Priced Quality Auto Radio! Aimed right at millions of used car and old-car owners! Self-installed in a jiffy. Superhet; A.V.C.; Dynamic Speaker; Low Drain; Suppressorless; Slant-View "Spot" Dial; beautiful tape-finished all-steel case, 6 7/8" x 7 1/2" x 4 1/2". Fits any car; with bracket for dash-edge mounting; optional brackets for mounting on steering column of old and new cars. A Best-Seller for the current season!



Another SONORA "Winner"! Nothing on the market like it! A plastic-molded Phono-Radio Combination—a real beauty—available in Walnut or Ivory. 5 Tube Superhet with quality Audio Amplifier; P.M. Speaker; 535-1720 K.C. Range; A.V.C.; Molded Tuning Dial. Rim-drive 78 R.P.M. motor; plays 10" and 12" records. Latest Crystal pickup; arm-rest and needle cups molded in. Nothing like it for styling and eye appeal. Size: 9 3/4" x 12 3/4" x 6 1/2". A Complete Musical Instrument with "Clear as a Bell" tone—that all America can afford! Only SONORA offers you this Phono-Radio Profit-BUILDER!

SONORA RADIO & TELEVISION CORP.
2626 W. Washington Blvd. Dept. 3-RR.
Chicago, Illinois

Send Us Full Details Covering the SONORA Spring & Summer "WINNER" MODELS Shown Above (Jobbers Only).

Name

Address

The RADIO MONTH

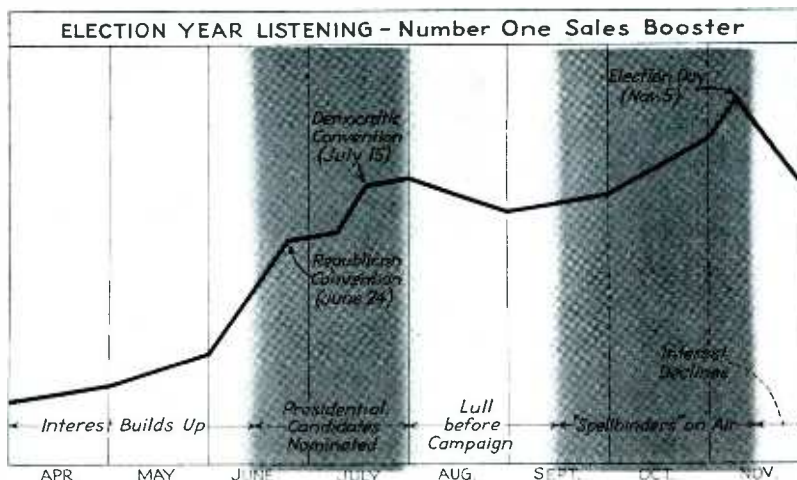
MARCH

1940

LISTEN BEFORE YOU VOTE is an effective new slogan around which the entire radio industry may well rally between now and November 5. Devised by Association men, many of whom remember that broadcasting of Harding-Cox returns just twenty years ago gave radio listening its first major shot-in-the-arm, the catchphrase is to be the heart of a non-partisan campaign already having approval of both big political parties. Soon tie-in suggestions will be ready for broadcasters, manufacturers, distributors, dealers and, particularly for the last mentioned group, *Radio Retailing* intends to get in some cooperative liks beginning next month . . . **Speaking of Slogans**, one of the many dealers we have been quietly questioning concerning new line wants since early January pulled this one on us during a discussion of cabinet styling and we think it worth repeating: "Radios should be *heard* and not *seen!*" . . . **Television Rules** just handed down by the FCC (reported elsewhere in this issue) constitute a "straddle" pleasing nearly everybody in some respects and almost nobody in all. September 1 issuance of station licenses with permission to charge advertising sponsors program costs is certain to increase and improve service, will be gratefully received in sales circles anxious to get started with television on a business basis, while the Commission's pointed refusal to establish transmission system standards at this time palliates those on the other side of the fence. A worse solution could readily have been found . . . **Frequency Modulation**, we suspect, may be handled by the FCC very much as television has been. There'll be more light on the subject

after the March 18 Washington hearing . . . **Worth Weight in Gold** was an American battery portable purchased on 42nd Street within a stone's throw of our editorial offices last summer by a Warsaw banker, when it constituted the only link

There is a definite market for such equipment, particularly for streamlining old-fashioned doorbells, and we hear that at least one manufacturer is going after it with suitably designed models this fall . . . **Record Packaging** is in for a much-needed "face-lifting," judging from the amount of cellophane and transparent plastic we have seen around in factories this month. The idea that merchandising methods which put the business at the top of the heap before radio may not be good enough for today's big disc boom is slowly percolating back to manufacturers . . . **West of Rockies** is a curious phrase that



between this Polish city and the outside world while power was shut off during the blitzkrieg. Eventually, we hear, it was "replevined" by the Gestapo . . . **Parts Show Booths** are almost completely sold out, indicating that the June shindig in Chicago will probably be an even bigger success than last year . . . **Treasury Optimism** is indicated by the news that Washington expects 1940 radio excise tax collections to reach \$7,900,000. (Collections for 1939 totaled \$5,229,649). We know this year's business is going to be good, but not *that* good! . . . **Home Inter-Communicators** have been sold in fair quantities for some time but most of the stuff made in the past has been built and priced primarily for business use.

has been coupled with prices in many fields for many years and far be it from us to just arbitrarily kick over the traces and say that prices should be the same anywhere in the United States. We do, however, think this subject should be opened up for discussion for the addition sometimes penalizes western dealers far beyond mere freight costs and many feel that its about time they were welcomed into the Union . . .

Mac
W. MacDonald
EDITOR

Emerson OK's Preferred Type Tubes Program



"A smart move to help the whole Radio Industry"

... says **BEN ABRAMS**

President of Emerson Radio and Phonograph Corporation, New York City

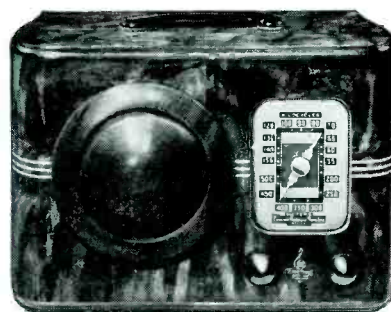
"It's the right answer to one of the most troublesome problems of the radio business. I see immediate benefits for manufacturers who will be able to insure more orderly and more economical production. Distributors, dealers, and service men can expect a more profitable and easier to operate tube business in the future. We, at Emerson, endorse this plan 100 per cent."

THEY'RE ALL FOR IT—manufacturers, distributors, dealers and service men. Never in history has a program received the immediate and enthusiastic support which is greeting the RCA Preferred Type Tubes Program!

The reason? Well—everybody benefits: the whole industry—and the consumer, too! It's sound all the way. Everybody has wanted it. Everybody is glad to get it. And RCA is doing all that can be done to see that every benefit for the industry will be realized as quickly as possible.



Less than one type in ten of the 470 types of radio receiver tubes now on the market is actually needed to design practically every type of radio receiver at the lowest ultimate cost. RCA has outlined a list of 36 RCA Preferred Type Tubes which adequately cover every function for any type of receiving set circuit.



BRILLIANT EMERSON RADIO
Employs Preferred Tubes!

Emerson Model D.B. 365 with Re-Flex Miracle Tone Chamber. A fine example of the way a competent engineering staff can create great values with tubes in the Preference List.



Radio Tubes

RCA Manufacturing Company, Inc., Camden, New Jersey • A Service of the Radio Corporation of America

INVERTED DISPLAY... the *hard way*

IF YOU HAVE some good, strong "skyhooks," a husky ceiling and the nerve you can hang a console close to the top of your window, build a startling display like this and stop shoppers dead in their tracks. That's the *hard way*.

Actually, there is an *easy way* to achieve nearly the same effect without the skyhooks. We've printed this photograph upside-down. Turn it around and you will see how Prentke Laboratories of Cleveland dramatized a Stromberg-Carlson, standing the set on its head in the window and similarly inverting triangular signs explaining features.

The square, white signs (lettering too small to be legible in our reproduction) appeared right-side-up, read: "Don't stand on your hands to study these features. Come in. See and hear for yourself how this set works in any position with the same good tone, flat against a wall or out in the middle of a room."

Appeal of this window, particularly for smaller dealers, will be its trivial cost, extreme novelty taking the place of elaborate decoration.



... the *easy way*

INVERTED DISPLAY

PHOTOShorts

Pictures *from the News*
to help you **SELL**



MEMORIAL FOR ALMA MAMMY

Frequently left behind as class memorials by seniors of 1,212 universities and colleges and 17,296 high schools are such things as bronze plaques, bird-baths, granite seats under shady trees. Suggested as novel and certainly more practical memorials are modern sound systems. We suspect that many superintendents and principals would lend an ear to sound salesmen seeking a way to implant the idea in the minds of graduating students



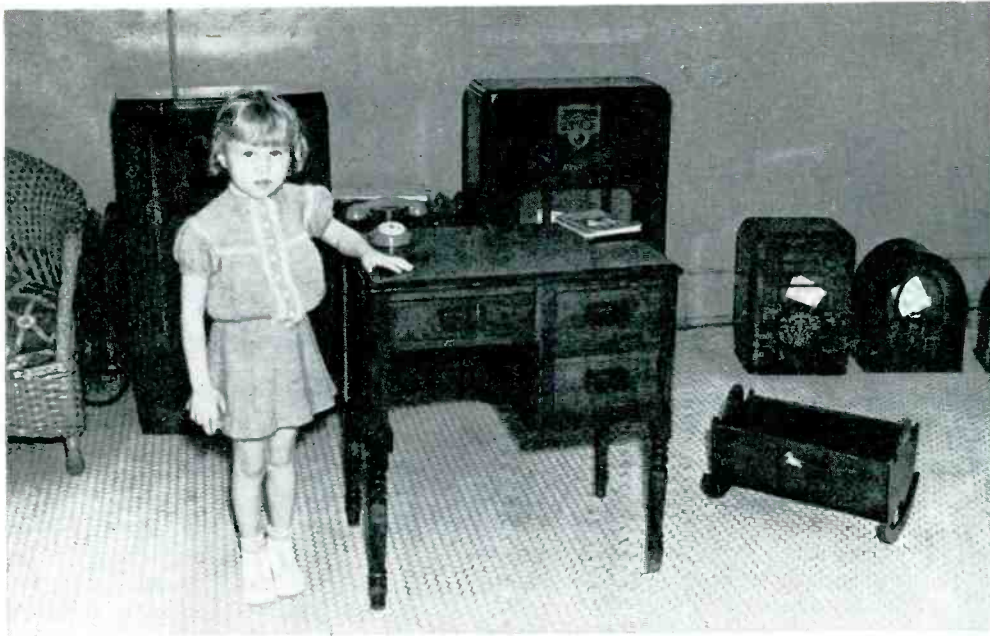
RECORDS, HAND-TO-HAND

Unique, compact phonograph record department at Rich's, Atlanta, comprises a short, center sales counter backed up by stock racks, flanked by two soundproofed listening booths. Discs are passed through sliding glass windows to customers on either side

PART OF 53,000

More than 53,000 people flocked to Gimbel's in Philadelphia recently when a travelling television transmitter piped pictures to these sets exhibited within the store on six successive days. Event was plugged through newspapers, display windows. Overflow attendance made it necessary to keep the store open one Friday night



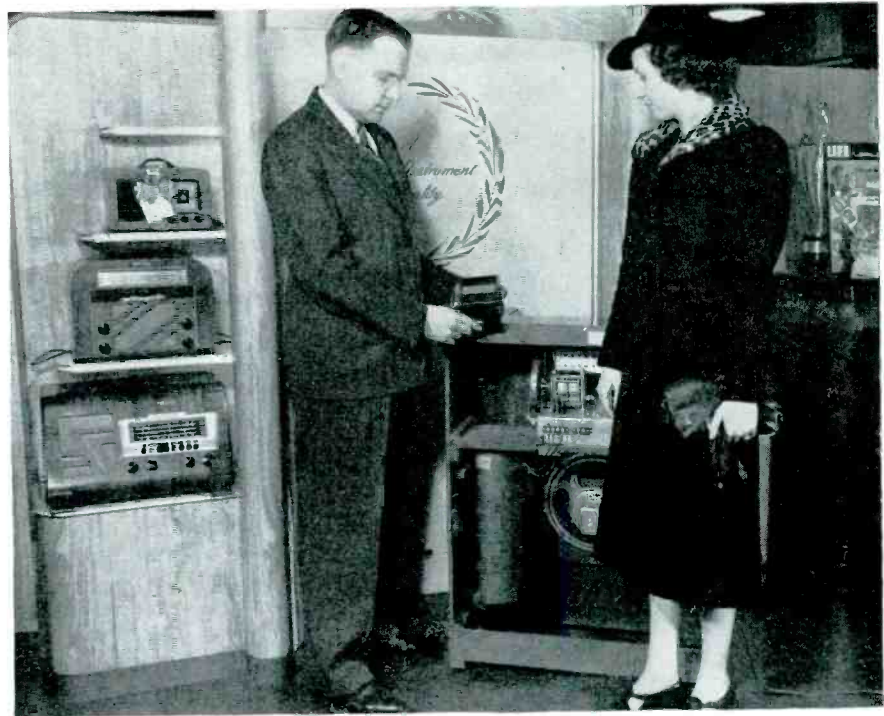


ONE USE FOR DEADWOOD

Believe it or not, the desk on which the little girl leans and the doll's crib on the floor were made from traded-in radio cabinets. W. D. Bankston of Birmingham's West End Radio also turns out shoeshine stands, other household knickknacks in his spare time, says this is one way to get old stuff out of circulation. He frequently sells his handiworks

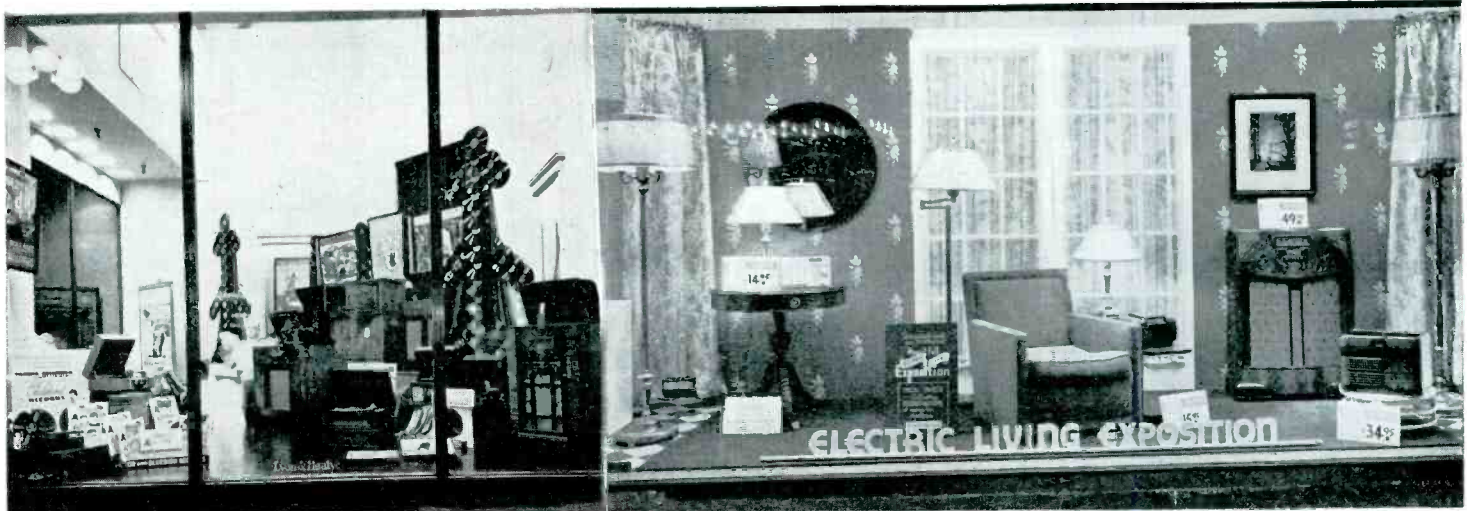
NICE NOISE TO ORDER

One way to demonstrate (right) the ability of a built in loop type antenna to discriminate against noise is to turn on a racket-creating gadget such as Charles E. Gerhard holds in his hand (powered by a small self-contained battery) and induce the prospect to turn the loop until the noise is minimized



RECORDS AND RADIO RIGHT IN THE EYE

Two particularly effective window displays seen this month are (below) one featuring both records and radio-phonograph combinations on which to play them by Lyon & Healy, Chicago, another (below right) showing modern radios as they look in actual homes by means of a papered and curtained backdrop prepared by Commonwealth Edison's display man in the same city



DESIGNING DEALERS

Outline New

GADGETS ARE FINE, says trade, but if cost permits their inclusion only at the expense of Selectivity, Sensitivity, Tone and Workmanship they'll take the latter and do a better job of replacement selling

EXISTING FEATURE Popularity †

TONE CONTROL
98%

LOOPS
88%

FOREIGN RECEPTION
87%

PUSH BUTTONS
75%

AUXILIARY JACKS
69%

HOME RECORDING
51%

Police, Air, Amateur
45%

Electric Clocks
31%

Program Timers
30%

Remote Speakers
27%

Twin Speakers
21%

Elaborate Dials
20%

Remote Tuning
18%

Numerous Controls
9%

†As sales aids, among retailers

SPEND A WEEK in the radio stores of your own home town. See for yourself what models and what features are most readily sold, and why.

This is the advice of a shrewd middle-western radio and record buyer to factory salesmen, designers and engineers who wish to be certain that new lines now in preparation "ring the bell" with the trade and, as a result, are enthusiastically merchandised to the consumer.

And it is good advice. So good, in fact, that we have taken it ourselves. Since early January RADIO RETAILING's editorial staff and field correspondents have been asking retailers everywhere what they would most like to see in forthcoming lines and, last month in these columns, we passed along to manufacturers the result of our first tabulation of replies . . . dealing with receiver types, suggested pricing and cabinets.

Now we concentrate on radio features, again reporting dealer suggestions well in advance of complete new line announcements and so keeping the study constructive:

Old Standbys

By request, from many interviewed dealers, we precede this discussion of features with the statement that:

Gadgets are fine, but if cost permits their inclusion only at the expense of Selectivity, Sensitivity, Tone and Workmanship the average retailer will take the latter and do a better job of replacement selling.

This, the trade almost universally tells us, cannot be stressed too strongly. For despite the obvious

*Editor

sales advantages of many features incorporated in sets during 1939 there was widespread feeling among purchasers that a good many receivers were not uniformly superior to traded-in models from the standpoint of basic reception functions. And few were willing to make allowances just because they bought new radios at extremely low prices.

Another point made by many dealers was that manufacturers might do well to omit certain features from the cheaper models, confining them to better receiver types to aid selling-up.

Manufacturers, we submit, would do well to keep these two thoughts firmly fixed in mind while reading that. . . .

Tone Controls are recommended for use in 1940 radio models by 98 per cent of all the dealers contacted by RADIO RETAILING. Whether they are most often really used as tone controls, or as noise-reducers, we cannot definitely say but it is certain that they are a "must" feature, particularly in consoles and probably in all sets. Many dealers, in fact, would like to see the "continuous" type further improved and not a few recommend that this is one feature that might with good effect be more visually dramatized.

Loops are favored as a 1940 sales feature by 88 per cent of the dealers we've talked to and they may very well continue to be up near the top of the feature list this year. The trade likes them because they simplify and speed up installations and the customer likes them because they simplify radio placement. And they demonstrate well.

Foreign Reception helps sell sets despite the fact that it is not worked overtime once in the home,

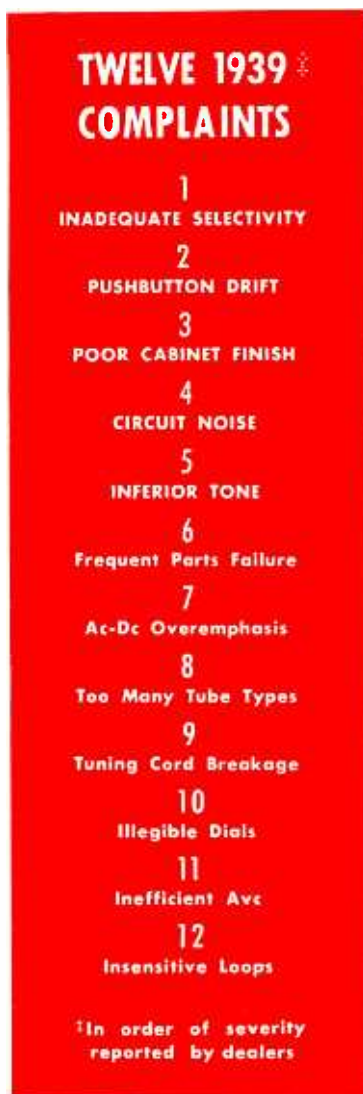
Line Needs

say 87 per cent. Most dealers, however, think it should be confined to the higher priced models and that it is least valuable as a sales feature in inexpensive versions. Virtually all think manufacturers make a mistake in putting it in practically everything they make, despite the new interest given shortwave listening by war news. Few see any reason for "giving it away."

Push Button Tuning is specified by 75 per cent. Quite a few tell us that in their estimation it should be confined to sets listing over \$20, or \$30. Desire for this feature is, of course, predicated upon the assumption that the buttons do a good job. (More about actual performance of the various features mentioned here in later paragraphs.) Weak spot is apparently rural districts.

Auxiliary Jacks such as those for phonograph attachments, television and frequency modulation accessories are considered useful in view of their low inclusion cost by 69 per cent. Here again the need is considered most pressing in larger models, more of a sales than an actually utilized feature. Featuring of such jacks for future phonograph attachment is considered more effective than the tele and f-m "hook". Few dealers expressed a need for "protection" in these latter instances.

Home Recording, despite the fact that it has been brought to the attention of the average dealer in conjunction with regular radio receiving and record-playing machines only in the last 8 months or so, is considered a possible feature leader for 1940. (*Many manufacturers, as reported elsewhere in this issue, are already aware of awakened interest in the subject. So on this one feature our survey can do little more than confirm this interest and help designers get off on the right foot.*) 51 per cent of the dealers we've talked to think it has important sales possibilities. We suspect that more would be favorably inclined if we asked them the same question again just a few months



hence, when more of them have played with such merchandise. At present, some few consider home recording a "fad." This must be said if our study is to reflect actual trade opinion rather than our own. Dealers already familiar with the feature urge manufacturers to keep the price up, keep it in the upper bracket radio models only. Manufacturer policies, we are inclined to think, will have much to do with the position of this feature at the close of the present year.

The above paragraphs complete the list of known radio features recommended for 1940 use by 50 per cent or more of the trade. Following features, recommended by less than half the dealers interviewed, may yet make up in other ways what they appear to lack with respect to heavy dealer support . . . a good but not infallible guide to design.

Police, Airplane and Amateur band reception is considered valuable by 45 per cent of the dealers

By
W. MacDONALD*

contacted by RADIO RETAILING. Some say it is too late to limit this feature. Some say it should be included only in the better receivers. Some say that in their particular location interest has been built up in certain civic radio services. Many say that the police band, chiefly, is interesting and that airplane and amateur bands need not often be included.

Electric Clocks, as built-in extras incorporated in radios, meet with the approval of 31 per cent. Most of these say just one or two such models is sufficient. A few think that clocks in some instances detract from radio sales value.

Program Timers, not generally seen as part and parcel of complete radios these days, are considered interesting by 30 per cent. For big models, simpler to operate and without high extra cost. May be most readily featured, on such a basis, as an extra, or accessory item.

Remote Speakers might be a useful feature in the better sets, say 27 per cent. Most wouldn't want this in compacts but there does seem to be some demand for more output jacks in the general run of receivers, for headphones if not speakers.

Twin Speakers within the cabinet itself are considered a good sales feature by 21 per cent. Consumer interest in this, say many, today hinges upon whether or not tone is noticeably improved rather than visual appearance.

Numerous Controls, placed on radios more for the purpose of making them look like they do everything but "put out the cat" than because of actual utility, is a sales method recommended by only 9 per cent. Simplicity of control, in fact, seems to be the general trade desire and many dealers told us that they thought 1939 models pretty well designed in this respect.

Elaborate Dials, intended to knock the prospect's eye out with their size, ornamentation and lighting, seem like good 1940 sales strategy to just 20 per cent. Most

dealers think the market wants dials big, and legible, but not gaudy. Much depends upon neighborhood, of course, but this survey must average dealer preferences and consider them on a national rather than local basis.

Remote Tuning interests 18 per cent as a sales feature. "One", "DeLuxe", "Custom-Built", are dealer terms expressive of opinion among this group.

Possible New Ideas

Dealer reception to modifications of the features already mentioned depends, of course, upon what such modifications are, how they are treated by designers and how much they add to overall receiver cost. Designers may, naturally, shift the relative popularity position of such features, depending upon their ingenuity.

Designers may, in other words, "set style" by their own efforts, dealers falling in line later where feature treatment is right. This is true, as well, of the following random design suggestions submitted by interviewed dealers. Naturally, much would depend upon details, working them into marketable shape.

Why not, ask dealers. . . .

Include front-of-panel rotation controls for built-in loops? (At least one manufacturer has already anticipated this request.)

Put out a few upright table-types instead of all laydowns? ("Old" might now seem "new"!)

Leave space in consoles for later phonograph turntable installation?

Utilize space in the bottom of consoles for magazines or books?

Use simple noise-limiters in all sets tuning in shortwave bands?

Put 110-volt receptacles on backs of sets for connection of lamps?

Leave the tops of a few sets flat, so women can decorate with vases?

Provide adjustable sounding boards in the larger consoles?

Mould side indentations in compacts to facilitate carrying?

Put grips on bottom of compacts so that they cannot slide?

Fully inclose the backs of more new models?

Make more home battery type radios with spring-wound phonographs?

Provide sets with a pushbutton tuning-in the longwave "weather report band."

Of practical value to receiver engineers will be the tabulation of

Twelve 1939 Complaints appearing with this article.

"Please, Not In 1940"

These were sufficiently aggravating, interviewed dealers tell us, to warrant close attention when designing 1940 models. We comment on them here in greater detail:

Inadequate Selectivity was very generally reported of sets made last year, seems sufficiently extensive to indicate that unless quickly corrected this characteristic may get out of hand and cause really serious trouble in the replacement market. Interference between broadcast stations themselves, especially on crowded "high ends", is everywhere reported (this is a matter for the FCC as well as designers and the Commission is known to be working on it). Such interference, within our own major service band, dealers think unpardonable. Other services, too, were causing plenty of crosstalk. (Need for r.f. stages

Second of Three Articles

PUBLISHED February

**What the Public Wants
For Its Money**

COMING April

**New Line Merchandising
Policy Suggestions**

in more, if not all, models seemed obvious in the field). *Improved selectivity is probably 1940 need number one.*

Pushbutton Drift marred an otherwise much-thought-of feature. Very few sets were free of it and unless this trend is corrected in 1940 push buttons may get an undeserved black-eye.

Poor Cabinet Finish and workmanship took the punch out of many cabinet designs which from the standpoint of line itself were quite satisfactory. And, dealers say, there were not a few so "gingerbready" that women couldn't keep them dusted. Ability to keep cabinets clean, believe it or not, is a very definite sales factor and one that we, personally, had never considered until this study called it forcibly to our attention.

Circuit Noise, curiously seemed to be worse in 1939 than in previous years, according to reports. Combination of higher sensi-

tivity with resultant "hiss", racket between stations on sets using AVC without much delay or "squelch" systems and general failure to take man-made noise into consideration during a period in which most eyes were fixed on price probably accounts for the severity of this complaint.

Inferior Tone, by comparison with some sets offered as trade-ins, was a very common cry. Tone, dealers admit, is no cinch to sell when it is just a question of "good against super-special" but there is a minimum below which designers should not go for any reason if new sets are to show up well on demonstration against old ones. And they believe that many factories have completely lost sight of that minimum.

Then, too, **Frequent Parts Failure** seemed to many out of all proportion to previous years, technicians frequently contending that it should have been obvious to designers before sets were shipped that certain tolerances were on thin ice, even too thin for cheapest new radios. **Ac-Dc Overemphasis** claimed by a few, who contended that it was ok in compacts and where twin operation was really needed by the consumer but likely to reduce overall radio performance if permitted to become more general for purely price reasons. **Too Many Tube Types** (already widely editorialized upon) complicated the job of testing and replacement tube selling enough to be commented upon frequently in the field and, while on the subject of tubes, frequent failure of 1.4 volt types was reported. **Tuning Cord Breakage** appeared to be a rather general weakness of 1939 design. **Illegible Dials** bothered quite a few purchasers, especially older people with so-so eyesight (Dealers want big, plain, clearly and simply marked dials). **Inefficient Avc** systems were encountered often enough to indicate that this feature had frequently been slighted. And **Insensitive Loops** were not uncommon. (Most installation men talked to said provision for external antennas should definitely be provided in all loop sets, said that very often when need for more pickup made this necessary the sets became broad as barn-doors).

Next month we proceed to dealer-suggested 1940 Merchandising Policies the trade itself thinks would make more money for all.

Is your PORTABLE RADIO ready to roll?

On the FIRST WARM WEEKEND you'll be reaching for it IN A HURRY and it probably needs a QUICK ONCE-OVER after the LONG WINTER LAYUP

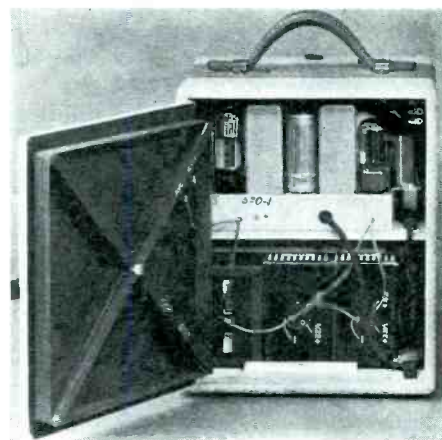


Do You Know That

BATTERIES wear themselves out just standing idle for several months even though they are not used, come in many sizes and shapes sometimes not easily replaced away from home . . .
Have them tested now, free of charge

TUBES must be just about perfect in these compact little sets if you are to be sure of picking up stations out in the country away from big stations, and picking them up loud enough
Checkup today is good insurance, costs nothing

TUNE-UP is desirable after the banging around you gave your portable last summer and the temperature changes to which it has been subjected through the cold weather
This adjustment is inexpensive



RADIO and Television
RETAILING

Check Up Now
Save TIME and MONEY Later!



WILCOX-GAY

Recordio

HOME RECORDING

Comes of Age

TODAY'S MAIL is carrying a new batch of pictures to Grandmother G., who has never seen Baby Susan in person. This time, however, Susan is going to gurgle, crow, laugh and cry at Grandmother's house when the little disc that came with the pictures is played on Grandmother's electric phonograph.

Grandmother K. left for Florida before Christmas. Before she left, she ordered a new piano for Patsy and Joyce. When Grandmother K. opens the next mail, she'll be able to hear the girls play for the first time—on another little disc.

These grandmothers are going to be pleased—and surprised, for its news to them that recordings can be made at home, easily and inexpensively, on relatively low-cost equipment.

Now Does Real Job

Home recording is really here. While we have been scratching our heads and wondering what to do next to stimulate radio business, home recording has crept upon us with a suddenness that has been surprising even to those who have

* Chief Engineer, Shure Brothers

SNAPSHOTS IN SOUND seen as one of year's best bets, giving radio-phonograph combinations additional appeal and expanding market for commercial discs, developing demand for blanks and traffic-building supplies, paving way for professional machines

By **RALPH P. GLOVER***

been "behind the scenes" in its development.

The *idea* of home recording is far from new. Offered years ago in expensive combination models by several manufacturers, this basically sound idea failed to make headway in the face of poor reproduction and high cost of pregrooved records, and was abandoned. Advances in instantaneous recording technique and new developments in equipment gradually changed the picture. Today, with improved yet relatively inexpensive records, motors, cutters and feed mechanisms, pickups and microphones available, real record-

ing is ready to go to the public at popular prices.

Though official announcements have not yet been released, it is safe to say that several additional "big name" set manufacturers will offer recording combinations in their 1940 lines.

Potential Market Large

Like most new things, the advent of recording brings with it new merchandising and service problems. It's not hard to visualize a brisk demand for trade-in deals from present owners of radio-phonograph combinations; nor service calls from

recording combination purchasers who haven't read the simple instructions, or who shout into the microphone with consequent distortion or expect it to pick up a whisper fifty feet away.

But all such problems will be merely incidental to those distributors and dealers who grasp the bigness of the thing, its truly universal appeal. Here and now, for the first time, radio can introduce the *personal element*—the “you do it yourself” angle that has been the foundation of the success of the photographic industry.

It takes only a moment's comparison with photography to realize how fundamentally sound home recording is. You probably own a camera—and so do most of your friends and acquaintances. You can record what people look like, highlight what they *do*, with pictures. But your mental portrait of personalities includes what they *say*, how *they* sound. A recording fills the gap, supplies the elements that are missing in even the most fortunate snapshot.

Has Many Uses

Actually, home recording makes it possible to take “snapshots in sound.”

And we can pursue the photographic analogy further.

The same people who move the camera and make out-of-focus snapshots are going to make “blurry” records with voices fading in and out. Those who are willing to make a slight but definite effort eventually learn to make passable snapshots, just as they will learn to make passable (to them, priceless) records. Those who grasp the possibilities of their cameras make portraits, close-ups and candid shots that portray intimate and characteristic details. And we can do all this too with home recording equipment. Even the “exposure” problem is with us. Film latitude takes care of the photographic tyro—and so also is there a reasonable latitude in recording—providing we don't “over-expose” and overcut from one groove into the next. Exposure meters help the photographer. And, similarly, most of the new recorders will have “level indicators”, to prevent overcutting.

There are many very practical uses for home recording equipment beyond the mere making of “sound snapshots.”

It can aid in the perfecting of public speaking technique. It can aid voice culture and make faults in diction painfully obvious. It can aid the study of music by providing an impartial record which can be played back and critically analyzed whenever and wherever it is desired. The ability to record “off the air,” which will be a feature of some recording equipment offered this year, makes it possible to preserve anything that is historically important, interesting, amusing, entertaining, instructive or profitable, that is broadcast.

We could expand this list almost indefinitely.

Let us sum up the main reasons why home recording is about to “go places.”

- (1) It brings an entirely new appeal to radio sales, the personal “do it yourself” angle.
- (2) It promotes the sale of medium and high-priced radio-phono-recording combinations, a trade-up from, or replacement for, straight radio and radio-phono combinations.
- (3) It creates a market for continuous sale of supplies, the recording discs and needles.
- (4) It automatically creates an added demand for commercial phonograph records.
- (5) It lays the foundation for future sales of professional type recording equipment to hobby and luxury buyers.
- (6) It creates a potential market for extra microphones and speakers, for, with a little ingenuity, the *home recording system* can easily become the *home sound system*.

TYPICAL NEW MODELS

With and Without Radio, For Home or Professional Use



HOWARD Radio-Phono-Recorder



FEDERAL 101



RCA VICTOR 12707



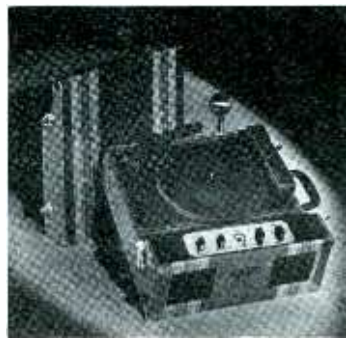
PRESTO K



BELL Re-Cord-O-Phone



SPEAK-O-PHONE I-52



WESTERN Recorder



BOGEN JR-112



BATEMAN P12A

DEALERS SAY THIS 9-TUBE
CONSOLE REALLY

"WALKS OFF THE FLOOR!"

HERE ARE FEATURES
THAT SHOUT VALUE!



10-TUBE PERFORMANCE

- 9 Tubes including rectifier and 1 double-purpose tube!
- Built-in Magic Antenna!
- 8-Button Magic Keyboard Automatic Electric Tuning!
- Covers all bands from 540 to 18,000 Kc.!
- Connection for record-player and television sound!
- 12-Inch De Luxe Dynamic Speaker!
- Push-Pull Audio Stage!
- Wide-Range Band-Pass R. F. Stage!
- AVC and Bass Compensation!
- 5-Position Tone Control!
- Massive hand-rubbed cabinet!

\$ 69⁹⁵

CALL YOUR DISTRIBUTOR NOW!

This One Is "Red Hot" Too!

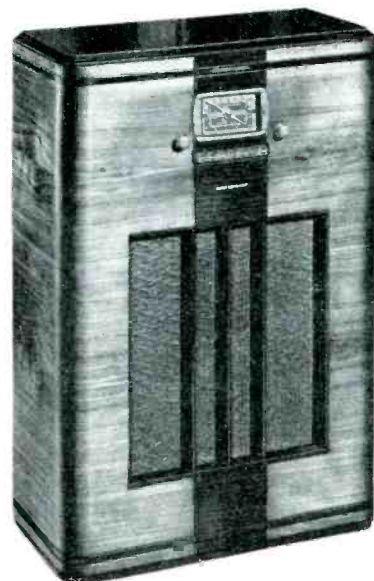
- 6-Tube Console! Built-in Magic Antenna!
- 7 Push-Button Electric Tuning!
- Broadcast and Short Wave Bands!
- 8-Tube Performance! Beautiful Cabinet!

\$ 39⁹⁵

STEWART-WARNER

RADIOS AND TELEVISION
Another Stewart-Warner Product

STEWART-WARNER CORPORATION, 1828 Diversey Parkway, Chicago
Also Makers of SAV-A-STEP Refrigerators and Electric Ranges



Straight Type about F-M and TELEVISION

PRESSTIME PANORAMA of progress made by two ultra high frequency services in past 30 days

VIDEO NEWS

*FCC Ok's Ads, Not Standards
Important Price Reductions
First Relays Tested*

WASHINGTON—Beginning September 1 television stations assigned a single protected channel, operating on regular schedule 10 hours or more weekly for the purpose of further developing programs and studio technique (to be licensed as "Group 2," "semi-commercial" stations) may transmit sponsored material including advertising, charging sponsors at cost for the preparation and handling of such material but not for the transmission itself.

"Group 1" stations, to be simultaneously licensed by the Federal Communications Commission, will not be permitted to transmit sponsored material but may operate on several assigned channels for the purpose of further developing television technically without the necessity of maintaining regular schedules.

Where more rapid advance of the art can be fostered by such licensing the FCC may license certain stations as both Class 2 and Class 1. It is further understood that Class 2 stations will, at least for the present, not be required to share channel-time and that where Class 1 stations operate for experimental purposes on channels assigned to Class 2 stations they must defer to the latter in the event of interference.

Deferred by the FCC for the present are television transmission

system standards, the industry itself being urged by this body, further, to avoid "freezing" at this time.

Pointing out that while it sees no reason why consumers fully aware of the fluid state of the art with respect to standards and willing to assume the financial risk at present involved for the sake of programs at present available should not buy receivers, the Commission nevertheless urged manufacturers to avoid overselling. It went so far as to suggest that, where consistent with reasonable cost, it would be desirable for the industry to design, build and distribute receivers capable of being adjusted with respect to synchronization method and number of frames or lines.

Checked with the FCC's secretary T. J. Slowie February 20, the latest list of licensed television stations includes transmitters in:

Boston (Mass.)	Long Island City (NY)
Bridgeport (Conn.)	Los Angeles (Cal.)
Camden (NJ) (2)	New Scotland (NY) (2)
Chicago (Ill.)	New York (NY) (4)
Hollywood (Cal.)	Passaic (NJ)
Iowa City (Ia.)	Philadelphia (Penna.) (2)
Kansas City (Mo.)	Schenectady (NY)
West Lafayette (Ind.)	

CAMDEN—RCA-Victor took the "Fifth Step" in its long-planned television program here March 6 when vice-president Tom Joyce told dealers served by Philadelphia distributor Ray Rosen that the company is about to launch an aggressive receiver merchandising campaign wherever reliable program service is available, showed them sets coming off factory lines for the first time in production quantities. (RCA's Board ok'd a New York,

Boston, Washington "relay" March 1st).

Highspot of the planned sales campaign (New York dealers are hearing about it as we go to press and two New York newspapers will carry consumer announcements March 17) described by Joyce is reduction in price of two tele-radio combination consoles, from \$600 to \$495 and from \$450 to \$295. Equally interesting was his announcement that both would carry better dealer discounts than heretofore, that installation charges were to be reduced and that RCA planned to rebate dealers and consumers who had already purchased these two models (they are essentially the same as 12 and 9-inch "Kinescope" types sold in New York for some months but embody circuit refinements upping sensitivity) to the tune of some \$200,000. Consumer terms of 10 per cent down and 18 months to pay were simultaneously offered.

Heavy promotion planned included immediate mailing of circulars to 20,000 taverns in adequately served areas (direct from the factory), many dealer-helps.

Much of the program about to be inaugurated, said Joyce, is a result of actual experience during recent Newburgh - Poughkeepsie - Middletown merchandising tests. During these tests, for example, it was found that: 56 per cent of the buyers earned under \$5,000, 26 per cent between \$5,000 and \$10,000. Seven of 21 dealers aiding in the test in Newburgh employed outside salesmen, moved 85 per cent of the

receivers sold. (The company says it should move 500 sets a week in metropolitan New York if dealer experience follows the upstate test ratios.) Sales declined nearly 90 per cent when outside selling was deliberately curtailed for test purposes December 1.

Necessity for intensive outside sales work if televisions are to be moved in quantities was stressed, company executives recommending, however, that prospects first be given demonstrations in stores rather than approached "cold turkey." Suggested as best initial prospects were taverns (20 per cent of Newburgh sales went to such places using television as a business-aid).

Called one of the most effective regular Empire State transmitter program features at present was Lowell Thomas and his news commentary. Hinted was the probability that the Republican Convention would be televised, possibility that a current NBC dicker for "Information Please" might shortly be completed. (A regular NBC broadcast sponsor is understood to be negotiating for a 3-year television contract as we write).

SCHENECTADY — Residents of this city and surrounding territory lucky enough to have access to a television receiver have been "looking in" for the past several weekends on programs originated by NBC's Empire State Building in New York City.

They are being picked up 129 miles north at a General Electric Company relay station in the Hudson River Valley "trough," re-transmitted to the same company's Helderberg Mountain transmitter and again passed along 159 miles away from the source.

PHILADELPHIA — Three new Philco Radio & Television Corporation achievements described by vice-president William H. Grinditch to the press February 14 included: (1) Television reception of a 605-line picture, at 24 frames per second. (2) Reception based on vertical wave transmission permitting built-in vertical loop receiving antennas and (3) Use of built-in loop antenna to reduce diathermy and noise interference.

PASSAIC — Allen B. DuMont, prominent television engineer and

manufacturer, lauds the FCC's latest report declining to "freeze" television transmission system standards in a statement just released to the press.

AUDIO HIGHLIGHTS

FM Broadcasters "Network"

Latest FCC License List

Two New Receiver Makers

NEW YORK—Four frequency-modulated transmitters passed a program from here to New Hampshire, fed three regular broadcast stations on the way and an experimental a-m transmitter "at the end of the line" February 29 when FM Broadcasters, Inc. arranged to test feasibility of such chaining entirely "via radio" and without the use of wire links.

Program originated at Yonkers W2XAG, was picked up and rebroadcast by Alpine's (N.J.) W2XMN, in turn tuned in and relayed by Meriden's (Conn.) W1XPW to Paxton's (Mass.) W1XOJ for the final "push" . . . all four of these transmitters using f-m and operating on the ultra high frequencies. Simultaneously, WICC at Bridgeport (Conn.) tuned in and rebroadcast Alpine, WEAN at Providence (R.I.) and WAAB at Boston (Mass.) picked up Paxton and re-transmitted on their usual a-m broadcast channels while ultra high frequency a-m W1XER atop Mt. Washington (N.H.) used this same source and again rebroadcast.

During the test the press listened in on Alpine (rebroadcasting Yonkers) via a Stromberg-Carlson f-m receiver in Manhattan's Ritz Towers, had called to their attention the relay's freedom from noise. Later, presiding John Shepard of the Yankee Network introduced Major Edwin H. Armstrong, who deplored airspace at present permitted f-m, questioned existing power restrictions, had his W2XMN transmit sound effects demonstrating quality possible with the system, predicted "100 f-m stations in operation by the end of the year." (F-M men will request "Limited Commercial" Licenses in Washington, March 18.)

WASHINGTON — Checkup with the FCC February 20 disclosed that 21 f-m stations had been licensed

up to that date (List in January RADIO RETAILING showed 7 actual licenses, 32 construction permits and applications pending) with 59 applications on hand.

Licensed stations were located in:

Albany (NY)	Holden (Mass)
Alpine (NJ)	Meriden (Conn.)
Avon (Conn.)	Milwaukee (Wisc.)
Bethesda (Md.)	New York (NY)
Boston (Mass.)	New York (NY)
Carteret (NJ)	Paxton (Mass.)
Chicago (Ill.)	Rochester (NY)
Columbus (Ohio)	Rochester (NY)
East Springfield (Mass.)	Schenectady (NY)
Georgetown (D.C.)	Superior (Wisc.)
	Yonkers (NY)

(It is believed that 18 of these are already in actual operation, or testing, as this is written).

License applicants are located in the States of: California (2), Florida (1), Georgia (3), Illinois (5), Indiana (1), Iowa (2), Kentucky (2), Maine (1), Massachusetts (2), Michigan (3), Minnesota (1), Missouri (2), New Hampshire (1), New Jersey (1), New York (12), North Carolina (2), Ohio (6), Pennsylvania (5), Rhode Island (2), Tennessee (2), Texas (1), Utah (2).

Requesting licenses for operation of amplitude-modulated stations in the 41,000 to 42,000 kc. band also sought by frequency-modulation station applicants and thus further complicating assignment of available channels to the new service were numerous educational organizations on hand at hearings.

CHICAGO—Latest big radio receiver maker to secure a license to build frequency-modulation sets is the Zenith Radio Corporation of this city. (Other licensees, previously reported, include G-E, Stromberg-Carlson, Stewart-Warner, Pilot, Hallicrafters, Hammarlund, Scott, National and REL, Browning making a kit).

Said this firm's Edgar G. Herrmann: "We are planning to bring out frequency-modulation receivers for the public this spring. They will be part of our new 1941 radio line. . . . Will undoubtedly be incorporated in a number of four-band receivers containing standard amplitude-modulation as well, these models designed for high quality reproduction and falling in appropriate price brackets. . . . They will be introduced wherever frequency-modulation broadcasts can be heard. As I am dictating our frequency-modulated transmitter and studio are being transferred to the top floor of the Chicago Towers Club, one of the city's tallest buildings. . . . We have made an arrangement with WBBM for simultaneous transmission of standard programs."

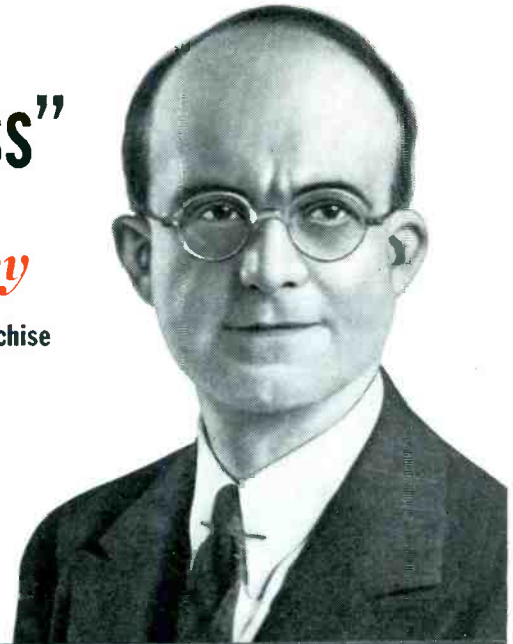
The Meissner Manufacturing Company, located at Mt. Carmel, Illinois, has also secured a license, now manufactures frequency-modulation receiver kits.

"The Mainspring of Our Business"

says *George D. Barbey*

of The George D. Barbey Company, Reading, Pa., speaking of the RCA Franchise

"Yes! The RCA Franchise makes things tick in our business. It gives us the tops in Test Equipment, Receiving Tubes, and Power Tubes. All three help our customers to make more money. That's why we're for this franchise 100 per cent."



The RCA Big Three will help "up" your Bank Account

If you met him you'd share the general opinion that George Barbey is a smart, personable man. And when he says the RCA Franchise means profits for his dealers he knows what he's talking about.

He says RCA Test Equipment is tops in the field. And no wonder... for it is backed by more actual service experience in radio and sound than any other equipment is. He says Cunningham Receiving Tubes are tops. And that's natural, too... because RCA was first in the business. No other tubes command as much acceptance. George says RCA is tops in Power and Special Purpose Tubes. And no one questions that! RCA builds types no one else can offer. Values are highest all along the line because RCA knows the requirements of transmitters as only the leading manufacturer of transmitters can.

Only RCA offers all three... and the best in all three. That's the point to keep in mind when you're in business for profits.

Over 95 million Cunningham Radio Tubes have been purchased by radio users. In tubes, as in parts and test equipment, it pays to go RCA All the Way.

**Only RCA Offers
You All Three**

TEST EQUIPMENT
RECEIVING TUBES
POWER TUBES

(Transmitting, Cathode Ray, Special Purpose Tubes)

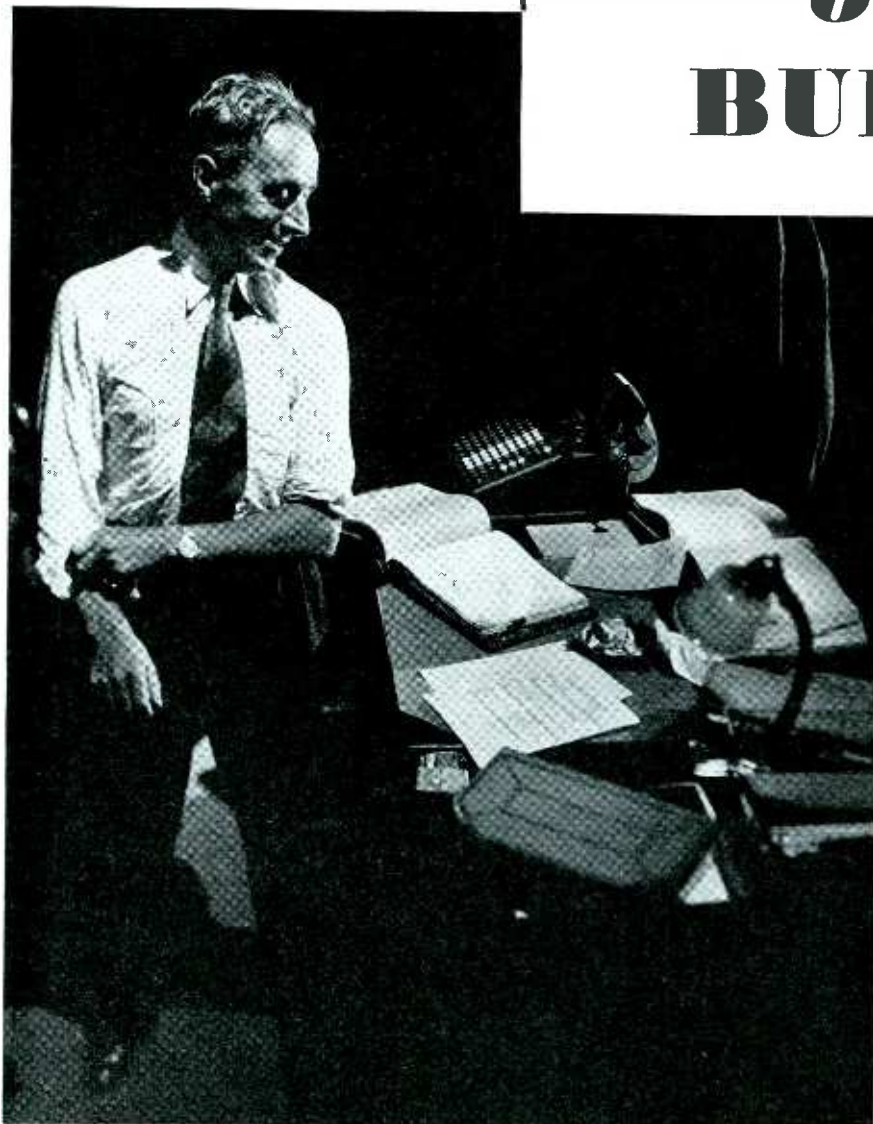
Cunningham
Radio Tube
STANDARD SINCE 1915
A Quality Product
by
RCA



Tubes and Test Equipment

RCA Manufacturing Company, Inc., Camden, New Jersey
A Service of the Radio Corporation of America

BUSINESS on a BUDGET



MODERN MANAGEMENT METHODS take much of the strain out of retailing by spotlighting the dealer's objective, then making sure that he gets there

RUNNING YOUR BUSINESS without a "budget" is like driving your car without a destination. Ultimately you wind up *somewhere*, but whether it's where you want to be or not, is a matter of luck.

Operating your business on a budget is knowing just where you are going—and going there.

Typical "Figure-Picture"

It's *planning* your work, and working your *plan*.

Making your plan is not really hard.

Let's take a typical radio business, and see what we can do. The figure-picture of a typical business looks like this:

Sales	\$30,000	
Cost of Mdse. Sold	18,000	60%
Expense	10,500	35%
Margin	12,000	40%
Net Profit	1,500	5%
Average stock (@ cost)	3,000	
Turnover	6	

Cost of merchandise at 60 per cent of sales is high, and we must give serious question to whether we

have been trading in at too high a figure or not. Because our volume is certainly enough to get better than 40 per cent discount across the board.

Now let's see where our sales came from last year.

Our sales book gives the following figures:

Jan.	Feb.	Mar.	Apr.	May	June
\$2,430	\$1,530	\$2,160	\$1,710	\$1,950	\$1,350
8.1%	5.1%	7.2%	5.7%	6.5%	4.5%
July	Aug.	Sept.	Oct.	Nov.	Dec.
\$1,260	\$2,160	\$2,310	\$4,230	\$3,930	\$4,920
4.2%	7.2%	7.7%	14.1%	13.1%	16.4%

Detailed Stock Study

Now let's look at our stock. Our average stock was \$3,000—composed of 4 lines and some odds and ends:

one line accounted for	35% of sales
another line gave	25% of sales
a third line resulted in	20% of sales
the fourth was responsible for	15% of sales
and odds and ends	5% of sales

When we analyze sales and stock, we find this condition:

	Sales	Average Stock at Cost	Margin	Turn-over
Consoles.....	\$12,000	\$1,300	45%	5
Compacts.....	8,000	600	40%	8
Combinations.....	6,000	850	50%	4
Portables.....	4,000	2.0	40%	11

Not much question, but our stock was out of balance with our sales, last year, but we will "budget" our stock for 1940—and buy accordingly. It is the consensus of opinion that the radio business in 1940 will be from 12 to 15 per cent better than in 1939.

So, let's budget our sales at 10 per cent over 1939, to be conservative.

Our average stock might be planned this way:

	Jan.	Apr.	July	Oct.	Average
	Feb.	May	Aug.	Nov.	
	Mar.	June	Sept.	Dec.	
Consoles.....	\$1,200	\$800	\$800	\$2,000	\$1,200
Compacts....	600	800	800	1,000	800
Combinations.	600	500	400	1,000	625
Portables....	250	350	500	350	375
Total.....	\$2,650	\$2,450	\$2,500	\$4,350	\$3,000

Note that our stock varies season-

HERE'S HOW to plan purchasing and promotion for the 12 to 15 per cent sales increase expected this year

ally, to keep in line with seasonal sales, to offer broader assortments when the lines are in demand.

Apportioning Overhead Expenses

Before we get away from our stock plan—let's take a look at that fourth line of sets.

That looked good when we bought it.

Long discount—50/10 across the board, something we could "play" with, to meet price competition and still have something left.

But we only got 15% of sales out of it, and had 25% of our stock in it. That held our turnover down, took a lot of floor space, and kept our assortment of the faster-moving models smaller.

And when we got through with our "playing" with it, the long trades and "special deals" ate up the long margin so we had no more left than on a "regular" line, but did have a lot of good capital invested in it. It was harder to sell too.

Might be a good idea to close that line out, and do a better job on the other lines. If we concentrated more, we might even be able to get a better price on one of the other lines. That's a thought. Well, that's our stock and assortment budget.

Now we'll budget our expense.

	1939 Expense		1940 Expense Budget	
Sales	\$30,000		\$33,000
Owner's Salary	2,600	8.65%	2,600	7.8%
Other Salary & Comm.	3,600	12.00%	3,800	11.5%
Rent	900	3.00%	900	2.7%
Heat, Light, Phone	520	1.75%	550	1.7%
Advertising	600	2.00%	660	2.0%
Deliver-Service	660	2.20%	700	2.2%
Int., Ins., Tax	780	2.6%	825	2.5%
General	840	2.8%	760	2.3%
Total	10,500	35.0%	10,795	32.7%
Margin	12,000	40.0%	14,000	42.4%
Net Profit	1,500	5.0%	3,205	9.7%

There's half the story.

We've planned our work, to give double the profit from a 10% increase in sales.

Now, we've got to *work the plan*.

Buying Control Setup

The stock control is simple. Record your inventory in a book, or on cards, with each classification, and each manufacturer's line separate. A columnar book is good.

Indicate on this record exactly how many of each model you need

to complete your planned stock. And don't buy *any* model unless your stock control gives you the "open-to-buy" highsign.

When new models come along, they must replace some existing model, the poorest seller preferably.

On this stock control you must enter your unit sales and record your purchases. Look at it often, follow its signals exactly, and your stock will stick to plan.

Dollar sales too, should be recorded by merchandise classification, so that you may also know your gross profit and your turnover, by departments, and so maintain the balance you have planned as being "right" for your store.

Some smart dealers even figure their turnover by classification down to a cumulative weekly basis. Whether you approach your control problem from this angle or not, you must have *some* means of knowing your stock to sales ratio in small merchandise units, at regular and frequent intervals.

Planned, Yet Flexible

Your budget too, is not rigid, but rather, is flexible. It is only the *ratio*, the balance between stock, expense, and sales that should never be permitted to fall *below* plan.

That doesn't mean that if sales are not up to expectation, you must start cutting and slashing expense, or let your stock go down, and destroy your assortment.

You've got to use your good judgment, with your budget as your guide.

Setting some sales figures on

paper does not constitute a sales plan.

Back of these figures must be your carefully thought out plans for *getting* these sales. The month by month advertising, sales promotion, merchandising actions, which based upon your own previous efforts and results, are calculated to produce the goal you are shooting at.

To keep your operation on the budget, you must give your constant and primary attention to sales.

Not sales in dollars alone—but unit sales, which are better guides.

When your stock control indicates a model's rate of sale turning downward, find out why, and either bring its sales back up to plan, or cut down your stock to the new sales level.

In every merchandise classification you will find the rate of sale may vary between the best seller and the poor seller by as much as 5 to 1.

If the ratio is greater than that it's time you gave serious thought to replacing the poor seller with something more people will buy.

No radio improves in salability with age. And so, when your stock control points out a model that doesn't move, mark it down, put a special tag on it, get it out. It costs you less to take a loss as soon as it stops moving than it does six months later.

Weekly Signposts

The principle advantage in operating a business on a budget lies in the fact that you have detailed

(Continued on page 70)

USED BY "MISTER BIG"

CONTROL SYSTEMS like the one described here are religiously consulted by department stores, constitute one reason why such merchandisers appear to "guess the market" with such uncanny skill

More About SOUND RENTAL CHARGES

By **ROBERT S.
NASH***

IN JUNE 1939 I discussed in these columns charges made by dealers for the rental use of sound equipment.

Immediately, and almost continuously ever since, I have had a veritable hornet's nest of mail about my ears. The article apparently "hit the jackpot," focussing attention sharply upon a problem with which many soundmen are much concerned but few in agreement.

Bouquets and Brickbats, both have been helpful. For the one thing that can solve the very difficult problem of more generally establishing profitable rental rates is open discussion and plenty of it. The reason why rental rates have been so ragged, considered nationally, is because each individual operator has tried to solve the problem himself.

Those Were Minimum

Most soundmen who have written realized that the figures published in June were average *minimum* charges obtained by "pooling" lowest rates used by men contributing data to the survey and that they were advanced more as a starting point of fact from which discussion could proceed than as anything resembling a "standard." I said so, but apparently not strongly enough.

Assuming that few if any sound installations are identical with respect to installation time required, operating time and removal, it was left to the discretion of soundmen to determine just how much *more* the prospect should pay and to bid accordingly on each installation. Used without such discretion, of course the rates listed would often be too low. They represented "rock-bottom" below which loss was certain.

It is, of course, granted by the writer that the minimum scales cannot apply at all to installations where bidding is below \$5.00. Such

* Sound Specialist



What's YOUR Bid?

JOB YWCA Dance
TIME 8 PM to Midnight
INSTALL & REMOVE 1 Hour
ATTENDANT 1 Operator
EXTRAS Extra Microphone

business is handled at a loss by everyone who has modern equipment, an established business, normal overhead and an eye to profit.

It is, may I also note, poor policy to handle some \$500.00 worth of rental business and make a profit of \$100.00, if by judicious bidding \$350.00 worth of business will result in the same profit or better. Soundmen too infrequently keep this in mind.

Not So Low

Furthermore, the sooner a soundman starts on a systematic scale of bids, the sooner he will be selling *service* and not price. And service in the end is a better sound salesman than price, because price can always be bidden under while service remains an obstacle that oppo-

sition cannot overcome unless they better it.

Taking a medium sized installation which would require an operator, the following charges are frequently made for an 8 p.m. to 12 midnight occasion, assuming that one hour is required for the installation and the removal of equipment:

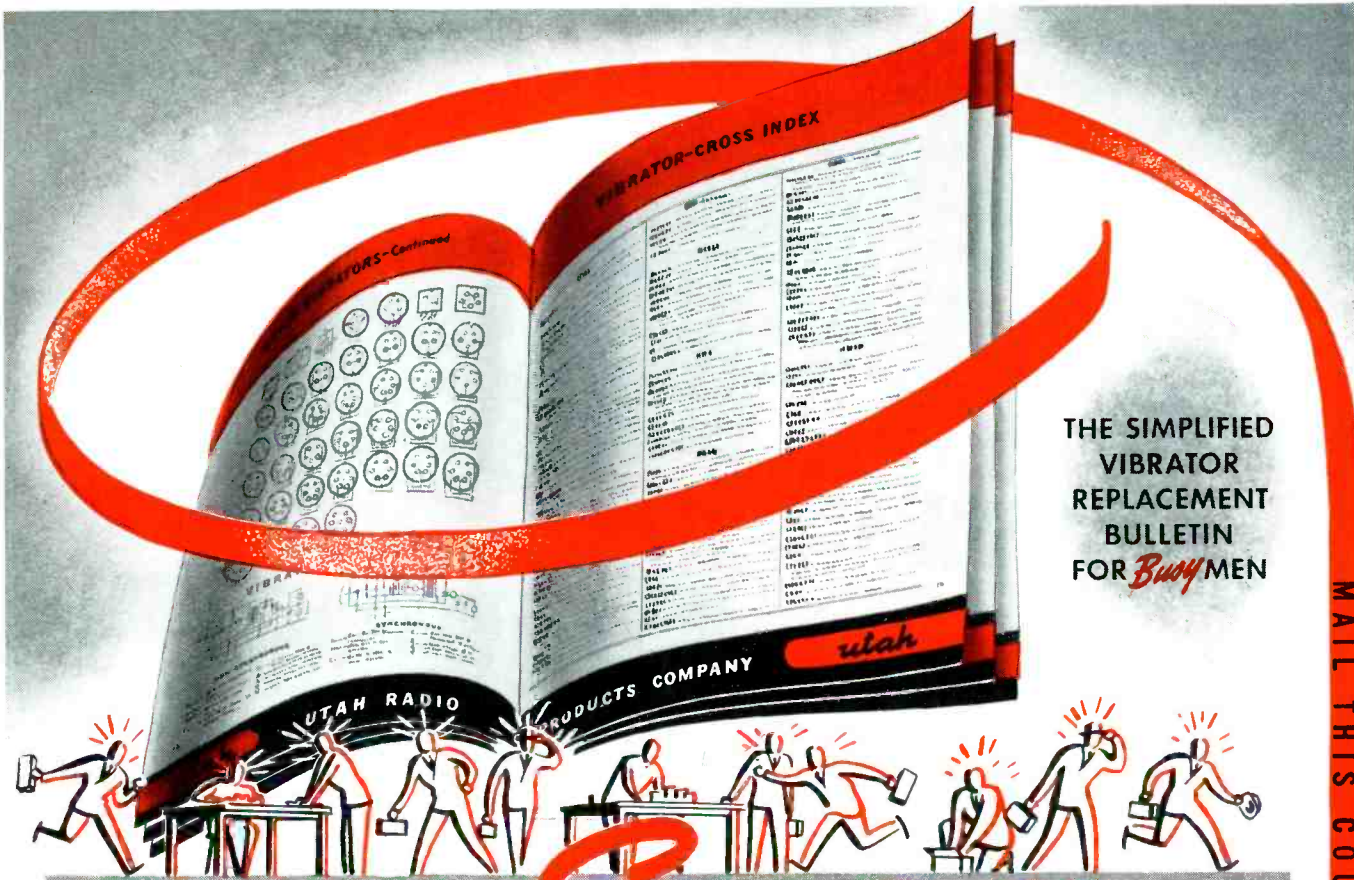
Installation & Removal, (one hour) \$2.00
 Operating Time, (four hours) 6.00
 One Extra Microphone 1.50

TOTAL AMOUNT OF BID \$9.50

As mentioned in the previous article already referred to, this is the *minimum* at present charged by sound dealers, average in round figures on their reports.

It would certainly appear that this \$9.50 charge represents the *rock-bottom* price for an affair of this nature; \$12.50 to \$15.00 should be charged. However, if the sound dealer does such a job himself (as 76% do) it means roughly

(Continued on page 70)



THE SIMPLIFIED
VIBRATOR
REPLACEMENT
BULLETIN
FOR *BUY* MEN

MAIL THIS COUPON FOR YOUR FREE COPY

COMPLETE

Easy-to-Use

VIBRATOR REPLACEMENT BULLETIN

Your free copy of the new vibrator replacement bulletin is ready for you. It is complete, contains all the information a competent service man needs for auto radio and battery-operated home receiver replacements. Unnecessary information, simple facts that experienced service men already know have been eliminated to save your time and to increase the bulletin's usefulness to you.

Mail the coupon for your free copy of this time-saving, money-making bulletin today. There is no obligation.

REPLACE WITH UTAH AND BE SURE OF SATISFIED CUSTOMERS

Here are some of the reasons for the 63% increase in demand for Utah Vibrators: 1. The Utah line provides exact replacement for every vibrator requirement. 2. Absolute dependability is assured by Utah's rugged, time-proved construction. 3. Finest materials obtainable are used in the manufacture of Utah Vibrators. 4. "Life Tested" in Utah's laboratory—the industry's most versatile and best equipped. 5. 12 months' guarantee—against defective workmanship and materials.

You can capitalize on these advantages by insisting on Vibrators that carry the Utah trade-mark.



VIBRATORS

SPEAKERS • TRANSFORMERS

UTAH-CARTER PARTS

UTAH RADIO PRODUCTS CO.
810 Orleans St., Chicago, Ill.

Mail me a free copy of the Simplified, Easy-to-use Vibrator Replacement Bulletin.

Name

Address

City State



**GROWTH IS
A SIGN
OF
SYLVANIA
SUCCESS**

Sylvania

**SET-TESTED RADIO TUBES
NOW SOLD IN 124 COUNTRIES**

Plants at:

Emporium, St. Marys, Pa., and Salem, Mass.

LAST YEAR, two new wings were added to the Sylvania radio tube plant at Emporium. This and other past additions represent an increase of floor space for radio tube manufacturing from a small building of approximately 5,000 sq. ft. in 1925 to a total of almost 4½ acres of floor space (196,000 sq. ft.) in efficient modern buildings in 1939.

This rapid growth, made possible by world-wide acceptance of Sylvania radio tubes is due, we feel, to a recognition of the high quality and dependable performance of our product.

HYGRADE SYLVANIA CORP., 500 FIFTH AVENUE, NEW YORK CITY

You Can Sell ROOM COOLERS



NO LONGER JUST MILLIONAIRES—The average man-in-the street can now afford new, low-priced “packaged” units such as this Airtemp Cool Breeze

ROOM-COOLERS are coming fast, to chalk up plus sales on dealer charts, to put plus profits in some dealer pockets.

Understand, there is no great throng *fighting* to buy them, but the latent demand is great, and public acceptance is growing rapidly.

A good specialty selling job will turn this acceptance and demand into sales.

The public can be sold room-coolers by *any* alert retailer, no matter what his major line may be, but the field is particularly inviting to the radio-appliance dealer.

Not only are room-coolers important to the radio-appliance dealer for their direct sales and profits, but for the many prospects for other appliances and radios which satisfied customers will in turn open up.

Use your radio and appliance customers to sell room-coolers, use your satisfied room-cooler customers to sell radio and appliances.

Need Is Readymade

Now is the time for radio dealers to look into room-coolers, pick their line, and go to work. For, while distribution channels are not yet set, they will certainly begin to jell this year.

And if the radio dealer doesn't take them on, someone else will.

There is no greater buying urge than health and comfort. Room coolers provide both.

The public has long wanted re-

lief from summer discomfort. Now room-coolers provide what the public wants at a price they can afford to pay.

It remains only for you to remind the public that they *do* want such relief, that *you* sell room coolers, and that the *price* is now in reach of almost *anyone*.

How To Get Started

Don't think of room-cooler sales in telephone numbers. But, many alert dealers can certainly sell 25 to 50 room coolers this year, and have the stage all set for several times as many next year. How?

In every town you will find the doctor, the dentist, the lawyer, the beauty shop, the millinery shop, the dress shop, the women's shoe store, the confectionery and many other stores are excellent prospects.

In such places room-coolers quickly pay for themselves by bringing in new business.

Not many of these people who enjoy the benefits of room-coolers during the day will spend sleepless

nights without a room-cooler in their homes.

Room-cooler rentals to hospital patients provide a source of revenue, and prospects, easily sold later for their home comfort.

One sale quickly leads to another, because, though everyone wants relief from summer heat, few know how simply, how inexpensively room-coolers will give them just what they want.

Your selling job is to get your room-coolers in, tell the world you've got them, and what they will do.

Arrange demonstrations, capitalize on some prominent installations, equip your own store and advertise it, use direct mail, to a selected list, freely,—and *talk relief from summer discomfort*, plainly.

Year 'Round Proposition

Point out too that room-coolers will filter and circulate the air any time, offer a genuine relief to those

(Continued on page 71)

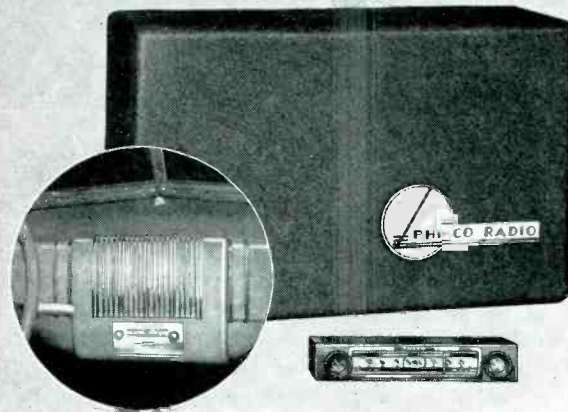
PHILCO All Means Profits

PHILCO RADIOS and PHONOGRAPHS



Dealers everywhere acclaim Philco for 1940 the most popular, most salable and most profitable line of home radios in the entire industry! Whether your customers prefer a beautiful console or a smart table model... a luxurious radio-phonograph or a handy portable... there's a big-value Philco to exactly meet their needs and pocketbook. And in the low-priced compact field, Philco Transistones are unsurpassed for quality and performance. See them at your distributor's—or mail coupon.

PHILCO AUTO RADIOS



For 1940 Philco offers you the finest, most complete line of auto radios ever built. New features that offer performance and convenience never before possible! New values that make Philco the easiest auto radio in the world to sell! Models for every purse and preference... including the

Sensational, New Philco SHORT-WAVE AUTO RADIO

Yes, for the first time, a *short-wave* Auto Radio that tunes in *foreign* stations direct... that enables you to switch to short-wave American broadcasts when standard reception is poor. Makes *all* car owners your prospects, whether they own auto radios or not... opens up an entire new field of profitable business. *Only Philco has it!* For details, see your Philco distributor—or mail coupon.

HOME RADIO • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO TUBES • PARTS • REFRIGERATORS

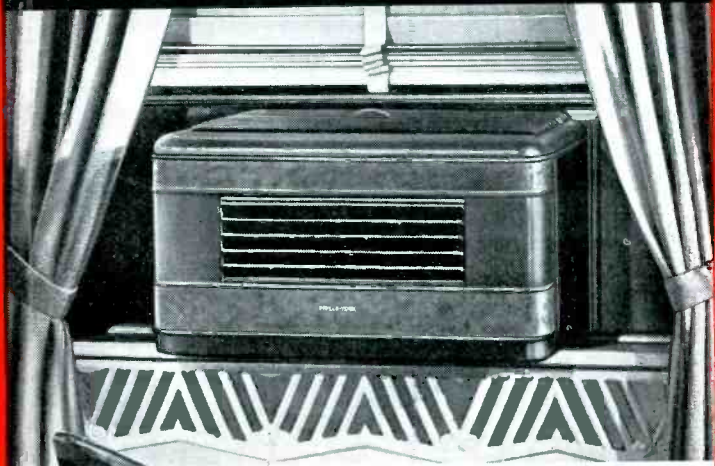
Year 'Round All Year 'Round!

PHILCO REFRIGERATORS



A new kind of refrigerator . . . offering you sales and profit opportunities no other refrigerator can match! The old-fashioned freezing unit that takes up space in the center of the refrigerator is *gone*. Instead, Philco gives you *two* separate freezing chambers . . . one for ice cubes and the other a *giant-size, separate* Frozen Food Compartment for frozen food, frozen desserts, ice cream, etc. *Plus* a Dry Cold Compartment, a Moist Cold Compartment and the famous Conservador, or Inner Door.

PHILCO-YORK AIR CONDITIONERS



Now—get in on the ground floor of America's fastest growing industry with Philco-York Portable Air Conditioners! A complete line of 1940 models . . . at new low prices that make every office and home a prospect. Easily and quickly installed, without wiring or plumbing. *No trade-ins* . . . FULL PROFITS! Big direct mail and magazine campaign, plus powerful dealer helps. See your Philco-York distributor—or mail coupon.

**MAIL
COUPON
NOW!**

PHILCO, Dept. 602

Tioga and C Streets, Philadelphia, Pa.

Please tell me more about the Philco All Year 'Round profit opportunities. I am particularly interested in

- Philco Radios and Radio-Phonographs
- Philco Auto Radios
- Philco Refrigerators
- Philco-York Air Conditioners

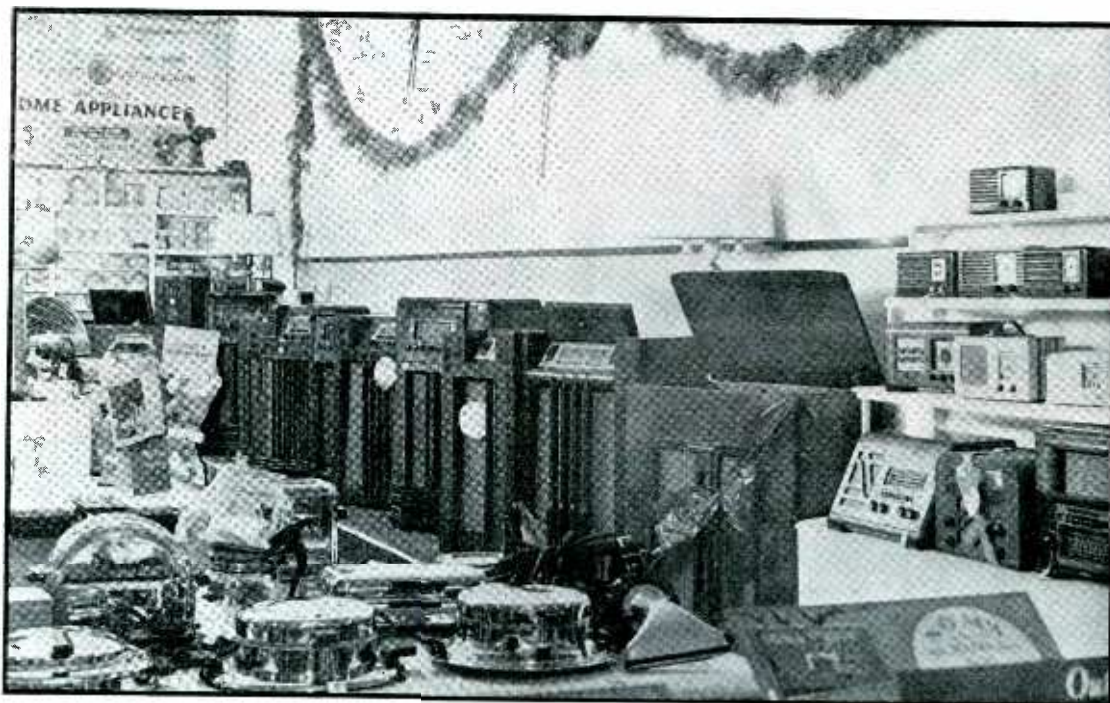
NAME _____

STREET _____ COUNTY _____

CITY _____ STATE _____

• AIR CONDITIONERS • DRY BATTERIES

PROFIT... IS WHERE



EXTRA SET SALES developed by Service Electric of Oconomowoc, Wisconsin, proving eye-opener for firm until recently concentrating on conventional home uses

By MARTIN FRANCIS*

MYSTERY to many is why more radio dealers don't place more radios in more places of business.

Possible explanation is the fact that volume naturally resides largely in homes and retailers hesitate to divert sales effort from this admittedly major market to one which by comparison seems "small potatoes."

But is it?

Another possible explanation is the fact that many dealers have become blasé about their own merchandise and jump to the conclusion

* *Special Correspondent*

that other businessmen, too, are "hard-boiled."

But *are* they?

In these pages are five pictures of five actual places in which the Service Electric Company of Oconomowoc, Wisconsin, without excessive effort closed *extra* set business. Not pictured are filling stations (Partners, N. W. Smith and Bob Kuenne, say a quick canvass here moved 12 trade-ins, 4 new models).

We won't bore you with a list of other logical business prospects for radio beyond the bare suggestion that you fill in after *restaurants, amusement places, factories, watch-*

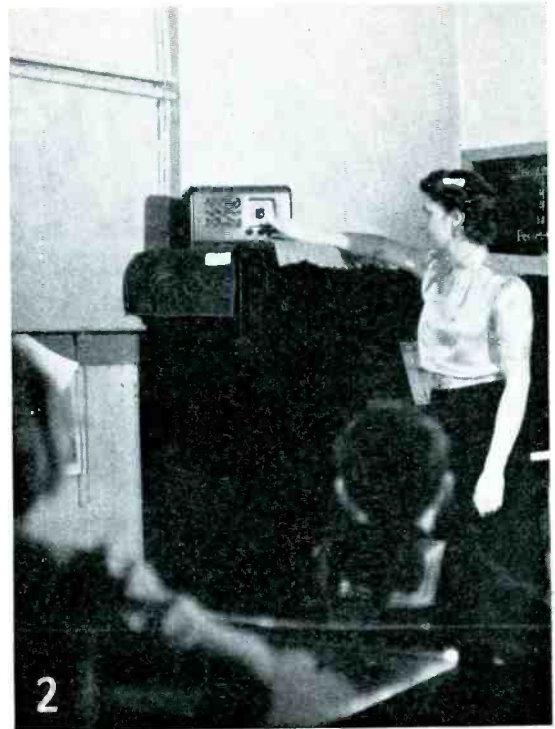
men, stores whose products are advertised over the air

Service Electric has even gone so far as to canvass business offices soliciting service work on the *home* sets of employees. A similar office canvass is at present proving very effective in diverting auto-radio business to the store as most people in Oconomowoc (pronounced, by its 5,000 inhabitants . . . "Oconomowoc"!) drive their cars to work and talk about them more readily there than at home.

Is this a potential market for radios so many dealers can ignore?

Business is where *you* find it

YOU FIND IT



- 1 POLICE—Chief Carl Marquardt bought this allwave set, for professional as well as personal use at headquarters
- 2 SCHOOL—Some teachers, failing to induce their local boards to buy, will spend their own money for a classroom radio
- 3 HOTEL—H. Johnson, manager of the Majestic Hotel, keeps a portable on the desk, uses it himself or rents it
- 4 OFFICE—Can't say whether this steno listens to business news or love serials but Furney Insurance bought the set
- 5 BARN—Partner N. W. Smith tunes a trade-in he's just sold. (Partner Bob Kuenne appears in service shop photo at left)



Every house needs
Westinghouse



IT'S
RING-TIME
for

WESTINGHOUSE REFRIGERATOR RETAILERS
Don't miss the big Westinghouse "Ring-Time" Meetings
... there'll be one near you soon!

Yes! Spring time is "Ring-Time" this year for Westinghouse Refrigerator Retailers! The new "Faster for '40" Pacemaker Refrigerator Line is sounding a new note in style, features, and all-around *salability*. Prices are down to strictly competitive levels—with something *extra* for you to offer in every model. "Selling up" is made easier than ever—profit opportunities amazingly increased. You'll agree that Westinghouse "rings the bell" as never before when you get this sensational product story at the coming "Ring-Time" Meetings.

But you'll find *product* only *half* the story at these meetings! To help you ring up a bigger share of 1940's \$50,000,000 range and refriger-

ator market, Westinghouse will ring up the curtain on the most complete seasonal advertising and promotion program in Westinghouse history! Magazines! Newspapers! Radio! Demonstrations, displays, dynamic local promotions! A wealth of selling help from contact to closing—including a brand-new, sure-fire traffic-building plan that's too good to disclose here. Learn all about it at your local "Ring-Time" Meeting.

You're invited! *Make no commitments* of any kind until *after* this meeting. Plan for a ringside seat at "Ring-Time," and see for yourself how much *more* Westinghouse offers for 1940!

- "RING-TIME" MEETINGS SCHEDULED IN THESE CITIES:**
- | | | | | |
|------------------|--------------------|----------------------|----------------------|-----------------------|
| Akron, O. | Columbus, O. | Little Rock, Ark. | Orlando, Fla. | San Francisco, Calif. |
| Albany, N. Y. | Dallas, Tex. | Los Angeles, Calif. | Philadelphia, Pa. | Scranton, Pa. |
| Atlanta, Ga. | Dayton, O. | Louisville, Ky. | Phoenix, Ariz. | Seattle, Wash. |
| Birmingham, Ala. | Denver, Colo. | Memphis, Tenn. | Pittsburgh, Pa. | Spokane, Wash. |
| Boise, Idaho | Des Moines, Ia. | Milwaukee, Wis. | Portland, Ore. | Springfield, Mass. |
| Boston, Mass. | Detroit, Mich. | Nashville, Tenn. | Raleigh, N. C. | St. Louis, Mo. |
| Buffalo, N. Y. | Houston, Tex. | Newark, N. J. | Richmond, Va. | St. Paul, Minn. |
| Charlotte, N. C. | Huntington, W. Va. | New Orleans, La. | Rochester, N. Y. | Syracuse, N. Y. |
| Chicago, Ill. | Indianapolis, Ind. | New York, N. Y. | Salt Lake City, Utah | Toledo, O. |
| Cincinnati, O. | Kansas City, Mo. | Oklahoma City, Okla. | San Antonio, Tex. | Washington, D. C. |
| Cleveland, O. | Knoxville, Tenn. | Omaha, Nebr. | San Diego, Calif. | Wichita, Kan. |

"RING-TIME" DATES BETWEEN MARCH 8 and APRIL 12
ASK YOUR WESTINGHOUSE DISTRIBUTOR FOR DATE OF YOUR MEETING

NEW WESTINGHOUSE PROGRAM RINGS BELL ON EVERY COUNT!

BONG!

Important improvements, and new low prices will be dramatized in smashing full color magazine advertising, key city newspapers, the 97-station "Musical Americana" weekly radio program and the new "Ring-Time" promotion.

BR-R-RING!

NEW PEP AND PUNCH BEHIND LOCAL SALES PROMOTION!

Complete sales training and selling help program makes it easier than ever to demonstrate greater Westinghouse value. Every type of retail outlet will benefit from this new and broader assistance, covering every step of the sale.

Z-Z-Z-ZING!

NEW OPPORTUNITIES FOR GREATER RETAIL VOLUME AND PROFITS!

Westinghouse price reductions protect retail profits, not only through greater volume, but in actual dollars-and cents per sale! What you will learn at your local "Ring-Time" meeting will be reflected in your balance sheet and bank account.

TUNE IN "MUSICAL AMERICANA"

Thursdays, 8 P.M. Eastern Time,
7 P.M. Central Time, N.B.C. Blue
Network. (8:30 P.S.T.; 9:30 M.S.T.)

Westinghouse Refrigerator
THE PACEMAKER . . . NOW FASTER FOR '40!

TYPICAL "OVERSIZE SIX"—Electrics such as this Norge are a "natural" for low income groups, provide a springboard for selling-up too



REFRIGERATION'S Twin-Market

REFRIGERATOR MERCHANDISING in 1940 is taking on new and important slants.

With something over 55 per cent of the market saturated, selling efforts from now on will have to be two-fold.

First, is the continued effort for original installations, increasing the market penetration.

Price here is probably the dominant factor.

All major producers have drastically lowered their prices this year to go after this class of business, and volume will respond.

Second, is the replacement market.

Manpower the Thing

Last year about 25 per cent of all boxes sold were replacements. This year replacements should account for 30 to 35% of sales, and if you really go after them, replacements may run up to 40 or 45% of sales in certain areas.

With prices reaching for new lows, to entice the lower income market into buying, margins also have shrunk in some instances.

It is doubtful if the average dealer can sell any substantial portion of his total boxes in the lowest price bracket and show a real profit on his operation.

To make a profit in refrigeration in 1940 it is imperative that dealers "sell up"—get more of their unit sales into the higher priced brackets.

The replacement market still re-

LOWEST PRICED MODELS insure further market penetration while other, deluxe boxes, aim at important replacement profits

quires *selling*. Selling means man-power. Man-power means *men*—trained men, and well-paid men.

Sales Tips

Train your men to "dress up" your higher priced boxes with all the features, and "sell the features" with all the tricks in the bag.

Point out strongly that multiple temperatures and varied humidity are necessary to safely preserve various kinds of food. And prove your point. Make this impression on your customer's mind indelible.

Emphasize the growing importance of frozen foods, because of their convenience, and how much can be preserved indefinitely in your "deluxe job."

Every line has its features.

Dramatize them, *glamorize* them and *sell* them, for your profits lie right there.

Break your prices down into monthly, weekly, or even daily amounts, to emphasize how little more deluxe boxes really cost.

Compare the features of your 1940 boxes with refrigerators of 7 to 10 years ago.

Such comparisons will make an excellent series of direct mail cards to stimulate the buying urge of present owners of older boxes.

And they are interesting subjects of phone conversations with the old owners too.

Shout your "price" from the housetops to bring the people in, but don't make the mistake of letting anyone "buy" your lowest price jobs until you have "given them the works," on the deluxe boxes.

It'll cost you money if you do.

Payoff Where It Pays

Concentrate your actual face-to-face selling on the better boxes.

Pay your men more, much more, for selling the higher priced job.

A real selling job is worth 15% today, as it was 5 and 10 years ago.

Margins are less on your price leaders than they used to be.

The commission rate should vary too. For example:

On net unit sales, after all allowances or trade-ins, pay 5% on sales under \$135. From \$135. to \$175. pay 10%, and over \$175. a commission of 15%. This would put the incentive where it belonged, and the pay-off where it was earned.

There's plenty of profit left in refrigerator merchandising if you merchandise aggressively and keep a hard hitting crew "selling up"—and happy.

Try This on WASHERS

SIMPLE and effective is the five-step washer sales system employed by Sam Shapiro of Milwaukee's Royal Radio Store. Here, in a nutshell, is the way it works:

Everyday, the illustrated inexpensive ad is run in classified newspaper columns. The column headline labels merchandise "used." Repetition of the word in advertisers' copy is not required.

Women bite on the legitimately low price, go to the store. There a window devoted to the best new machines stocked gives them their first "build-up," even before they enter.

Within the store, prospects are

deliberately conducted between rows of new machines to the basement, where used washers are displayed. Several are quickly shown at and above the advertised price but during the conversation the salesman repeatedly manoeuvres into positions from which a few swanky new machines scattered around as "decoys" must be seen. This is the heart of the plan.

Most women gravitate to the new machines, assuming that these are slightly used, cheap. Delaying the statement that such machines are new, by any subterfuge that occurs, long enough to elaborate on their features and even make demonstra-

tions, salesmen get in "sell-up licks," then tell. Frequently their job has by this time been done so well that women can be painlessly conducted back to the new washer display, removed from the proximity of used machines.

Obstacle occurring at this time is generally cost. Obvious method of hurdling it is to convert conversation about total cost of used washers into down-payment on new machines. With sufficient regularity to be extremely profitable the stunt works.

Last step is getting women to phone their husbands to come to the store and ok a time deal.

ROYAL RADIO of Milwaukee swears by FIVE-STEP SALES SYSTEM



1

DAILY CLASSIFIED AD

2

SHOW WINDOW TIE-IN

3

USED MACHINE DISPLAY

4

SWITCH TO NEW MODELS

5

TIME-PAYMENT CLINCHER



GET PROFITABLE VOLUME WITH GALE!

"I THINK THE NEW LINE OF GALE REFRIGERATORS IS WONDERFUL! ... I WOULDN'T TAKE \$1000 FOR MY DEALER'S FRANCHISE..."



Excerpt from a letter—name and address on request.

Gale

'KIT PLAN'

This is Gale's revolutionary new merchandising idea! With only 9 cabinets—including four, five, six and eight foot sizes—you can show 18 beautiful refrigerators! You actually offer more models with less inventory investment! You can meet any price or feature competition instantly! With Gale, you can be the tough competition! Find out just how this amazing 'Kit Plan' works!

BRILLIANT 1940 LINE

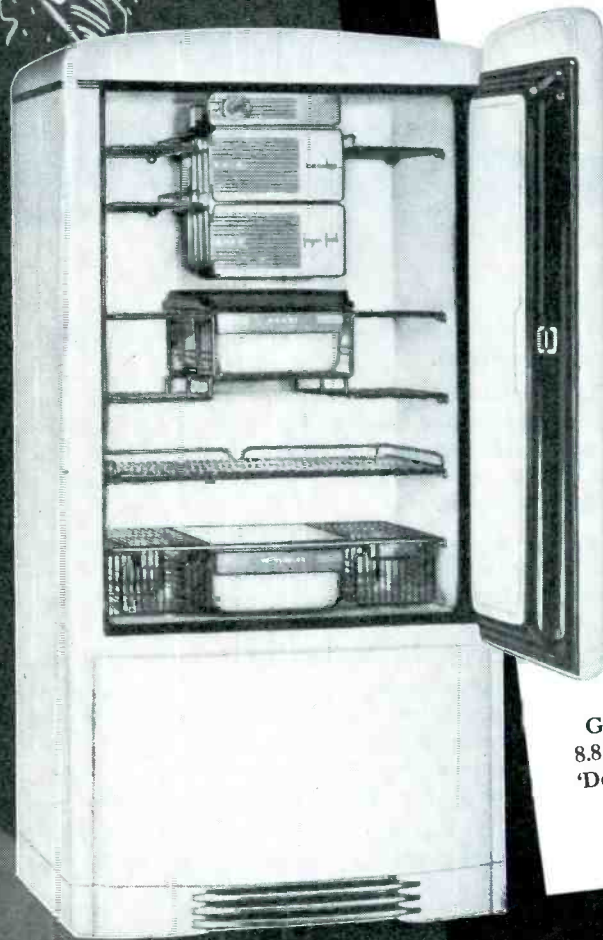
The Gale line is complete—4's, 5's, 6's, 8's, even a 13.5 foot model, to meet every family's needs. Yet you keep inventory low! It's a beautiful line—superbly-styled cabinets—interiors of surpassing beauty—porcelain, chromium, rich blue plastics! Gale has features—everything to help you sell! Price for price, the arrangement and equipment of Gale refrigerators is outstanding!

DIRECT-FROM-FACTORY

Gale sells direct from factory to dealer to give you lower prices, real help and true cooperation. No "high pressure" or quotas from the factory. You make your full margin on every Gale refrigerator that you sell! There are plenty of leaders in the Gale line but no loss leaders. Even the lowest-priced Gale gives you a worth-while profit!

GALE PRICES ARE RIGHT!

We waited to see—now we know! Gale's 1940 prices are emphatically RIGHT! "Play Gale right across the board"—you'll find that model for model, size for size and feature for feature, Gale refrigerators are PRICED LOWER but your margin is BIGGER! Get the facts and see for yourself!



GALE
8.8 Cu.Ft.
'De Luxe'

"NOW THAT THE EXCITEMENT IN THE INDUSTRY HAS QUIETED DOWN, THIS FACT STANDS OUT: YOU CAN BUILD PROFITABLE VOLUME WITH GALE."



GALE PRODUCTS

Division of Outboard, Marine & Manufacturing Co.
GALESBURG, ILLINOIS
In Canada, GALE Products, Peterboro, Ontario

Build Extra Volume and Extra Profits with GALE SPACE COOLERS New! Materially improved performance and efficiency. Two fast-selling models let you cash in on a tremendous new market!



GALE Products
1627 Monmouth Blvd.
Galesburg, Illinois

GENTLEMEN: Without obligation you may send me your low 1940 prices and full information on Gale refrigerators.
Include facts on Gale Space Coolers

COMPANY _____
ADDRESS _____
CITY _____ STATE _____
BY _____ TITLE _____

Over a third of a million pieces of electrical refrigeration compressor equipment have passed over Gale's production line in the past five years.

Here's the Finance Plan for YOU..

Here's WHY



FIRST in importance to you, in any finance plan you work with this year, is the question:

*"Will the plan attract the buyer—
and still assure my full profit?"*

There's no use your making sales if you don't pocket a profit out of them. And it's hard to make—and *bold*—a profit if the customers' rate is made low at *your* expense.

So Commercial Credit Companies bring you the new **DEALER RESERVE PLAN**, in which the first consideration is the protection of your merchandise profits.

It boils down to this:

A large part of your 1940 sales will be time payment sales. On a certain percentage of these sales, you may have to make repossessions.

After you get through paying the repossessing, reconditioning and re-selling expenses, you can seldom realize enough to show a profit—frequently you take a loss.

Most repossessions will occur in the first six months. A plan that doesn't give you protection during this crucial period lets you down. It doesn't do any good to lock the barn *after* the horse is stolen.

Commercial Credit Dealer Reserve Plan protection starts the day you make the sale, with a cash reserve set aside for you which runs as high as \$5.40 a deal.

There's the meat of it—*Profit Protection*—point number one, in *your* favor.

Do you think this protection forces higher rates to your customers? On the contrary. On this, and on all other Commercial Credit plans available to you, rates have been substantially reduced. That's point number two—and it's also in *your* favor.

Among the other plans referred to are the Limited Liability Plan—popular with many dealers—as well as the Purchaser Discount Plan—created to reward prompt paying purchasers.

Commercial Credit plans are backed by a liberal, highly efficient credit and collection service, and require but a single, simplified rate chart. Special plans are available for short-term financing; for quarterly payments by farmers; for combination and "add-on" sales; and a liberal, low-cost FHA plan for financing eligible equipment.

These are the high spots. Talk to your local Commercial Credit representative, and let him fill in the interesting details. It will be decidedly to your advantage.

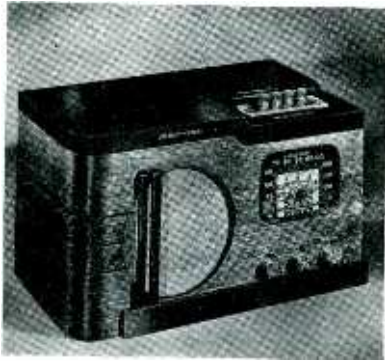
* * * *

Commercial Credit Companies offer a Floor Display Plan for financing a single unit or an entire display of new merchandise. Terms are liberal and the charges extremely low. Dealers may also arrange to demonstrate this merchandise in the prospect's home. Ask your local office for full details.

COMMERCIAL CREDIT COMPANIES

AUTO RADIO Specifications

Model Number	List Price	Tuning Range (Kc.) (1)	Type Tuning (2)	Speaker Type, Size, and Location (3)	Recommended Antenna (4)	Audio Output (Watts)	Tone Control	Vibrator Type (5)	Battery Drain (Amps.)	I. F. Peak	Number and Type Tubes (6)	Dimensions (Inches)
Automatic Radio Mfg. Co., 122 Brookline Ave., Boston, Mass., (Automatic)												
M20	\$19.95	1560-540	D	5ES	TFU	3	Yes	NS	6	456	5G	11x7x5
M60	21.95	1520-540	D	5ES	TFU	3	No	NS	6.5	456	6G	11x7x5
M66	29.95	1520-540	DP	5ES	TFU	3	No	NS	8	456	6G	12x11x5
M77	24.95	1520-540	D	5ES	TFU	3	No	NS	8	456	6G	12x11x5
M90	24.95	1520-540	R	5ES	TFU	3	No	NS	8	456	6M	9x8x7
911LW	21.95	1520-538	D	5ES	TFU	3	No	NS	6	456	5G	11x7x5
M66LW	23.95	350-147 1520-538	DP	5ES	TFU	3	No	NS	8	456	6G	12x11x5
Belmont Radio Corporation, 1257 Fullerton Ave., Chicago, Ill., (Belmont), (Freshman Masterpiece)												
678		535-1565	PR	8ES	BTF WU	11.1	Yes	S	7.3	465	6GM	6x8 3/4
579		540-1550	PD	5ES	BTF WU	2.9	No	NS	5.5	465	5GM	7 1/2 x 5 1/4 x 5 1/4
The Crosley Corp., Cincinnati, Ohio, (Crosley)												
A-450	\$14.99	540-1520	D	5E	W	3	No	NS	6.6	455	5GT	12x6x6
A-150	19.99	540-1520	D	5E	W	3	No	NS	6.0	455	5GT	13 1/2 x 5 1/2 x 5
A-350	24.95	540-1520	DP	5E	W	3	No	NS	6.0	455	5GT	12 1/2 x 5 1/2 x 5
A-250	29.95	540-1520	DP	5E	W	3	No	NS	6.0	455	5GT	13 1/2 x 5 1/2 x 5
A-160	34.95	540-1520	DP	6EC*	W	5	Yes	NS	8.0	455	6GT	12 1/2 x 5 1/2 x 5
* Speaker mounts behind grille on dash or in housing on cowl. Select item.												
Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill., (Motorola)												
250	\$24.95	535-1550	D	C	*	2.5	No	NS	6.5	455	GT	
300	29.95	535-1550	R	5ES	*	3	No	NS	6.2	262	GT	
350	39.95	535-1550	R	*	*	3.5	Yes	NS	6.5	262	GT	
400	39.95	535-1550	R	7ES	*	4	Yes	NS	6.5	262	GT	
450	49.95	535-1550	R	7 1/2 PS	Special F	4.5	Yes	NS	6.5	262	GT	
500	49.95	535-1550	PR	7 1/2 PS	*	5	Yes	NS	6.5	262	GT	
700	69.95	535-1550	PR	*	*	10	Yes	NS	7.5	262	GT	
25-F	Ford	535-1550	DP	6EC	*	3	Yes	NS	7.0	455	GT	
26-C	Chevrolet	535-1550	DP	6ES	*	3	Yes	NS	6.0	455	GT	
26-C-7	Chevrolet	535-1550	DP	7ES	*	5.5	Yes	NS	7.0	455	GT	
27-D	All Chrysler Products	535-1550	DP	7EC	*	5	Yes	NS	6.5	455	GT	
29-B-6	Buick	535-1550	DP	7PS	*	3.5	Yes	NS	7.0	455	GT	
29-B	Buick	535-1550	DP	8PS	*	10	Yes	NS	7.0	455	GT	
28-O	Oldsmobile	535-1550	DP	6ES	*	5.5	Yes	NS	7.0	455	GT	
30-P	Pontiac	535-1550	DP	6ES	*	5.5	Yes	NS	7.0	455	GT	
34K6	Packard	535-1550	PR	6ES	*	3.5	Yes	NS	7.0	455	GT	
34K7	Packard	535-1550	PR	8EC	*	4.5	Yes	NS	7.0	455	GT	
35N	Nash	535-1550	DP	6ES	*	3.5	Yes	NS	7.0	455	GT	
* Optional.												
General Electric Co., Bridgeport, Conn., (G-E)												
JA-64		540-1540	P	6ES	Optional	3.5	No	NS	7.3	465	6MG	6 1/2 x 7 1/2 x 13
Karadio Corporation, 2233 University Ave., St. Paul, Minn., (Karadio)												
1077	\$55.00	1500-2500*	R	PS	W	2	No	NS	5-6	TRF	5-G	9 1/2 x 7 1/2 x 6
1078	69.50	2-Bands†	R	PHC	W	8	Yes	NS	5-6	456	7-G	9 1/2 x 7 1/2 x 6
1079	79.50	3-Bands†	R	PHC	W	8	Yes	NS	5-6	456	7-G	9 1/2 x 7 1/2 x 6
1080	54.50	1-Band†	R	PC	W	3.5	Yes	NS	5-6	292	8-G	9 1/2 x 7 1/2 x 4 1/2
* Fixed tuned police receiver.												
† Short and long wave.												
Noblitt-Sparks Industries, Inc., Columbus, Indiana, (Arrin)												
510	\$14.95	540-1500	D	5ES	FW*	2	No	NS	5	455	G	11x5 1/2 x 5 1/2
610	17.95	540-1500	P	5ES	FW*	2	No	NS	5	455	G	11x5 1/2 x 5 1/2
710	24.95	540-1500	R	8ES	FW*	3	No	NS	5.2	455	GM	8 1/2 x 8 1/2 x 7 1/2
810	50.00	540-1500	R	8ES	FW*	5	Yes	NS	7.2	175	GM	8 1/2 x 8 1/2 x 7 1/2
* Built-in phantom filter.												
Philco Radio & Television Corp., Philadelphia, Pa., (Philco)												
AR1	\$19.95	†	D	C	C		No	NS		455	6-L	5 1/2 x 12 1/2 x 5
AR2	24.95	†	D	C	C		No	NS		455	6-L	5 1/2 x 12 1/2 x 5
AR3	39.95	†	D-P	C	C		Yes	NS		455	6-L	6 1/2 x 12 1/2 x 4 1/2
AR4	34.95	†	R	C	C		Yes	NS		455	6-L	10 1/2 x 6 1/2 x 4 1/2
AR5	44.95	†	R-P	C	C		Yes	NS		455	6-L	10 1/2 x 6 1/2 x 4 1/2
AR6	29.95	†	R	C	C		No	NS		455	3-L 3-G	9x8 1/2 x 7
AR7	49.95	†	R-P	C	C		Yes	NS		455	3-L 3-G	9x8 1/2 x 7
AR8	69.95	†	R-P	C	C		Yes	NS		455	4-L 3-G	9x8 1/2 x 6
AR9	49.95	† †	R*	C	C		Yes	NS		455	6-L	10 1/2 x 6 1/2 x 4 1/2
† Tunes broadcast band.												
* Push button used to change wavebands.												
† Also tunes shortwaves; 5.9-10, 11.7-11.9 MC.												
Sonora Radio & Television Corp., 2626 W. Washington Blvd., Chicago, Ill., (Clear as a Bell)												
KU-9	\$14.95	535-1600		4ES	WF	0.75	No	S	3	456	6GM	6 1/2 x 7 1/2 x 4 1/2
United Motors Service, 3044 W. Grand Blvd., Detroit, Mich., (Delco)												
R-685*	\$27.45	540-1560	P	5ES	TFWU	3.5	No	NS	5.0	455	5GM	5 1/2 x 6 x 11
R-686	39.95	540-1530	R	6ES	TFWU	4.0	Yes	NS	7.0	260	6GM	7 1/2 x 6 1/2 x 10 1/2
R-687*	49.95	540-1560	P	7ES	TFWU	4.5	Yes	NS	7.0	455	6GM	9x9x4 1/2
R-688†	55.00	540-1560	RP	7ES	TFWU	4.5	Yes	NS	7.0	455	6GM	8 1/2 x 10 1/2 x 6
* Custom set for 1940 Buick, Oldsmobile, Pontiac, Chevrolet.												
† Custom set for 1940 Buick, Oldsmobile, Pontiac, Chevrolet, Plymouth, Dodge, Ford, Mercury.												
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago, Ill., (Arcadia)												
6CH5-421		540-1560	R	6ES	F	6	Yes	S	7.5	175	6GM	10 1/2 x 7 1/2 x 6 1/2
6C13-421		540-1560	R	6ES or C	F	6	Yes	S	7.8	456	6GM	11x8 1/2 x 7 1/2
(1) If Short Waves included but skip-band, indicate Bands												
(2) R—Remote D—Direct P—Pushbutton												
(3) E—Electro-dynamic P—Permanent Magnet S—In Set C—Cowl H—Header												
(4) B—Built-in Roof T—Top F—Fishpole W—Whip U—Under Car												
(5) S—Synchronous NS—Non-Synchronous												
(6) G—Glass M—Metal GM—Glass and Metal L—Loktal												



STEWART-WARNER

TABLE TYPE—Model 07-5S1 with built-in antenna; modernistically designed cabinet of walnut; contrasting dark grille bars against light colored grille cloth. Features a 5-inch dynamic speaker; four pushbuttons or manual tuning; provision for record player and television sound.



CONSOLE MODEL 03-6L7—Attractive for its simplicity of modern design; walnut cabinet finished in two contrasting tones. Features an 8-inch dynamic speaker; manual or pushbutton tuning; provision for record player and television sound. Stewart-Warner Corp., 1836 Diversey Parkway, Chicago, Ill.

RCA



FARM RADIO—Streamlined battery radio, Model 4QB, designed to provide for foreign and American stations, police, amateur, and aviation broadcasts. Easily convertible to a.c. operation. Features 5-inch dynamic speaker; large colorful glass dial, set at convenient angle for good vision while tuning; housed in modern plastic cabinet.



ZENITH

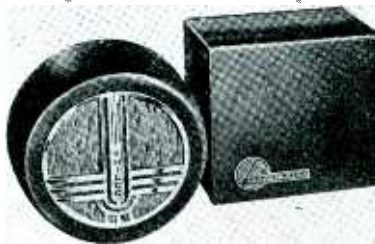
RADIO - PHONOGRAPH — One of the new low combination sets finished in walnut veneering. Designed to conceal automatic record playing apparatus with front panel doors. Contains a personal control of tone values, affording 64 different tonal combinations that are listed on printed chart. A 7-tube model lists for \$129.95; an 8-tube for \$159.95. Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.

Preview of

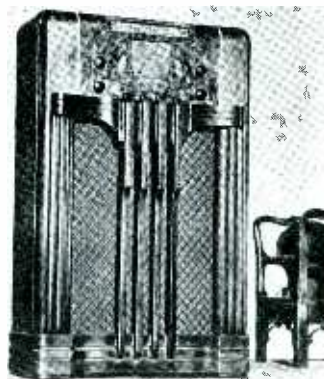
RECEIVER—Model AR-77, a 10-tube instrument, has new treatment of dials; dual r-f alignment; negative feedback; calibrated bandspread; improved noise limiter. Conveniently designed metal cabinet. Has full bandspread dial on 10, 20, 40 and 80 meter bands; uses low-loss insulation. Price \$139.50. RCA Mfg. Co., Camden, N. J.

PHILCO

AUTO RADIO—Model AR-8 is a two unit superhet with 7-tubes; built-in interference filtering; full selectivity; electric pushbutton tuning; automatic volume control, full wave vibrator. Price \$69.95. Philco Radio & Telev. Corp., Tioga and C Sts., Philadelphia, Pa.



MODEL 158F—Console a.c. Superheterodyne receiver with six local tubes; provides for television. Contains electro-dynamic speaker, automatic volume control, seven to one ratio vernier tuning; easy-to-read illuminated dial. Covers standard broadcasts, state and city police and amateur calls; measures 36 $\frac{1}{8}$ " high, 23 $\frac{3}{4}$ " wide, and 9 $\frac{3}{4}$ " deep. Philco Radio & Television Corp., Philadelphia, Pa.



ADMIRAL

PORTABLE—Model 33-FS is a 5-tube superhet with automatic power switch for operation on a.c.-d.c. or 1 $\frac{1}{2}$ volt battery; has heavy duty dynamic speaker; aerospace antenna. Housed in attractive brown tweed case with bakelite carrying handle. Convenient to take on outings. Has easy-to-read slide rule dial; small in size and light in weight. Price \$19.95



PORTABLE—Model 37-66 is encased in handsome brown leatherette on top and sides while front and back panels are of genuine butt walnut with scuff proof finish; features aerospace antenna, 6-tube superhet operating on a.c.-d.c. or 1 $\frac{1}{2}$ volt battery. Price \$29.95. Continental Radio & Tele. Corp., 3800 Cortland St., Chicago, Ill.



New Products

FARNSWORTH

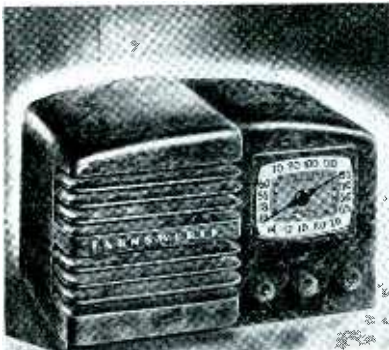


TABLE TYPE—Model BT-20, modern style plastic cabinet, finished in dark red Durez; features easy-to-read dial; 6-tube a.c.-d.c. superhet; automatic volume control; 5-inch dynamic speaker; built-in antenna. Farnsworth Tele. & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.

AUTOMATIC



AUTO RADIO—Model M-20 is a 5-tube superhet; has an automatic volume control, PM speaker, housed in single unit; ruggedly constructed with large rectangular dial. Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.

WESTINGHOUSE



RADIO-PHONOGRAPH—Model WR-476 features an automatic volume control; 12-inch dust proof dynamic speaker; plays 10 or 12-inch records

automatically. Attractive cabinet with front panel of burl walnut, top and sides of walnut veneers. Price \$99.95. Westinghouse Radio Headquarters, 150 Varick St., New York, N. Y.

MAJESTIC



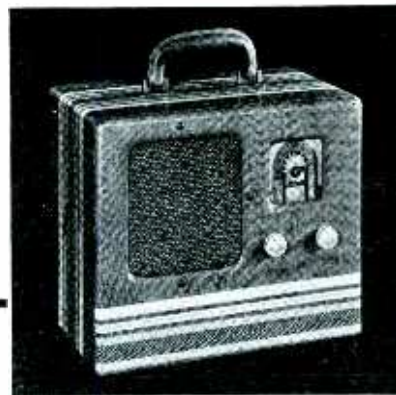
TABLE TYPE—Model 5BDA, a 5 tube superhet with pushbutton control. Equipped for American broadcast and police calls; built in antenna.



CONSOLE—Model 2C60-P is an unusually attractive cabinet providing a combination of radio and phonograph. Panel near top opens to reveal phonograph operating devices. Has rectangular slide rule dial; pushbutton or manual tuning. Majestic Radio & Television Corp., 2600 W. 50th St., Chicago, Ill.

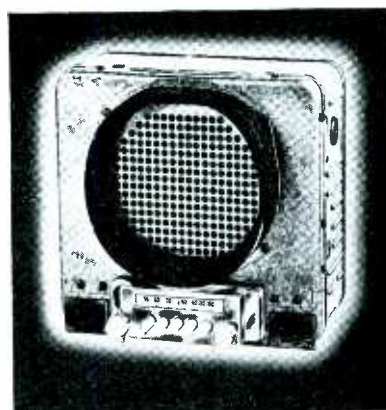
MOTOROLA

TABLE TYPE—Model 40-50W, a 5-tube a.c. superhet with built-in loop antenna, features horizontal, easy-to-read, slide rule dial; manual tuning; two-tone wood cabinet of modern design. Galvin Mfg. Coro., 4545 Augusta Blvd., Chicago, Ill.



PORTABLE—Model 40-65BP, a 3-power portable with 3-gang tuning condenser and r.f. amplifier stage, is a 6-tube a.c.-d.c. superhet; features 6½-inch dynamic speaker; built-in antenna; tone control; strong leather handle, cabinetted in airplane luggage.

DELCO

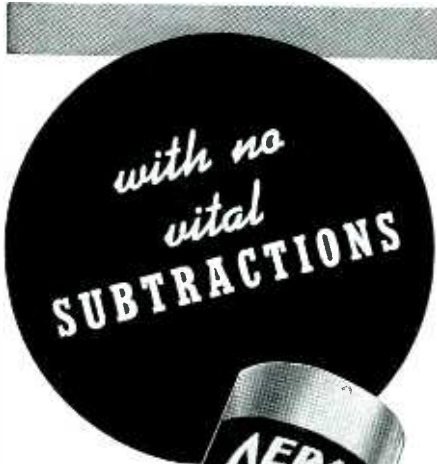


AUTO RADIO—Model R-687, a deluxe model, has automatic permeability tuning, powerful 6-tube superheterodyne, beam power amplifier, 7-inch dynamic speaker, 5 pushbuttons, duro-glaze finish. Price \$49.95. United Motors Service, Inc., 3044 West Grand Blvd., Detroit, Mich.

HOWARD



PHONO-COMBINATION—Four new phonograph combinations with home recording features; prices ranging from \$119.95 to \$169.50; hepplewhite period cabinets. Available in mahogany or walnut. Two models include automatic phonograph record changers. Howard Radio Co., 1731-35 Belmont Ave., Chicago, Ill.



ACTUAL SIZE
450-450-25
volt unit
10-10-25mfd.

★ Yur darn tootin'—these jobs may all look alike but there can be a heap of difference beneath the label, can, base.

While achieving reasonable compactness and low price, AEROVOX Series F prongbase midgets contain a standard AEROVOX dry electrolytic section with approximately twice the foil area for given capacity and voltage, to insure long, dependable life. Nothing vital subtracted to meet any size or price. No ultra etching or tricky foil. No skimping on separators.

A nice choice of popular working voltages and capacities, in single and combination units.

Ask for CATALOG . . .

★ More pages, more items, more choice—the new 1940 Catalog is the best yet. Ask local jobber for copy—or write us direct. And ask your jobber to show you any AEROVOX condensers you may require.

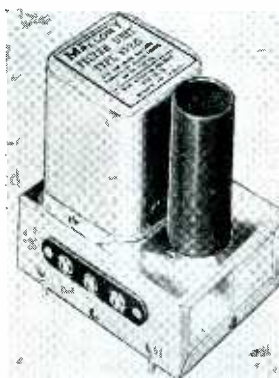


MOTOROLA



AUTO RADIO—Model 400 built with instrument panel controls to fit and match all cars; 7-tubes; push-pull audio stage; 7-inch electro dynamic speaker; push-buttons. Ruggedly constructed; easily transferred from one car to another. List \$39.95. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.

MALLORY

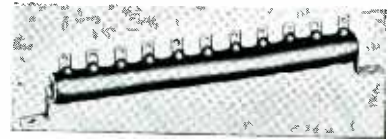


FILTER PACK—Type VF-223, a new audio or hum filter, is now available for use with all single unit vibrapacks; the filter condenser is a 3-section FPT-390, of 15-15-10 mfd. capacity, 450 working volts. The filter choke is rated at 100 m.a. and has a d.c. resistance on only 90 ohms, resulting in a minimum of voltage drop. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ATR



VIBRATORS—New 1940 replacement vibrators for auto and farm radios; contains 3/16 inch diameter tungsten contacts; magnetic circuit with formed base; mica and metal stack spacers with two-bolt construction; flexible leads with tinned clamp supports. American Tele. & Radio Co., 300 East Fourth St., St. Paul, Minn.



OHMITE

RESISTORS—"Multivolt" multi-tap vitreous-enamelled resistors, suited for cathode modulation radio telephone circuits. Rated at 50 watt, and available in various ranges, they make it possible to secure the proper impedance match of the modulator to the filament or cathode circuit of the final radio frequency amplifier. Ohmite Mfg. Co., 4835 Flournoy St., Chicago, Ill.

TRIUMPH



BATTERY TESTER—Model 632 tests all types of dry batteries and battery packs under load. Has 11 point selector switch. Complete with 24 inch test leads, prods, instructions, and voltage conversion chart. Metal case with black wrinkle finish and ivory metal front panel with black raised designations. Price \$10.95. Triumph Mfg. Co., 4017-19 W. Lake St., Chicago, Ill.



AND SO WILL YOUR PROFITS!
WITH THE NEW

AUDIOLISC

MERCHANDISING PLAN

You will enjoy new and repeat business in conjunction with your recorder sales.

These professional type instantaneous recording blanks—

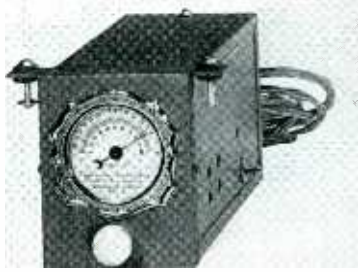
- Bring out the best in every recording machine
- Sell in Easy-to-Merchandise packages
- Carry competitive prices
- Give you a profitable and protected line

AUDIOPOINT professional cutting sapphires eliminate every whisper of scratch, record brilliantly and are most economical.

Write for complete jobber-dealer setup

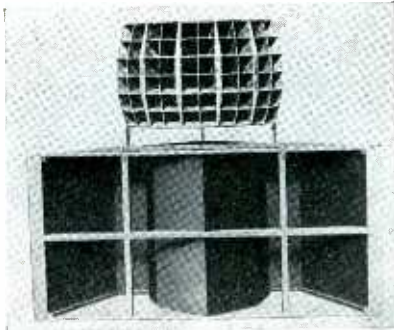


ABC



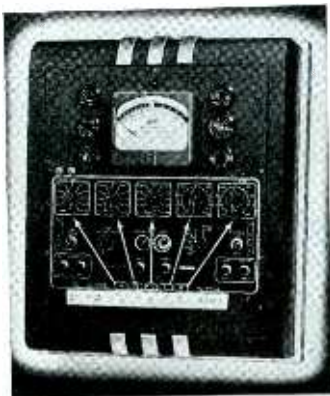
CONVERTER—Model 500, short wave converter for attachment to auto radio or any other broadcast receiver. Uses 2 tubes; has handsome airplane type dial; mounts inconspicuously; obtains power from set; only 3 connections necessary. ABC Radio Laboratories, 3334 N. New Jersey Ave., Indianapolis, Ind.

JENSEN



SPEAKER—Type B system consists of a multi-cellular high frequency horn utilizing two annular diaphragm speaker units, and a new "folded" type horn equipped with two low frequency loud speakers. Jensen Radio Mfg. Co., 6601 South Laramie Ave., Chicago, Ill.

HICKOK



TUBE TESTER—Model #530 measures dynamic mutual conductance on three ranges of micromhos, 0-3000-6000-15000; dual reading scale indicates good, bad, doubtful, as well as micromhos; tests all tubes; checks gassy tubes; detects both shorted and open elements; short-tests made hot or cold. Available in both counter and portable type cases. Hickok Electrical Instrument Co., 10514 Dumont Ave., Cleveland, Ohio.

COMPARE POWER FACTOR!



NATIONAL UNION CONDENSERS IN ALL POPULAR TYPES FOR REPLACEMENTS

COMPARE THEM
FEATURE FOR FEATURE!

POWER FACTOR—The life and performance of electrolytic condensers are determined to a considerable extent by the power factor. Compare the low power factor of National Union condensers with other leading makes.

HIGH BREAKDOWN VOLTAGE—Uniformly aged and tested considerably above their rated operating voltages.

UNIFORMITY—Double checked to insure reliability and uniformity of characteristics.

CAPACITY—Very close tolerances result in extreme uniformity and freedom from replacement difficulties.

LOW LEAKAGE—Remember N.U.'s check-test of every condenser insures uniformly low leakage and good leakage recovery. Excessive leakage causes more service difficulty than any other type of condenser trouble. Just compare.

SIZE—Type for type National Union Condensers are as small or smaller than leading competitive makes. Yet Priced the Same.

THEY'RE BUILT FOR THE
SERVICE BUSINESS!

We have attempted to design a complete line of replacement condensers which would adequately meet the needs of the serviceman. Uniformity and excellent electrical characteristics result in freedom from "call-backs" and field difficulties. Smaller sizes and mechanical ruggedness result in quick and easy replacement installations.

Complete assortment of condensers for replacement applications now available. All popular types and sizes: Junior Box, Standard Box, Universal Replacement, Junior Can, Standard Can, Wets, Large Can, Ceramites, Numites, Tubular Papers, Auto Generator, Auto Vibrator, Uncased Paper, Transmitting.

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APPLIED TO TUBE DEALS

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NATIONAL UNION RADIO CORPORATION
NEWARK, N. J.

NEW! AND GREAT!
THE SENSATIONAL
TUBE TESTER

NO COMPROMISE with make or type of tube. A SEARCHING and ACCURATE test. VARIABLE SENSITIVITY. SIMPLE OPERATION.

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TRIUMPH

MODEL 443



**SELL MOBILE
P. A.
TO THE POLITICOS
this year . . .**



Advanced design in combination 6 volt-110 volt mobile equipment results in low hum and noise level, high overload capacity. Hear this new amplifier.



MR. JOHN ERWOOD
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says "Model 1420-M mobile system—designed by the originator of mobile equipment has plenty of power with ample reserve capacity."

The Sound Engineers' biggest problem is stressed in all Erwood designs. Each item has been designed to insure sound satisfaction under various acoustic conditions and wide variations in power supply.

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**THOUSANDS
of users
Boost Model 1200-A**

TRIPLET

**VOLT-OHM-
MILLIAMMETER**

WITH RED • DOT LIFETIME
GUARANTEED INSTRUMENT

Model 1200-A has separate AC and DC instruments in fitting twin case, accuracy of each within 2%. This exclusive Triplett filtering feature permits adjustment of twin instruments to angle in direct alignment with reader's line of vision. AC-DC Volts, 0-10-50-250-500-1000 (2000 ohms per volt DC); DC Ma. 0-1-10-50-250; low ohms, 1/2-500; 1500 ohms; 1/2 and 3 megohms. Has two RED • DOT Lifetime Guaranteed Instruments. Sturdy Portable Metal Case with black suede enamel finish . . . Etched panel is silver and red on black.

Similar Volt-Ohm-Milliammeters available with D.C. sensitivity to 25,000 ohms per volt.

Write for Catalog . . . Section 203, Harmon Drive

TRIPLET ELECTRICAL INSTRUMENT CO.
Bluffton, Ohio



Model 1200-A

Only \$23.84 DEALER NET

Pocket Size

VOLT-OHM-MILLIAMMETER

A complete pocket-size Volt-Ohm-Milliammeter with AC-DC Voltage ranges: 0-10-50-250-500-1000 at 1000 ohms per volt; DC Milliampers 0-1-10-50-250; Low Ohms, 1/2 to 300; High Ohms to 250,000 with provisions for higher readings by external batteries . . . Molded case and panel.

MODEL 666

Dealer Net Price . . . \$14.00



RADIO CITY



TROUBLE TRACER—Miniature instrument, Model 456, is an all purpose tester. Multi-scale meter has built-in zero adjustment and provides measurement accuracy of plus or minus 2 per cent. Measures a.c. and d.c. voltages of 0-5-50-500-1000 d.c. milliamperes 0-1-10; ohms 0-5000-500,000; decibels -12 to +54. Housed in a hardwood case. Radio City Products Co., 88 Park Pl., New York, N. Y.

OPERADIO



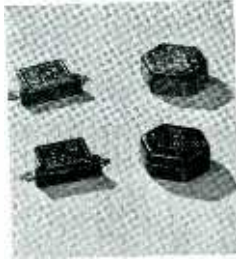
AMPLIFIER—Model 855 AR, a 55 watt type amplifier, uses beam power tubes; features a four channel input, electronically mixes 3 microphones simultaneously with phonograph or auxiliary input; provision for remote control; volume expansion; volume compression; electronic visual output level indicator; six stages, 13 tubes. Operadio Mfg. Co., St. Charles, Ill.

ATLAS



SPEAKERS—New line of storm-proof dynamic reflex trumpets and driver units. Illustration shows a 6 foot air column, bell opening of 29 inches, total depth (including unit and cover) of 35 inches. Driver unit is completely enclosed and covered with outer shell. Equipped with multi-adjustable cast mounting brackets. Atlas Sound Corp., 1449-39th St., Brooklyn, N. Y.

CORNELL-DUBILIER



CAPACITORS—Types 4 and 9 moulded mica units. Type 4, rectangular with projecting ears at lower corners, drilled to provide insulated mounting. Type 9, hexagonal with tapped metal bushings moulded into the bakelite to provide screw connection terminals. Available for working voltages of 800, 1200, 2500 with capacities ranging from .00005 to .03 for Type 4 and .06 for Type 9. Cornell-Dubilier Elec. Corp., South Plainfield, N. J.

WARD



AUTO ANTENNA—Model #168L is built in three sections, extending 57 inches in length; mounts on universal bracket, designed to fit all alligator and side break type hoods. Complete with 35 inch shielded lead, conveniently grounded to bracket. Price \$2.95. Ward Products Corp., 1523 East 45th St., Cleveland, Ohio.

KRAUS



HUMIDIFIER—Electric fountain humidifier for the home, uses 1 pt. of water in 24 hrs. depending on temperature and humidity of room; water cannot become stagnant due to constant circulation; made of heavy spun aluminum; comes in bronze, chrome, copper, red, and green. Measures 14 inches diameter, 6 inches high. Price \$17.50. Joseph H. Kraus & Co., 123 Liberty St., New York, N. Y.

It's the "insides" that count

Rugged Iron Yoke
High Permeability

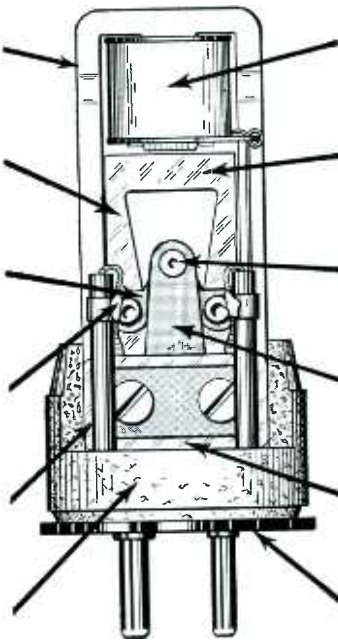
High-carbon Swedish Spring
Steel Reed — No Fatigue

Phosphor-Bronze Reen-
forcement Eliminates Reed
Breakage

Leads Soldered to Clamps
No Strain, No Broken Leads

Soft Surgical Rubber In-
sulation, Perfectly Flexible

Sponge Rubber Fully Insu-
lates Base—Deadens Noise



Machine-Wound Energiz-
ing Coil, Perfectly Insulated

Special Soft Iron Armature
Spot-welded to Reed

Pure Tungsten Contacts
Permanently Welded to Base

Heavy Phosphor-Bronze
Side Arms—Permanent
Adjustment

Best Mica Insulation Used
in Stack — No Leaks, No
Shorts

Laminated Bakelite Base
Standard Prong Arrange-
ments

Meissner Vibrators are built to last!

Now is the time to check over your Vibrator stock and order your requirements to take care of increasing seasonal demand. And when you do this you want to be sure that you really have the best and most dependable Vibrator available.

Meissner now offers this brand-new, completely re-designed vibrator construction. New standards of efficiency, ruggedness and silent, trouble-free operation are built into every element of this unit. Exhaustive tests under the most severe conditions have conclusively proven its performance to be superior in every way.

Check the twelve important features indicated above—compare each one with the same part of the Vibrator you are now using—convince yourself of Meissner leadership in Quality!

GET YOUR COUNTER DISPLAY NOW!

This attractive counter display in striking Meissner orange-and-black will sell Vibrators for you. Contains two each of three most popular replacement vibrators—at a special low price!

In addition—a big, clearly printed Wall Chart, showing the proper replacement Vibrator for any make of auto set—any model—is packed Free with each display. A good start for any dealer-serviceman's stock and a real opportunity for profits. See your Jobber at once or write today for further details and prices!

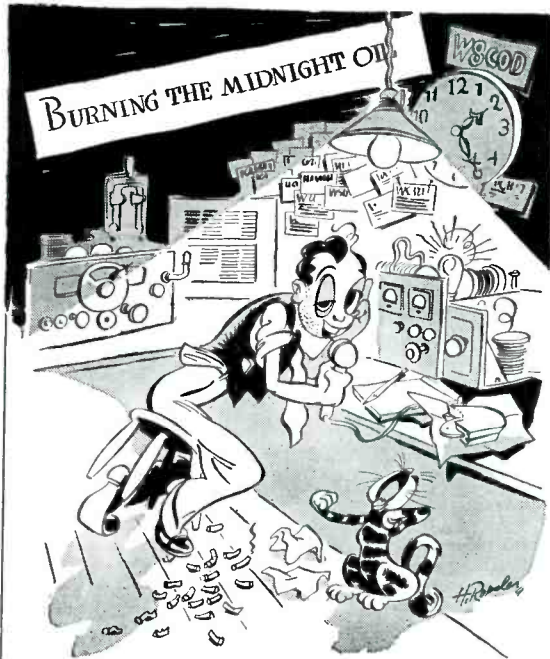
FREE CATALOG AND VIBRATOR GUIDE

Meissner's big 48-page complete catalog describes over 600 items of interest to the radio serviceman. New 12-page Vibrator Guide lists all 4-, 6-, 12-, and 32-volt Vibrators for every model of auto or farm radio set ever made. Complete cross-reference and base diagrams. Write for either one or both to the address below—free and postpaid. A postal card will do.



ADDRESS DEPT. R-3





CENTRALAB Stays Awake



The C. Q.'s have died down . . . too tired to Q.S.L. . . . but Old Man Centralab never bats an eye. Day in and day out this old owl is "wising up" to new developments in the business. In ham shacks . . . on service benches . . . and in the laboratories . . . the word "CENTRALAB" continues to stand for dependability . . . quality . . . and performance.

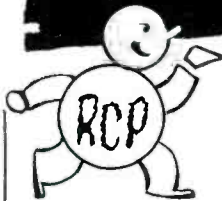
Volume Controls—Fixed Resistors
Ceramic Capacitors—Wave Band
Switches

Centralab

Div. of Globe Union Inc.
MILWAUKEE, WISC.

Day or night . . . play safe with
Centralab!

An instrument that
TESTS THE NEW MINIATURE TUBES
deserves a Big hand!



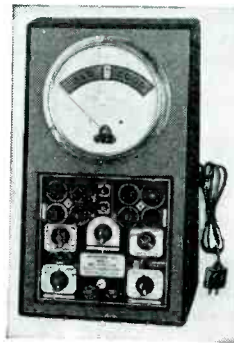
New RCP Series D NOW AVAILABLE WITH 9" METER

*Its smart appearance on your counter
will add prestige and increase sales!*

Yes, and big hand is what this new, improved RCP Tube Checker is getting. Big hand . . . big demand! For Model 308 series D has everything the test equipment user wants. It's a real tube merchandiser. Tests all the new miniature tubes . . . has, in addition to that sparkling list of features below, spare sockets providing for future miniature and large size tube developments. No wonder the call is for RCP Model 308 series D. Test equipment buyers are naturally not forgetting that the usual RCP economy and quality go along—even with an instrument so advanced in engineering principle and design. Get the performance that spells better service, extra profits. Cash in on wanted features like these:

Famous Dynoptimum Test Circuit; Celluloid covered tube charts; provides for filament and heater voltages up to full line voltage; tests all ballast tubes; noise and hum test for tubes; neon tests for shorts and leaks; tests individual element for shorts and leaks; checks pilots, headlights, miniature lights, etc.; jeweled pilot light for tester being "ON"; rotary selector switches provide rapid and simple tests for shorts, etc.; 103-135 V. meter indicated line voltage control; load selector provides proper load under test specified by R.M.A.; individual tests of sections of rectifiers and multi-purpose tubes.

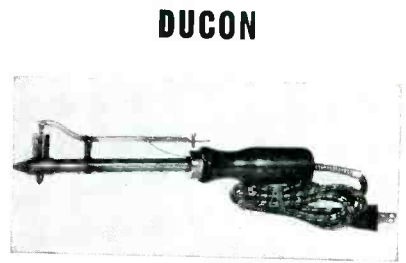
Counter Model 308
Series D—9" meter
Net \$25.95
Combination Counter
Portable Model
308P Series D—9"
meter . . . Net \$28.85
Model 308C—3"
meter counter mod-
el Net \$16.95
Model 308P—3"
meter portable mod-
el Net \$18.95



*If you are not
yet "in" on
RCP's sweet
service-profit
story, by all
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RADIO CITY

PRODUCTS CO. INC.
88 PARK PLACE, N. Y. C.



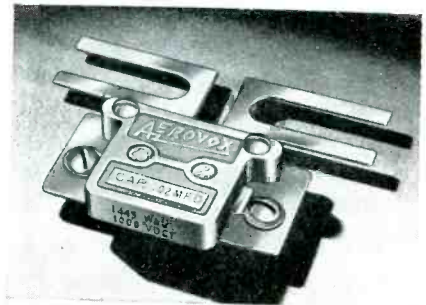
DUCON

SOLDERING IRON—A new model that eliminates the use of a "third" hand by a pushbutton attachment which releases a drop of solder, therefore using one hand for both heating and applying solder. This 60 watt iron lists at \$3.00, complete with pushbutton attachment. Dual Remote Control Co., 505 Guaranty Building, Detroit, Mich.

AMPHENOL

TUBE SOCKET—Molded of high dielectric black bakelite, with 1/2 inch body diameter, adds only 3/32 inch to the length of the tube. A spring steel retainer holds the socket in place. Fits new Raytheon tiny hearing aid tubes, makes servicing easier than permanently wired tubes. American Phenolic Corp., 1250 West Van Buren St., Chicago, Ill.

AEROVOX



CONDENSERS—Bakelite-molded mica condensers with handy meter-mounting brackets for shunting r.f. from meter windings. Long slots in bracket permit attaching to terminals of any standard panel meter. Aerovox Corp., New Bedford, Mass.

RADIART

AUTO AERIAL—1940 side cowl aerial has an easy plug-in connector; can be tightened anywhere along the aerial rod by hand, no tools needed; the lead-in is of the plug-in type, inserted after the aerial is completely installed; threads of the pull-up unit are entirely metal to metal and are vibration proof. Radiart Corp., 13229 Shaw Ave., Cleveland, Ohio.

BRACH

AUTO AERIALS—New 1940 lines include side cowl aerials of the conventional 2-insulator type, and a new streamline single insulator model; 2-insulator concealed bracket type for mounting under the hood, and a single insulator concealed bracket with a swivel arrangement. The L. S. Brach Mfg. Corp., Newark, N. J.

Looking for a Profitable Idea



Plan now to go to the
Radio Parts National Trade Show

June 11 to 14

It's the right clue, if you follow through. Because that's where you'll find many a good idea which you can turn into profit. Yes, even one thought, one idea would well repay you. That's why the Trade Show is so vital to your business and to you. That's why you can't afford to miss it. Plan now—to go!

JOBBER DAYS

Tues., Wed., Thurs., June 11, 12, 13

OPEN HOUSE

Friday, June 14

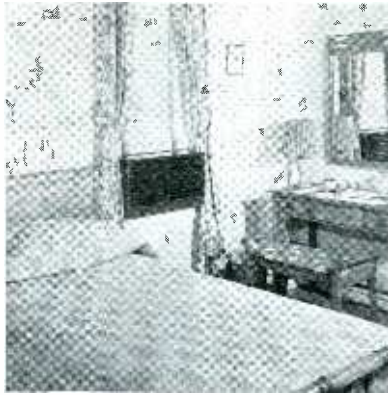
STEVENS HOTEL, CHICAGO

Radio Parts National Trade Show

Executive Office

33 West Jackson Boulevard - Chicago

WESTINGHOUSE



ROOM COOLERS—Three new sizes of packaged room coolers with capacities of 4,000, 6,000, and 8,500 B.t.u.'s per hour. Includes two models of the type that are installed directly into the window frame as illustrated; useful particularly in bedrooms. The other, a floor model, convenient for offices. Price ranging from \$149.50 and up. Westinghouse Electric & Mfg. Co., Springfield, Mass.

KELVINATOR



WASHER—Model 9-D, a new 1940 line of electric washers, features a fabric-saver wringer with pressure pilot to insure safety for each fabric put through wringer; another safety device is the pressure release bar which automatically releases the rolls when touched. Kelvinator Div., Nash Kelvinator Corp., Detroit, Mich.

GALE



REFRIGERATOR—New deluxe 8 cu. ft. model, streamline designed with curved top. Model RGS-82 is equipped with meat keepers, hydrators, fruit containers, sliding shelves and vegetable bins; provides 18.35 sq. ft. of usable shelf area. Gale Products, Galesburg, Ill.



Everyone will want a Ro-TENNA. We all like to keep up with modern ideas.



I'm not ashamed of being lazy. I'll gladly pay for comfort and utility.



I love the convenience of working the aerial from inside.



My pop works his Ro-TENNA without getting out of the car.

Ro-TENNA - Radiart's Wind-up Aerial — 1940's "MUST" Aerial



EVERY SO OFTEN, inventive activity and technical improvements culminate in a totally new product, which instantly obsolesces older forms and creates a new standard of performance and service. Ro-TENNA — the completely mechanical wind-up, which extends the aerial to its full length from inside the car — will hit a new high in sales of quality aeri-als!

THE RADIART CORP., Cleveland, Ohio • Manufacturing a Complete Line of Quality Aerials and RADIART VIBRATORS. Guaranteed 1 YEAR

On the Newsfront



VP-GM, SALESMANAGER — Stromberg-Carlson's Ray H. Manson (top) has just been appointed vice president and general manager while Fred N. Anibal steps up to the position of radio sales manager



Stromberg-Carlson Execs Upped

Manson, McCanne, Anibal, many others rise. Spencer slated for Canadian company presidency

ROCHESTER—Following a meeting of the Stromberg-Carlson Telephone Mfg. Co.'s board of directors February 14 the following organization changes were announced by president Wesley M. Angle:

Ray H. Manson stepped up from vice president in charge of engineering to the post of vice president and general manager, succeeding the late George A. Scoville. Lee McCanne, former radio sales manager and secretary, simultaneously became secretary and assistant general sales manager, working closely with Dr. Manson. Fred N. Anibal, former radio distributor division chief, was made radio sales manager.

Edwin C. Roworth, until recently treas-

urer, has been appointed vice president in charge of finance. Wilbur W. Hetzel succeeds as treasurer, was assistant treasurer and auditor. Arthur F. Gibson becomes assistant treasurer in charge of credits and office manager while Gordon G. Hoyt has been made assistant treasurer in charge of accounting.

Lloyd I. Spencer, continuing his duties as general sales manager, has been nominated to succeed the late Mr. Scoville as president and director of Stromberg-Carlson Manufacturing Company of Canada, Ltd., with headquarters at Toronto. Ralph H. Barger becomes telephone sales manager. Fred C. Young, former manager of engineering, has been named chief engineer. Sidney R. Curtis continues as purchasing agent, will also be assistant secretary.

Edward A. Hanover continues as vice president in charge of production, also has the responsibility for the company's broadcasting activities, now including frequency-modulation station W8XVB. George E. Eyer is general superintendent and William Fay manages the broadcast stations.

Music Week May 7-13

Many groups actively cooperating. Committee offers many dealer aids

NEW YORK—Music merchants throughout the nation will celebrate National Music Week May 7-13.

From C. M. Tremaine, secretary of the National Music Week Committee, comes word that to dealers cooperating the following aids are available: Round hangers to be used as window cards, window streamers bearing the slogan "Give More Thought to Music", large map showing geographical distribution of the celebration, seals for use on correspondence and 13 pamphlets. All are obtainable, at slight charge, through the committee at 30 Rockefeller Plaza.

A cooperative project, National Music Week has the active support of 33 leading music, educational and civic-minded organizations comprising its central committee. Prominent member is William Howard Beasley, president of the National Association of Music Merchants.

RCA Acquires Bloomington Plant

CAMDEN—The RCA Manufacturing Company has acquired a plant at Bloomington, Indiana, preparatory to the establishment of another modern factory for the production of "Nipper" table model radios.

Parts Show Exhibitors Listed

June affair success foregone conclusion

CHICAGO—Ken Hathaway of the Radio Parts Manufacturers National Trade Show, Inc., sends the following list of companies already contracting for exhibit space this June: (RADIO RETAILING will, of course, occupy its usual publisher's booth)

Aerovox	Kainer
Alliance	Ken-Rad
Alpha Wire	Kenyon
Amer. Lava	Lectrohm
Amer. Microphone	Lenz
Amer. Phenolic	Logan, Les
Amer. Television	Mallory, P. R. & Co.
Amer. Radio Har-d.	Meissner Mfg.
Amperite	Millen, James
Areturus	Million Radio
Astatic	National Carbon
Audak	National
Belden	Ohmite
Bliley	Oxford-Tartak
Bogen, David	Park Metalware
Brand, Wm.	Permo
Brush	Pioneer Genemotor
Bud	Precision Apparatus
Burgess	Premax
Carron	Presto
Centralab	Quam-Nichols
Chisholm-Ryder	RCA
Clarostat	Radiart
Consolidated Elec.	Radio Mfg. Eng.
Continental Carbon	Radio Speakers
Continental Elec.	Raytheon
Cornell-Dubilier	Readrite
Crowe	Rider, John F.
Dayton Acme	Rola
Drake	Simpson
Eby, Hugh H.	Solar
Elec. Soldering	Sprague
Elect. Ind.	Stancor
Eicor	Shure
General Cement	Supreme
General Industries	Thordarson
Gen'l. Trans.	Triplett
Hallcrafters	Tung-Sol
Hammarlund	United Catalog
Hickok	United Teletone
Howard	United Transformer
Hygrade Sylvania	University Labs.
Hyttron	Utah
Indiana Steel	Ward Leonard
Insuline	Ward Products
Inter. Resistance	Webster Co.
Jackson Elec.	Webster Elec. Co.
Jefferson Elec.	Weston
Jensen Radio	Wincharger
J. F. D.	Wirt
Johnson, E. F.	Worner

New RSA Chapter

CHICAGO—Another Chapter of the Radio Servicemen of America has been formed in Milwaukee.

Executive secretary Joe Marty of the RSA simultaneously announces that there are now 35 Chapters qualified under the Guarantee Service Plan and arranging cooperatives with local broadcasters. The entire membership of the RSA is to be included in this plan as rapidly as conditions permit.

Forty More For NRPDA

Drive, still on, nets new members in fourteen States to date

NEW YORK—From Art Moss, executive secretary of the National Radio Parts Distributors Association with headquarters at 5 West 86th Street, comes word that forty additional distributors in fourteen States have joined the group in the last two months during a membership drive still in process.

In *New York*: new members include Radio Equipment of Buffalo, Roy C. Stage, W. E. Berndt and Stewart W. Smith of Syracuse, Federal Radio of Binghamton, Fred C. Harrison of Elmira, Fort Orange and Edwin E. Taylor of Albany and Vaeth Electric of Utica.

In *Ohio*: Ross Radio of Youngstown, Radio Repair & Service of Akron, Armstrong Radio of Canton, Thompson Radio and Bell Radio Parts of Columbus, Lima Radio of Lima, United Radio and Radio Supply of Cincinnati.

In *Indiana*: Van Sickle Radio of Indianapolis and Archer & Evinger of Terre Haute.

In *Missouri*: Eginger Radio and Tom Brown Radio of St. Louis, Manhattan Corporation of Kansas City.

In *Iowa*: Dukes Radio of Sioux City, Wholesale Radio Labs of Council Bluffs and Iowa Radio of Des Moines.

In *Nebraska*: H. C. Noll of Omaha, *Kentucky*: P. I. Burks of Louisville, *Illinois*: Lurtz Electric of Belleville, *Pennsylvania*: Jordan Radio of Erie, *Washington*: Seattle Radio of Seattle, *Oregon*: United Radio of Portland, *Connecticut*: Stamford Radio.

In *Wisconsin*: Marsh Radio and Radio Parts of Milwaukee, Valley Radio and Appleton Radio of Appleton.

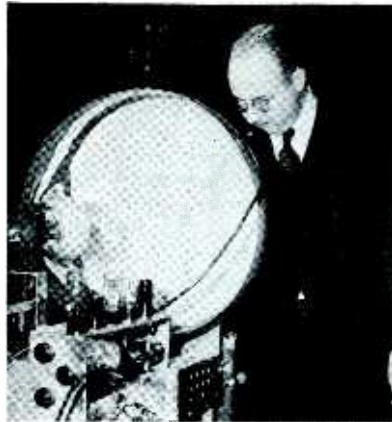
And in *Minnesota*: Northwest Radio of Duluth, Lew Bonn and Radio Maintenance of Minneapolis, Hall Electric of St. Paul.

New Clarion Radio Sales Plan Hinted

CHICAGO—From Robert Shellow, general sales manager of the Warwick Manufacturing Corporation, comes word that "Clarion" midget, portable and farm radios will shortly be merchandised under a "very unusual" sales plan.

The Clarion trademark, controlled by Warwick insofar as radios are concerned, has been inactive for some time, appeared on the nameplates of over a million receivers sold in years past.

Preferring to withhold details until after presstime, Shellow did hint that the plan accompanying re-introduction of Clarion sets would be "different from anything offered in the industry to date."



BIG TELE TUBE—Snapped in the Allen B. Du Mont Laboratories at Passaic is this interesting shot of a 20-inch cathode-ray tube now in production and designed to deliver an 11 x 15-inch image

Three Join CRC

BRIDGEPORT—Alex Steinweiss, rated one of the foremost young commercial artists in the country, has been appointed Art Director of the Columbia Recording Corporation. (Post newly created by director of sales promotion, Patrick Doan). He will be responsible for record promotion activities in posters, advertisements, albums and other allied fields.

William T. Meyers, prominent in the record business for the past 12 years, has joined CRC in an executive and sales capacity. Wayne Varnum is to handle popular disc promotion in the sales promotion department. And Bob Pampey has been appointed southeastern CRC sales rep covering Virginia to Atlanta, Georgia.

Majestic Sales Up

CHICAGO—From W. B. E. Norins, general sales manager of the Majestic Radio & Television Corporation, comes word that the company's sales for the first two months of this year were 61 per cent ahead of January-February 1939.

CCC Reduces Finance Rates

Also announces two new plans to protect dealer profits

BALTIMORE—Commercial Credit Companies have just announced new finance plans for 1940, calling for a considerable reduction in the finance charges required of radio and appliance buyers. Along with the announced rate reduction Commercial Credit presents two new plans of dealer operation, offered in addition to its existing plans.

A new Dealer Reserve Plan permits the retailer to receive a large portion of the finance charge as a special reserve to apply against his contingent liability on paper discounted. Twice a year the dealer receives any excess amount over a small percentage of his outstanding paper.

As an optional plan for dealers the company also offers a Purchaser Discount Plan at the same rates to the buying public. Under this plan, however, instead of the dealer getting a reserve, a discount is given to the purchaser who pays his account promptly.

It is left entirely up to the dealer whether or not it is to his advantage to select the Dealer Reserve Plan, the Purchaser Discount Plan or the Limited Liability Plan.

Mallory Campaign

INDIANAPOLIS—To distributors of P. R. Mallory & Company's vibrators February 15 went an elaborate planbook describing an intensive replacement unit sales campaign beginning at that time.

Described as the "Early Bird" campaign planbook (beginning earlier in the year than such large campaigns have been staged heretofore), the brochure called attention to a "lead-off" message in February radio and automotive tradepapers. Advertising copy for March pre-printed within the planbook featured the firm's Replacement Vibrator Guide." Similar heavy promotional copy was further illustrated, announced as ready for publication in April, May, June, July and August.

Simultaneously offered the trade for "point-of-sale" use during the campaign were colorful window display cards, wall and counter pieces.

Wedemeyer Shindig Success

ANN ARBOR—More than 350 men from 40 towns in southern Michigan attended a service and dealer meeting held here February 16 by the Wedemeyer Radio Company of this city and Battle Creek.

Eighteen exhibits were conducted by factorymen. Jerome Weissner of the University of Michigan spoke on Frequency-Modulation, demonstrated with the aid of a Stromberg-Carlson receiver and experimental transmissions from the University.

Entertainment, movies, refreshments, buses chartered for Battle Creek men, helped make the meeting successful, reports George Wedemeyer.



RADIO TECHNICIANS' GUILDMEN—Pictured at a recent meeting of this New England group's administrative board, left to right: Messrs. Batt, Cabral, Staples, Maginot, Saunders, Kennes, Baratta, Di Russo and Glynn. At Miles Standish Hotel in Boston

Atlas Sound



NEW 1940 P. A. Guide ----Yours FREE!

★ Prepare now for P. A.'s Biggest Year. . . Check your present sound equipment and demonstration systems. Increased industrial demand and election ballyhoo will have more sound Dollars rolling your way in 1940. ★ Have you enough baffles. . . enclosures. . . speakers. . . mike stands and accessories to handle aided business? For guidance on new equipment. . . refer to Atlas Sound Catalog F-40 which describes over 100 specialized P. A. accessories. Atlas Sound stocked by leading P. A. jobbers everywhere.



Write Department RR-3
ATLAS SOUND CORPORATION
1443 39th St., Brooklyn, N. Y.



★ Yes, Clarostat scores again with its new Plug-In-Resistor Tube Service Manual. Most extensive, up-to-the-minute, dependable listing of plug-in resistor tube replacements and equivalent types. Just another typical Clarostat contribution to the serviceman's working library. ★ Available through local jobbers for 15¢ a copy. ★ Or send 15¢ in stamps or coin direct to Clarostat Mfg. Co., Inc., Dept. RR3, 285-7 N. 6th St., Brooklyn, N. Y.



Three Reasons For Optimism

Stewart-Warner's Kelsey lists them for distributors at sectional meetings

CHICAGO—Predicting that 1940 will be a prosperous year for the radio industry, L. L. Kelsey, manager of the Stewart-Warner Corporation's radio division, speaking before distributors and district managers at four sectional conventions held last month in this city, New York, Dallas and San Francisco, based his forecast on three important factors:

1. A presidential year is always a good year for the radio industry.
2. The European war has intensified interest in news broadcasts and created a larger audience in shortwave programs, and
3. Business conditions, generally, show improvement.

Five million Stewart-Warner radios are now in use in the country, said Kelsey, who also noted that company radio sales had risen 300 per cent in 1939.

Speaking before distributors and district managers assembled at these same four meetings were Charles R. D'Olive (presenting new refrigeration plans), C. C. DeWees (reporting increased use of newspaper advertising on the firm's radios during 1939 and advertising plans for 1940).

Philco Makes Refrig Survey

PHILADELPHIA — Philco Radio & Television Corporation has just concluded a national survey to determine public reaction to its recently announced line of electric refrigerators. Returns, according to refrigeration manager W. Paul Jones, proved definitely that the industry need not depend wholly upon price appeal in today's market, that models providing new services and conveniences were exerting strong buyer appeal.

Philco's model LH-6, according to Jones, had been accorded an excellent reception by surveyed consumers. The concern's giant-size frozen food compartment, provided in addition to an oversize ice-cube chamber, came in for frequent favorable mention. "Conservador" was likewise lauded by housewives contacted as was the Philco aluminum freshener shelf providing moist cold.

"Blame It On Love"

CHICAGO—Invited to see a preview of the new Hotpoint merchandising movie "Blame It On Love" February 26 were representatives of the press.

Seven months in preparation, seventeen days in the "shooting," requiring 28 "sets" and two sound-stages, featuring a cast of over 100 and boasting a special theme-song, the celluloid cost over \$70,000, is certainly among the most ambitious films made to aid appliance salesmen ever released.

Said Hotpoint general merchandising manager G. H. Smith: "The dealer pro-



TALKS TECHNIQUE—W. B. (Bill) Coon, well-known northwest service engineer, who conducted a series of technical meetings in Oregon, Washington and British Columbia late in February with Don Burcham, district sales manager for P. R. Mallory & Company

motion of 'Blame It On Love' is designed to provide a program of maximum effectiveness, at minimum expense and greatest ease in its execution. We will provide either a 35 mm. or a 16 mm. film to the Hotpoint retailer, at no cost. He will order a sales promotion package for \$9.95, which contains a personal guide book for the handling of the entire promotion, including the hiring of the theater, arranging for the projection and which shows publicity and advertising material for building consumer interest in viewing the film.

"This package will also contain tickets, folders, souvenir programs and it is our sincere belief that the promotional program will unquestionably place the dealer in position for real volume sales by spotlighting his store, the product which he handles and by using the emotional stimulus of a new advertising medium."

Crosley Managers Meet

CINCINNATI — Crosley Corporation district managers concluded an intensive 3-day merchandising program meeting at the Netherland-Plaza here March 4, returned to their territories primed with facts about the most comprehensive campaign in the country's history, now under way.

The meeting, presided over by Neil Bauer, featured as speakers Thomas W. Berger, Lewis M. Crosley, R. C. Cosgrove, Duncan Morgan, William T. Wallace, R. J. O'Connor, G. Earle Walker, William Shipley, C. E. Reinbold, C. J. Felix, E. J. Ellig, R. H. Money and J. W. Craig.

Impressed upon managers was the fact that the new campaign would concentrate on broad, fundamental problems over a period of three years.

Farnsworth Export Sets Planned

FORT WAYNE—Farnsworth Television & Radio Corporation will announce a line of radio receivers for export about May 1, according to Col. William J. Avery of this company, in charge of the activity.

Sets, constituting a complete line, are to be given special treatment to withstand varying climatic conditions, will have continuous waveband coverage and transformer taps for 90, 110, 125, 160, 200 and 240 volt operation.

S-C Window-Winners Announced

ROCHESTER—Fifty Stromberg-Carlson dealers, winners in this firm's 45th Anniversary Prize Window Contest, have just been announced as recipients of the contest's awards.

First went to Jenkins Music of Tulsa. Prentke Laboratories of Cleveland finishing a very close second. Third went to Gilsenan Piano of Union City, N. J. and Chickering & Sons of Boston. Fourth places were awarded to The Killian Company of Cedar Rapids and Weis & Fisher of Rochester.

Fifth prizes were awarded to the remainder.

Worner Products Expands

CHICAGO—Worner Products Corporation, of which Leon Worner is president and Arthur Eidan chief engineer, has moved to enlarged manufacturing space at 1019 West Lake Street.

Rapidly growing demand for the firm's line of electronic devices, including announcers, burglar alarms and safety devices, is stated as the reason for the move.

New Service Group

ELMIRA—A new radio servicemen's Association named the Alleghany-Cattaraugus Radio Association has been formed in western New York State.

President is Glen Williams of Cuba, N. Y.

Meetings are to be held every other week, each time in a different town



FLOWERS—They celebrate opening of new Marsh Radio Supply store in Milwaukee. Left to right: Pete Brazan, K. Knell, Art Herzer, Erv Irving, Rosemary Krembs and Earl E. Marsh

within the area covered by the group's membership, at present totalling 45.

Bumby Succeeds Petrie At B & S

RIPON, WISC.—H. A. Bumby, with the Barlow & Selig Mfg. Co. of this city since 1927 and the past several years director, treasurer and vice president, has been elected president of the firm, succeeding R. I. Petrie, resigned.

W. A. Royce becomes treasurer, serving also as Comptroller. R. C. Labisky has been made assistant to the president. L. W. Ryler continues in the capacity of general sales manager.

Hotpoint's Prashaw to Dallas

CHICAGO—C. J. Prashaw has been appointed manager of the Edison General Electric Appliance Company's Dallas district, was Hotpoint's refrigeration specialist in Kansas City.

Prashaw succeeds J. T. Nee, transferred to the Atlanta District as range specialist.

West Coast Raytheon Moves

SAN FRANCISCO—Raytheon Production Corporation has moved its west coast warehouse and office to larger quarters at 1045 Bryant Street.

... ideal for tough P. A. set-ups!

To select the best performance for any given condition, just hook up the new Western Electric 639B multi-mike and try each of its patterns by a "flip of the switch."

It gives you non-directional, bi-directional and cardioid patterns—plus new patterns 1, 2 and 3 which reduce effects of reverberation even more than the famous 639A.

The 639B permits shifting the angle of minimum response to 150°, 130° or 110°, enabling you to avoid particular reflections or feed-back paths. New patterns are especially effective in reducing low frequency reverberation.

This new Western Electric mike can help you to make money handling tough P. A. jobs.

Send the coupon for full details!

Western Electric

**639 B CARDIOID
DIRECTIONAL MIKE**

GRAYBAR ELECTRIC CO., Graybar Bldg., New York.
Please send full details on Western Electric's new
639B Cardioid Mike. RR 3-40

NAME

ADDRESS

CITY STATE

NEW SEMI-PROFESSIONAL RECORDER



- Here's a recorder ideally suited for semi-professional use at a new attractive price. Engineered and built along professional lines, it reaches a new high for recorders used in schools, colleges, homes, etc.
- Weighs only 28 lbs.—attractive luggage case—6 watt amplifier—tubes accessible from top—heavy duty electric motor—improved crystal cutting head—simplified controls—guaranteed against defects for 12 months. Price \$99.50.

Write for full information to

Western Sound & Electric Labs., Inc.
311 West Kilbourn St., Milwaukee, Wisc.

YOU ASKED FOR
QUALITY at a PRICE

Here it is!

Readrite
RANGER

Model
432-A



Only \$17.85 Net

- RED • DDT Lifetime Guaranteed Triplett Meter
- Sockets for All Tubes including new 1.4-volt Miniatures
- Filament Voltages from 1.1 to 110—A Safe-guard Against Obsolescence
- Precision Indicating Instrument with Two Highest Quality Sapphire Jewel Bearings
- Separate Line Control Meter
- Neon Shorts Test
- Etched Panel of outstanding NEW Design
- Approved RMA Circuit

TODAY'S outstanding tube tester value—a guaranteed quality portable tester at a price you can afford to pay. Checks Locals, Single Ends, Bantam Jr., the 1.4 volt miniatures, Gaseous, Rectifier, Bal- last, the High Voltage Series (including 117Z6G) and others recently announced. Direct Reading GOOD-BAD meter scale. Positively will not deactivate 1.4 volt or other type tubes.

WRITE FOR CATALOG
SECTION 320 COLLEGE AVENUE

READRITE METER WORKS, Bluffton, Ohio

G-E Radio, Washer Men Shuffled

BRIDGEPORT—Perry Hadlock, manager of the General Electric radio receiver sales division has just announced that for the purpose of better coordinating radio receiver sales activities Fred A. Ray (eastern sales manager), George S. Peterson (as central sales manager) and Henry A. Crossland (as western sales manager) will henceforth share responsibility for this activity.

Simultaneously, from H. L. Andrews, G-E vice president in charge of the company's appliance and merchandising department, came word that Alfred C. Sanger has been named manager of the heating device and fan section, succeeding C. J. Hendon, resigned. L. H. Miller has, also, been appointed sales manager for refrigeration.

Adams With Oxford-Tartak

CHICAGO—Bob Adams, formerly with the Stewart-Warner Corporation and well known throughout the industry in amateur as well as servicing circles, has joined the Oxford-Tartak Radio Corporation in the capacity of sales engineer.

Distribution News

FARNSWORTH—Just appointed distributors are: *W. B. Davis Electric* of Memphis (eastern Arkansas, western Tennessee and upper Mississippi), *Republic Supply* at Detroit, *Lew Bonn* of Minneapolis, *Spencer Auto Electric* of Tampa. In St. Louis *Mayflower Sales* succeeds Crest, Inc. as Farnsworth products distributor and consideration is at present being given to an appointment in Atlanta.

STROMBERG-CARLSON — *Bond-Rider-Jackson* of Charleston has S-C in its local area, western Kentucky and southeastern Ohio. *Corcva Company* now distributes it in the vicinity of York.

HOWARD—*Smith-Benny* of New York (Benny Ginsberg and Herman Smith) have just been made sales reps for this radio line, territory to include New England states, New York, Pennsylvania, West Virginia, Virginia and North Carolina.

ARCTURUS—Southeastern territory on tube distribution goes to *S & S Company* of Staunton, Virginia and Memphis, Tennessee.

COLUMBIA RECORD — *Ludwig Hommel & Co.* of Pittsburgh gets this disc line, accommodating retailers formerly served by C. R. Rogers Co., engaging Don Carroll and inside personnel of the latter firm to help do the job. *Cain and Bultman* of Jacksonville takes over distribution in Florida east of the Apalachicola, formerly handled by Hopkins Equipment of Atlanta. *General Equipment Company* of Boston will serve this territory formerly handled by Roskin Distributors, engaging for-

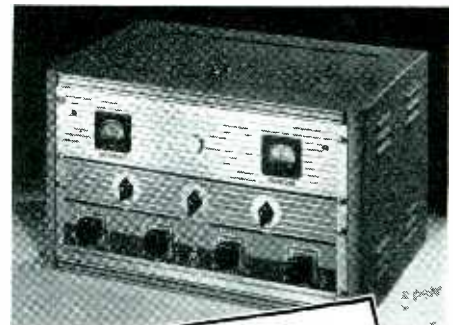
mer Roskin salesmen and other personnel for its separate, new record department.

US RECORD—*Hargar & Blish* of Des Moines and *Thompson & Holmes* of San Francisco have this firm's Varsity, Royale records.

US RECORD—Latest distributor appointed is *Interstate Distributing* of Omaha. Has Royale and Varsity discs in 17 Iowan counties and all of Nebraska.

UNIVERSAL MIKE—Factory representation for Arizona and New Mexico goes to *H. George Shefler* of Phoenix.

TRU-FIDELITY Studio AMPLIFIER



TRULY CREATES
AN ILLUSION OF
Presence

The THORDARSON T-30W10 Studio Amplifier has every required and desirable feature for perfect audio amplification. Tru-Fidelity quality, combined with rich, modern and decorative design, recommends this amplifier to studios and those who appreciate fine music and speech reproduction. It is ideal for record reproduction, recording and broadcast speech amplification.

THORDARSON Tru-Fidelity Broadcast transformers are used throughout. The amplifier is available with multiple shield low impedance input transformers to accommodate low impedance microphones and permit long input lines. Three input circuits with individual mixer controls and a "MASTER" gain control will satisfy practically any type of installation. Power output is indicated by an accurate "Level Indicator" meter calibrated in decibels. A plate current meter, with associate switch and bias controls allows exact balance of power tube plate current.

An audio frequency equalizer is featured, based on the original THORDARSON "Dual Tone Control" circuit. The individual "Bass" and "Treble" controls make it possible to correct for almost any electrical or acoustical condition.

The T-30W10 is only one of a long line of outstanding THORDARSON Amplifiers, each designed for exceptional tone fidelity.

Ask for Catalog 600-D
and Bulletin SD443

THORDARSON
Elec. Mfg. Co.
CHICAGO ILLINOIS

Dealer Helps

BIOGRAPHY—In a new twenty-page booklet entitled "Philo T. Farnsworth, inventor of electronic television", the *Farnsworth Television & Radio Corporation* has an effective promotional weapon. Tells "the romantic story of an Idaho farm lad who became one of the world's great scientists."

VIBRATOR DISPLAY — *Meissner Manufacturing Company* of Mt. Carmel, Illinois, offers its jobbers a new, three color display containing six fast-moving replacement vibrator types, says these displays (together with a large vibrator replacement wall chart) may be passed along to dealers in limited quantities on a special price plan.

AERIAL DISPLAY—*Radiart* has a new one which holds six of the more popular types of antennas, featuring a printed panel, stressing features. Metal support makes provision for mounting *Radiart* mirror combination aeri-als at the sides. Sturdy, compact, colorful. Full details obtainable from all company jobbers.

IT TALKS—Here's a photo of *Galvin Manufacturing Corporation's* novel "Mainliner" display for auto radio dealers. It's three-dimensional, permits actual playing of five new 1940 Motorolas for which space is provided. Big punch of



the setup is the fact that, supplied with it, is a special phonograph record that plays via model 21A wireless record players through one of the radios... and tells a Motorola sales story as it plays, opening with the musical number "Lovely to Look At" and continuing into the sales talk. "Mainliner," equipped with castors, is considered by factory to be "flagship" of its "fleet" of advertising and promotional aids.

TUBE STOCK CABINET—*Hytron Corporation* of Salem, Mass., has just designed an all-steel, three-color cabinet which stocks and displays 50 of its Bam-tam GT tube types. Vertical guides keep tubes in place and the unit may be used

on service calls as well as within the shop. Easily detached from wall for this purpose. Measures 8x22 inches by 4 deep and will stand up by itself if wall space is not available. Comes free of charge with purchase of assortment of 50 tubes of 23 types.

MIKE CATALOG—A new 8-page catalog prepared by *The Turner Company* of Cedar Rapids, Iowa, illustrates and describes all the microphones and equipment in its line. Available free of charge. Mention RADIO RETAILING when writing.

SCHOOL AIDS—1940 edition of "Audio-Visual Service for Schools,"

widely read publication covering *RCA Victor* sound products and services, has just been released for distribution by that company's Ellsworth C. Dent, director of the Educational Department. Includes 16 mm. sound motion picture equipment and ultra-high frequency transmission data as well as laboratory equipment, test equipment, recorders, broadcast receivers.

F-M DATA—Just off the press for use of *Stromberg-Carlson* dealers is a new two-color folder illustrating and describing the complete line of frequency-modulation receivers. Explains high-lights of f-m transmission system.

Typical SPRAGUE VALUES

SAVE MONEY ON RESISTORS . .

You can get the resistance value in a Sprague 5-watt Koolohm that would require the purchase of a 10-watt old-style resistor. You can't break down Sprague Koolohms—they take the overloads. Every bit of wire is insulated before winding. Units are layer-wound for more ohms in smaller size. Truly non-inductive Koolohms sold at lowest prices ever. Tele-dot automatic overload indicator warns when 25% overload occurs (see picture). Ask your jobber about this amazing Sprague resistor development!



SPRAGUE KOOLOHM WIRE WOUND RESISTORS



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Condenser-Resistor Analyzer
NET COST \$29.70

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Mightiest Midgets of All

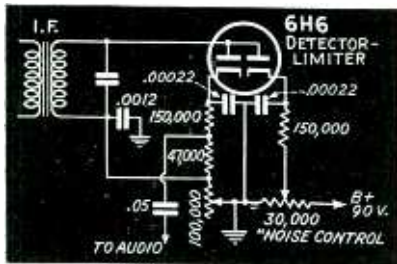


SPRAGUE

CONDENSERS
KOOLOHM RESISTORS
TEST EQUIPMENT

SPRAGUE PRODUCTS CO. NORTH ADAMS, MASS.

for the Service Department



Noise Limiter

Incorporated in RCA's Model AR-77 Communication receiver, the noise limiter shown here is highly effective since noise voltages cannot increase the limiter bias.

In operation, signal and noise voltages appear across the 47,000 ohm resistor in the cathode circuit of the first diode. Noise voltages alone appear across the 100,000 ohm potentiometer since the bias applied to the 150,000 ohm resistor in the second diode cathode by the 30,000 ohm potentiometer prevents this diode from operating on signal voltage. In other words, the second diode is biased up above the signal voltage. Since noise peaks are usually much greater than the signal, only the noise actuates this diode.

The sum of the voltages across the 47,000 ohm resistor and 100,000 ohm potentiometer are applied to the audio amplifier. It is apparent that the noise voltage across the 47,000 ohm resistor is opposed to that across the potentiometer. Therefore the noise cancels out, leaving only the signal.

The proper balance or signal to noise voltage is adjusted by the 100,000 ohm potentiometer. This is set once the correct position is found. The 30,000 ohm potentiometer is adjustable from the front panel and controls the bias on the second diode. For very strong signals the bias should be increased to prevent chopping off modulation peaks. For weak signals the bias is reduced to make noise limiting effective for the reduced carrier.

The manual control has been found

to improve the limiting action since on automatic types of limiters a high noise level will often bias the noise diode open so far as to destroy the limiting action.

F. M. Kit

Designed by Communication Measurement Labs, the frequency-modulated receiver shown here has some novel circuit features.

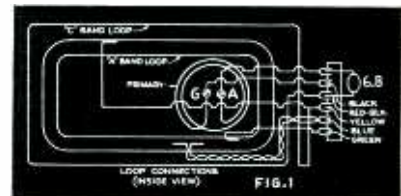
Starting from the left, the 6SA7 serves as converter-oscillator followed by 2 i.f. stages using 6AC7's.

The first diode of the following 6H6 acts as a limiter in conjunction with the accompanying 6AC7. The second diode of the same 6H6 supplies a.v.c. voltage to the 6SA7 converter. The 6H6 on the right is the f.m. detector.

Returning to the limiter circuit, the action of this is a little unconventional. The 6H6 first diode rectifies the positive peak of the incoming signal and develops a positive voltage on the cathode of this diode. Normally the diode in this position would completely load down the circuit if it were not for the limiting resistor in its cathode. Thus, as the rectified current increases, the voltage drop across this resistor becomes more and more until the diode approaches a saturated condition.

This rectified voltage biases the grid of the 6AC7 positive. Zero bias is used on this tube but plate current is low since plate and screen voltage is obtained through a 100,000 ohm resistor. As the grid goes positive, the plate current tends to increase creat-

ing a greater drop in the 100,000 ohm plate and screen supply resistor. Thus the plate current cannot increase past a given point since the plate voltage is falling. No matter how much signal or positive bias is applied to this circuit the plate current cannot increase past this given point, therefore the output is limited. Signals or loud noise pulses greater than those required to reach this point are therefore absent in the output.



New Loop Antennas

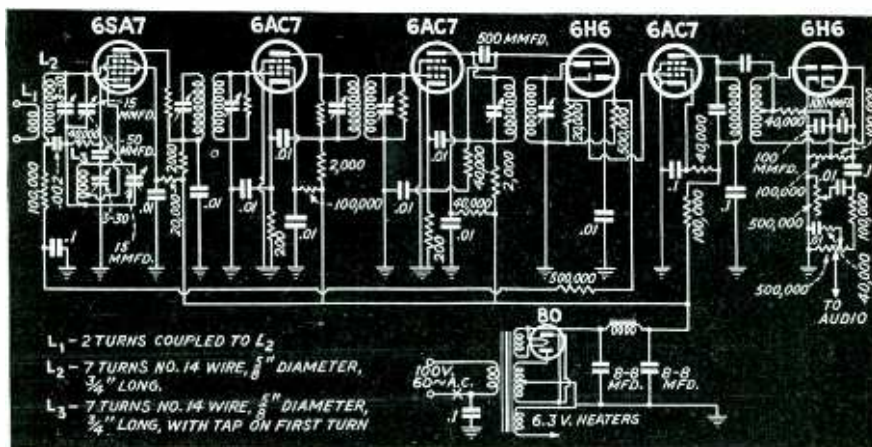
The illustrations herewith show mechanical specifications of the loops used in RCA's model T63, Fig. 1; and 46 X 21, Fig. 2.

Usual practice is to tap off the loop for the primary winding or wind a separate primary parallel to the secondary. With both the loops shown here the primary is a separate winding but wound on a much smaller form. This is desirable since it reduces the capacity of the antenna to the secondary and at the same time reduces the coupling between the 2 circuits as the loading of the antenna tends to destroy the selectivity of the circuit when overcoupled. The greater part of the coupling between antenna and secondary is inductive.

In Fig. 1, a "c" band loop is provided for short wave reception. This couples to the same primary as the "A" band loop. Color code connections as used in the receiver are shown.

Fig. 2 does not show the electrical circuit of the loop. The yellow lead from the terminal block at the center connects to a tap on the loop and is shown entering the winding.

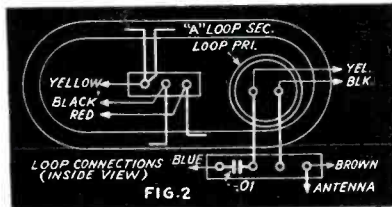
Reports from the field indicate that receivers using loop antennas are subject to more image, police and amateur interference than conventional antenna systems. This is probably due to the fact that on some stations signals are not as strong as when



usual antennas are used. Thus the a.v.c. would tend to operate the receiver at higher gain and consequently, in a more sensitive position, the set would pick up extraneous signals.

If interference is troublesome, first make sure that the loop is aligned with chassis and loop in cabinet. Revolving the loop to a position of minimum interference will sometimes help. If images are bad, try shifting the i.f. frequency up or down by 10 kc.

Sometimes by grounding the re-



ceiver or installing a line filter the interference can be reduced to a satisfactorily low level. A wave trap associated with the loop or loop stage is not recommended since it would upset the tracking of the loop.

Even though attempt has been made to reduce the capacity loading effect of an antenna on the loop, a good deal of this still remains. If an external antenna longer than 100 feet is used, a 100 to 200 mmf. condenser should be connected in series with the lead.

Vedolyzer

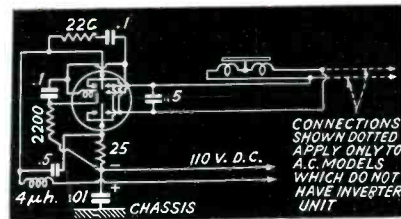
Using a cathode-ray tube as an indicator, the Model 560 tester by Supreme not only indicates the presence of signals in all circuits of a set, but permits actual viewing of the signal on the cathode-ray tube.

The r.f. and video channel uses two 1852 high gain pentodes and one 6L6G. The frequency response on the video section is 20 cycles to 4.5 megacycles with an undistorted gain of 80 db. For r.f., a special 3 band tuner operates from 65 to 2050 kc. using pushbutton switching.

A built-in vacuum-tube voltmeter using a 6J5 has 8 ranges of r.f. volts from 0.03 to 90 volts; 7 d.c. ranges from 2 to 600 volts at 15 megohms input resistance, and a 6000 volt range at 150 megohm input resistance. In addition 7 a.c. ranges are available from 3 to 3000 volts at 15 megohms input resistance. Ohms from 1/2 to 1000 megohms may be measured.

The V.T.V.M. may be used either with or without simultaneous oscillograph indicators. Only one meter adjustment is necessary for all r.f., a.c. and d.c. volt range and one zero adjustment for all resistance ranges.

The multiple probe input allows rapid stage by stage indications of intermittent receivers.

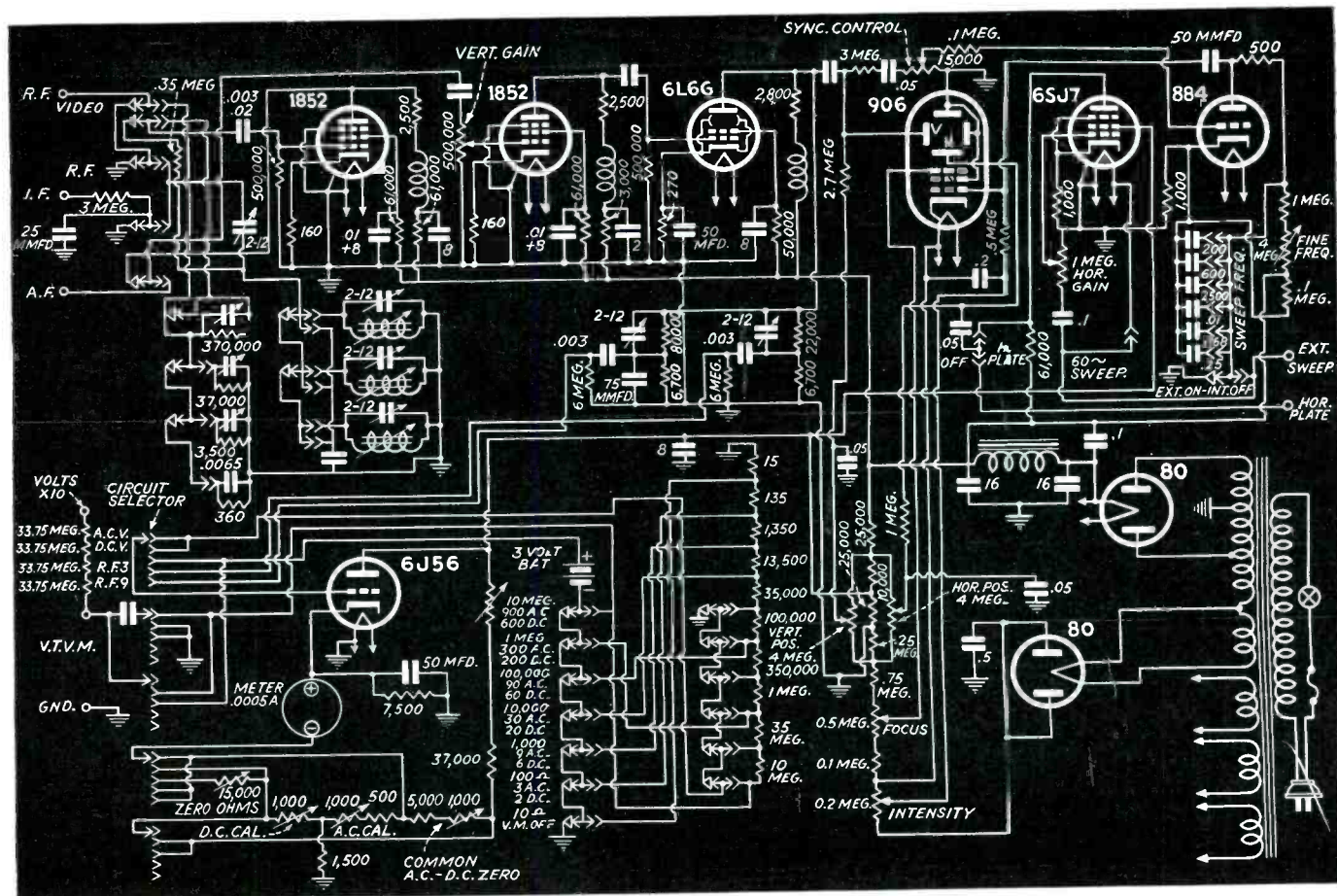


Power Inverter

In the G-E models HJ-618 A.C. and HJ-618 D.C. the same phono motor operates on a.c. or d.c.

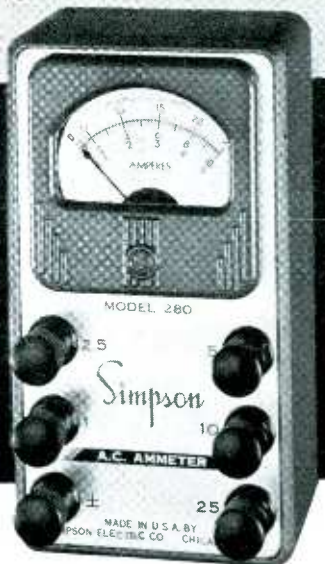
An a.c. motor is used in both units. In the a.c. model connection is made direct to the motor windings. In the d.c. version an inverter breaks up the d.c. to a.c., permitting the motor to function. In both sets the same a.c.-d.c. radio chassis is used.

As shown, the inverter consists of a full wave vibrator which operates to give not only a pulsating current but the proper alternations as well. Since the characteristics of the vibrator reed is designed to provide the correct alternating frequency when operated from 110 volts d.c., the synchronous motor turns at the same speed as when used on a.c. An increase in d.c. line voltage will, however, alter the frequency of alternations slightly and result in a corresponding change in motor speed. With normal line changes the motor speed is substantially constant, however.



Presenting SIMPSON "Micro-Testers"

HERE'S A SLICK IDEA —
Simply pick three instruments from the eight illustrated here to form a kit, as shown below. Almost invariably there is some combination of three Micro-Testers that will fit individual requirements like a glove. For example three testers, Models 280, 281 and 282 are priced at \$31.25 complete in sturdy leatherette case. Test leads extra.



MODEL 280 A.C. Ammeter with self contained transformer. Ranges: 0-1, 0-2.5, 0-5, 0-10 and 0-25 Amps. Your price... **\$9.75**

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Note, for instance, the Model 280 illustrated above. For the first time a current transformer and indicating instrument have been combined in one small case to meet the need for a compact, multiple-range A.C. Ammeter at an almost unbelievably low price. Providing a complete range, from a fraction of an ampere up to 25 amperes, this instrument fills a vital spot in every manufacturing plant, laboratory or service organization.

And the Model 280 is merely typical of the group of eight "Micro-Testers" in the types and ranges listed. From them, combinations can be selected that will exactly fit your needs. The result will be an analyzer, typified by the kit above, that is easy to use, easy to keep up-to-date, easy to pay for.

There is Simpson precision in every detail of these "Micro-Testers" and Simpson beauty in the red Bakelite case and meter, graced by a satin-silver panel with black characters, switch knobs and binding posts. All measure 2 7/8" by 5 1/4" by 1 3/4" and weigh about 20 ounces.

Ask for new bulletin covering Micro-Testers in detail.

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MODEL 283
D.C. Milliammeter. Ranges: 0-1-5-10-25-50-100-250-500-1000 M.A. Your net price... **\$9.25**



MODEL 284
D.C. Microammeter. Ranges: 0-50-100-250-500-1000 microamperes. Your net price... **\$9.75**



MODEL 285
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Use Model 560
Vedolyzer With
Model 561 Combination
Oscillator

THE MODEL 561 is radio's most complete oscillator—a combination of 4 essential instruments which every well equipped serviceman should have. It provides (1) A.F. oscillator, 15 to 15,000 cycles, (2) R.F. oscillator, variable amplitude or frequency modulated, (3) Carrier and modulation monitor, vacuum tube circuit, A.F. and R.F. oscillators may be used separately or the variable audio oscillator used to modulate the R.F. Percentage of modulation read directly on meter. (4) Frequency modulator. Double image, positive self-synchronizing.

THE MODEL 560 is a basically different dynamic test instrument using a high frequency 3" scope; 3 stage, wide range, high gain, television, video, vertical amplifiers; multi-range, multi-function, push button controlled, vacuum tube A.C., D.C., ohm and megohmmeter; super-sensitive R.F. voltmeter; broadcast, I.F. and oscillator variable tuning section; push button controlled multi-probe input circuit. The Model 560 Vedolyzer used with the 561 Oscillator is radio's finest and most complete signal tracing set-up.

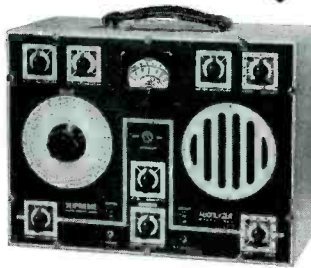


Or Use Model 562
Audolyzer with
Model 561 Combination
Oscillator

THE MODEL 562 is the simplest and most logical signal tracing and dynamic tester available. Servicemen everywhere are recommending its use because it will start "paying off" an hour after it reaches your shop. It is not necessary to "take out" a few days and learn to operate your new instrument. One hour with the AUDOLYZER, a test oscillator, and a receiver and you can tear into those repair jobs you have pushed aside to rest for a while. The AUDOLYZER contains a five inch dynamic speaker for its primary indicating device; a meter to monitor RF, IF, AF, AVC, AFC, and D.C. voltages; a two stage tuned amplifier to check frequencies from 95 KC to 14.5 MC; a vernier and step attenuator to control signal level reaching speaker; a vacuum-tube voltmeter to check D.C. volts from 0 to 1000 volts in seven ranges; a single probe to be used in any type circuit; dual probes for intermittents.



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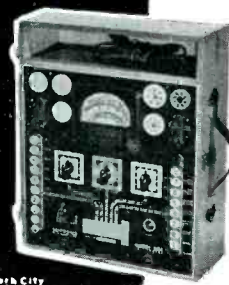
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MODEL 504 is SUPREME's finest combination tube tester, set tester and condenser tester. All tubes correctly tested regardless of base terminations or filament voltages. 31 millimeter and resistance ranges available on fast push button switches. Condenser settings included on roller chart for every capacity and working voltage. The Model 504 plus your signal tracing instruments and you have everything that a modern shop requires.

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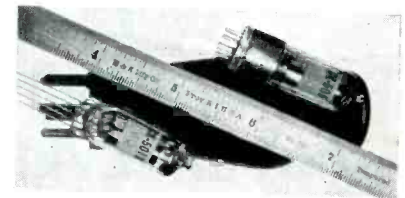
Webster Electric
"Where Quality is a Responsibility and Fair Dealing an Obligation"

not sufficient, the frequency response of the circuits will have several pronounced peaks. With overcoupling a broad band-width is obtained with fairly flat top but decidedly rounded corners. With the coupling adjusted properly, a fairly sharp-sided curve is obtained. By adjusting the resistance of R, a flat-topped curve results.

New Tubes

6S6GT—A remote cut-off radio frequency pentode by Ken-Rad having a high mutual conductance and low output capacity. Glass with octal base and top cap. Characteristics are:

Filament Voltage	6.3 volts
Filament Current	0.45 amp.
Plate Voltage	250 volts
Screen Voltage	100 volts
Grid Voltage	-2 volts
Plate Current	13 ma.
Screen Current	3 ma.
Mutual Conductance	4000 umhos
Amplification Factor	1400
Plate Resistance	350,000 ohms
Input Capacity	7 uuf.
Output Capacity	4.6 uuf.



CK-501—Hearing aid pentode by Raytheon. Filament drain of 33 ma. at 1.25 volts. Plate voltage 30 to 45 volts. Available with miniature base to fit special Amphenol socket or with tinned copper leads for direct soldering. With base, tube measures 1 1/4 inches long by 1/8 inch diameter. Without base, 1 1/2 inches long by 1/2 inch in diameter. May be operated with or without bias.

In addition 3 other tubes of the same type and current drain are available. These are the CK-502 which provides 11 milliwatts output at 45 volts, the CK-503 gives 7 milliwatts at 30 volts, and the CK-504 rated at 4.5 milliwatts at 30 volts.

New Book

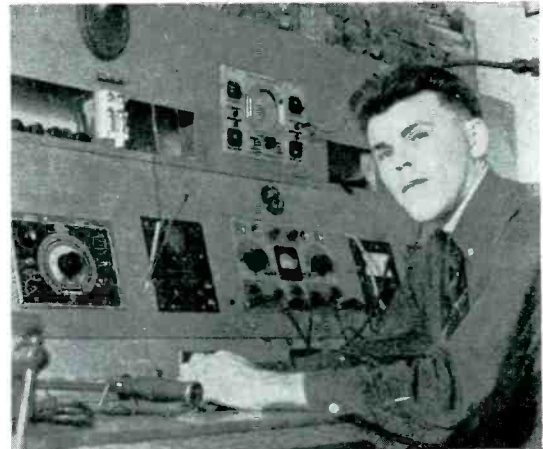
THE OSCILLATOR AT WORK (John F. Rider Publisher, Inc., \$1.50) by John F. Rider is a practical book for practical servicemen.

Tells how various oscillator circuits function and methods to improve their performance. Many newer and less familiar oscillators as well as standard types are described in detail. Covers r.f., a.f., sweep, test oscillators and others, as well as laboratory test methods.

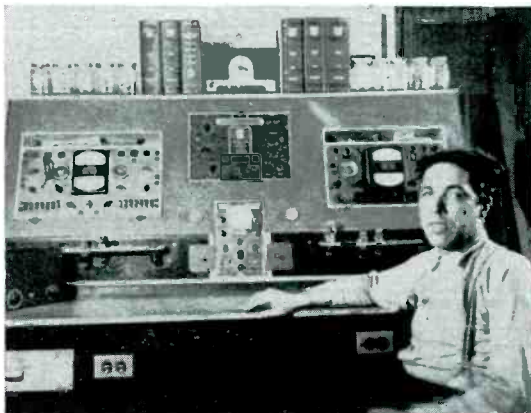
MEN *and* SHOPS



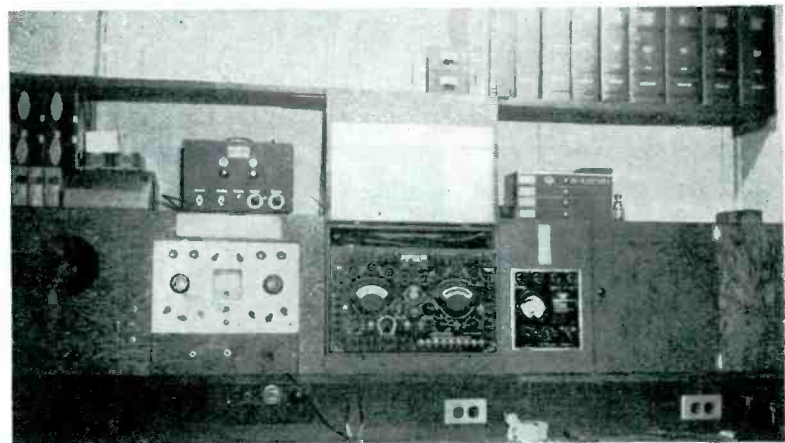
TEXAS—Here's Bill Babcock, Ft. Worth, who believes in plenty of bench room to sprawl the chassis. Soldering iron is kept off the bench by placing it in handy receptacle on bench front. Test instruments are not built-in since portability is desired



NEW JERSEY—Dave Blackwell poses in front of his new bench at Radio Service Laboratories, Skillman. Openings in panel above instruments are for storing test tubes and miscellaneous parts. Note sloping panel for easy instrument reading

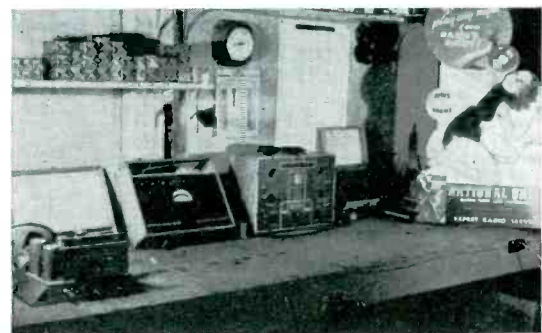


NEW YORK—This serious fellow is none other than Juan Zabole, Zabole Radio Laboratory, New York City. Juan spent a good deal of time on this layout, also some money as is evidenced by the instruments. Jars on top hold small parts, nuts and bolts. Circuit manuals are always on hand



WEST VIRGINIA—Compactness and simplicity are the keynote at Luce Radio Service, Salem. All required instruments readily accessible; note hinged panel at left for storage space. Plenty of room available for new instruments as they are purchased, a failure of most service benches. Elusive Luce could not be found when this photo was taken

FLORIDA—Poole Radio Service, Daytona, doesn't do their service work in this truck but they do have a nice sound business besides radio repairing. Servicemen, here's a way to collect those bad accounts! Just park in front of the house and ask for it through the speaker (R. R. accepts no responsibility for suits or damage to truck)



NEW YORK—Ray Drake, Belmont, was absent when we "snooked" this shot. Note convenient tube and parts supply. Clock permits accurate timing of each job. Portable instruments used for outside or shop jobs

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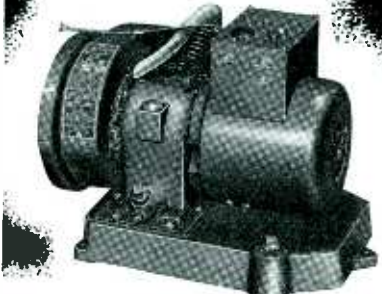
- Perforated Reed of highest quality Swedish Spring Steel.
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SERVICING

Friction Drive

PHONOMOTORS

WHAT TO LOOK FOR when a turntable motor fails, runs slow, or becomes noisy

BY PORTER TURNER*

WITH approximately a third of a million radio phonograph combinations sold in 1938, and close to half a million in 1939, the serviceman will soon find himself confronted with the problem of servicing them.

The friction or rim drive type phonomotor which has found considerable use this past year, now being used even in the record changing combinations, is worthy of particular consideration in regard to practical service problems. Fig. 1 illustrates a phonomotor of this type and will serve as a reference for the various component working parts as mentioned here.

It may be noted that the motor is mounted in such a manner as to have its rotor shaft, carrying the drive pulley, extending upward to engage a rubber-tired idler wheel which in turn drives the turntable top by contact with the flange or rim. The idler wheel is so mounted as to provide positive drive between the drive pulley and turntable in the clockwise direction of rotation. The reduction from the high motor speed to the proper turntable speed results from the small diameter pulley driving the large diameter turntable. This reduction, and thus the turntable speed, is dependent on the ratio of diameters of the drive pulley and turntable and not the idler wheel dimension. It should therefore be appreciated by the serviceman that even appreciable wear of the idler tire will not affect turntable speed.

Troubles

Faulty operation of the above type mechanism is usually evidenced by failure of the turntable to run at all, uneven speed, or noisy operation. In the first case, probable causes would be open or burned out motor windings, sticking of the idler plate in which the idler wheel is mounted, or a frozen turntable stud from loss of lubrication.

Invariably an open or burned out motor winding is caused by attempt-

ing to operate the motor on the wrong voltage or frequency source, or physical damage to the coil. This may best be repaired by either replacing the entire phonomotor or returning the old one through the jobber to the manufacturer for repair.

The second cause, that of the sticking idler plate, which may result from bending or physical damage to the assembly, may be repaired by correct-

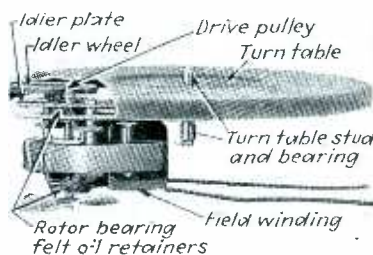


Fig. 1—Typical friction drive phonomotor showing the various components which are likely to develop trouble after long use

ing the existing damage so that the idler wheel assembly is again free to slide and engage the drive pulley and the turntable. A frozen turntable stud resulting from loss of lubrication because of unusual service requirements may of course be remedied by removing, cleaning, and relubricating with Gargoyle 600W or similar grade oil. Idler bearings may also be relubricated where necessary with this grade of oil.

The next sign of trouble, namely severe loss of speed or uneven speed is usually caused by loss of lubrication in rotor bearings, or bearings having been knocked out of line. Where loss of lubrication from the rotor bearings has resulted from severe or long service, a good grade of S.A.E. No. 10 motor oil or special dynamo oil such as Sinclair Cordymo should be used. The latter cause, that of bearings being out of alignment, may result from a severe stress on the rotor shaft. Once out of alignment these small motors rarely have sufficient power to realign themselves even though self-aligning type bear-

ings are universally used. Realignment, however, can be readily accomplished merely by tapping the motor with the current turned on until the rotor coasts freely.

Mechanical Noise

Noisy operation may result from physical damage to the rubber-tired idler wheel or turntable rim. For quiet and satisfactory operation it is important to have both of these surfaces smooth, concentric, and free of foreign matter. Damage may result when attempting to force the turntable on the stud without first making certain that the idler wheel is held clear of the rim, by dropping and bending the turntable rim, or allowing oil or grease to get on the idler tire in sufficient quantities to result in its deterioration.

If the unit has been in service for a long time normal oxidation of the rubber will cause it to harden and crack to such an extent that unsatisfactory and noisy operation may result. It is a strange fact that when used constantly the rubber tire will not deteriorate from old age as rapidly as when used but infrequently, as the flexing of the rubber tends to keep it alive. The obvious repair where the idler tire is at fault is of course its replacement.

Of the several type idler wheels in common use, one type, using a molded tire mounted on a single disc, illustrated in Fig. 2A, is readily removable and the tire only need be replaced. The tire should be seated on the steel disc quite carefully, press-

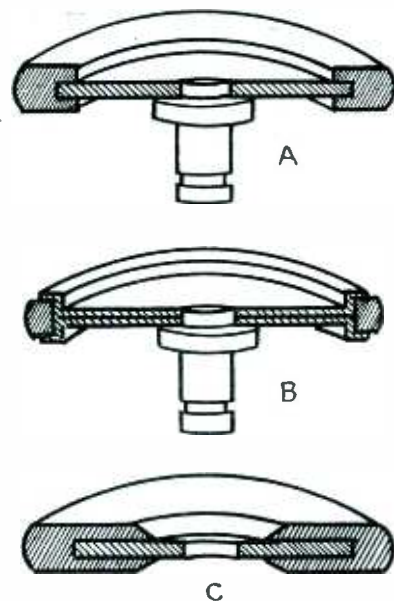



Fig. 2—Three idler wheel types in common use. When replacement is necessary only the tire need be changed on A. On types B and C entire wheel must be changed

* Alliance Mfg. Co.

JIM QUAM Says




A month or so ago I expressed myself on the economics of speaker repair. I said that in my opinion many servicemen were hurting themselves, both financially and in customer good will, by attempting to repair small speakers that should be replaced. Most of their customers will gladly pay a little more for the improved performance of a new speaker than less for a repair job that too often does not begin to reproduce the original performance.

We have been particularly gratified at the response my comments have had. It seems a number of servicemen have learned, by bitter experience, that it is better business to replace than repair the smaller speakers.

We hope that these remarks will cause more servicemen to think about a speaker service job in terms of simple economics and satisfied customers.

HONORARY MEMBER OF R. S. A.

QUAM-NICHOLS CO.
 33rd Place & Cottage Grove CHICAGO 1674 Broadway NEW YORK



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NEW P.A. 18 New Sound Systems—7 to 75 watts—for Electioneering, Rentals, Orchestras, Schools, Churches, etc. New ideas—new applications—new low prices. The easiest Time Payment Plan ever—15 Day Trial Offer, etc.

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SEND COUPON NOW!

ing it down around its entire circumference. The tire will then tend to further seat itself and smooth out after it has been in operation for a short time. The rubber tires should be handled with clean hands only, particularly free of grease and oil. Other type idlers using a rubber band cemented in the recess provided by a double flanged disc, Fig. 2B; or rubber molded to the disc, Fig. 2C, require replacement of the entire idler wheel.

In connection with foreign matter on the idler tire being a source of noisy operation I recall a rather humorous incident. In checking a life test motor one morning, it was found to have developed a very annoying thump. Further investigation disclosed that during the night, a fly, apparently seeking warmth as provided by the motor, made the mistake of getting caught between the idler wheel and turntable rim. It was of course effectively "run over" and in a flattened state adhered to the tire. Removing the carcass restored the phonomotor to its former quiet operation. Needless to say such an occurrence would be rare.

As a concluding point, I would like to stress the importance, in relubricating any of the bearing surfaces, particularly that of the idler, to be careful not to use an excessive amount of oil in view of the danger resulting from oil flooding out when hot onto parts such as the idler tire and destroying the rubber.

Audio Frequency

OSCILLATION IN TRIPLE GRID PENTODES may be reduced by connecting the suppressor grid to ground instead of cathode.

THERE ONCE WAS A FELLOW who had a set that drifted so badly that he took it to a beauty parlor to have the waves permanented.

TRICKS

BELMONT 777B

Improved tone and performance can be had by replacing 180 ohm cathode resistor on 6D6 tubes with 300 ohms.

CROSLEY 148

Dead . . . check first i.f. plate trimmer for short to ground. Replace trimmer or insert new mica.

CROSLEY 163

Bad distortion after set warms up . . . replace 150,000 ohm resistor in the cathode circuit of the 77 with 100,000.

FAIRBANKS MORSE 42

Motorboats when volume is advanced on strong stations . . . suspect 8 mfd condenser or resistor connected to volume control.

FARNSWORTH AKL59

Shock when phono pickup arm is touched . . . break shield on wire connecting set chassis and phono arm and insert .1 mfd condenser.

FARNSWORTH AT50

Weak on short waves . . . realign at 15 mc. although factory recommends 18 mc.

RCA 9K3

Chokes up on strong signals . . . look for high resistance leak between cathode to filament of 6H6.

RCA 13K

Fades after several hours of operation . . . check C85 and C86, 10 mfd filter condensers which are separate units connected in parallel. When one of these open, set fades.

NEW LOW COST, SMARTLY STYLED MIKE, ALLOWS FULL MARGIN PROFIT

TURNER R22X CRYSTAL

A top-performing, rugged, dependable microphone, offered at low cost, yet you get full margin on it. Streamlined, satin chrome finish, complete with 8 ft. cable, which can be changed without opening mike. Range 30-7000 cycles. Level -52DB. Fully protected for the ham. Large capacity crystal permits long lines with minimum loss of level. Styled to sell on sight. Packed, complete with chamoisette mike pouch and diagrams. **\$14.95**

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 MATCHING DESK STAND T-1, 9" high, 5 1/2" base diameter, 3 rubber feet. Completes matching desk stand with R22X, R22X and T-1 stand. **List \$18.45**

Each Turner Microphone Laboratory-tested, before shipped, to eliminate returned-goods headaches.

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 Licensed Under Patents of The Brush Development Co.



SILVERTONE 4589

Cuts out on frequencies higher than 770 kc . . . check 0041 mfd condenser bypassing oscillator coil to ground. Replace with .005 mfd unit.

SILVERTONE 6403, 6404, 6405, 6406, 6492, 6496

Hum, low volume . . . check the antenna loop for opens at the corners. This also may cause intermittent howl.

SONORA 705

Hum, poor volume control action . . . look for open 8 mfd electrolytic under resistor—condenser bank. Replace with 300 volt unit.

STEWART WARNER R-127A

Poor tone, oscillates . . . check tone control, often half of this unit opens.

STROMBERG CARLSON 231

Intermittent hum . . . Tighten screw holding filter condenser to chassis.

ZENITH 52

Hum . . . replace 500,000 ohm resistor across secondary of pushpull input transformer.

ZENITH 666

Noise when car is in motion which disappears when set heats up . . . look for broken stranded lead between the mixer grid cap and condenser gang. As the tubes heat, this brings the connection more firmly together.

ZENITH 5659

Excessive regeneration . . . move grid lead of 12A8G away from oscillator section of gang condenser.

ZENITH 5808, 1005, 1103

Oscillation at 550 kc. . . improper adjustment of wave trap; realign trap.

Noisy tuning . . . grounding braid on gang rubs on flywheel; burrs on drive shaft shorting to volume control; dial pulley rubbing against dial.

ZENITH 5902

Oscillation or audio howl. . . ground the 56 detector cathode right at the socket, remove original black ground wire. Reroute the second i.f. plate wire from the lug around the 8 mfd condenser and connect to the other side of the choke.

BUY DIRECT FROM THE MANUFACTURER AND SAVE

THE NEW MODEL 1230 SIGNAL GENERATOR WITH FIVE STEPS OF SINE-WAVE AUDIO



"I can't see how you do it at that price!" That one sentence states the consensus of opinion of the top-flight radio experts who examined and checked this new instrument, but you needn't be an expert to appreciate the amazing value we are offering in this new, most-advanced Signal Generator. Designed for appearance by one of the foremost instrument designers and engineered by a Radio Engineer who has specialized in frequency measuring devices for the past fifteen years, the Model 1230 is our bid for all of the 1940 Signal Generator business.

RADIO FREQUENCIES: from 100 K.C. to 90 Megacycles in 7 bands by front panel switch manipulation. All direct reading and accurate to within 1% on I.F. and Broadcast bands, 2% on higher frequencies. The R.F. is obtainable separately or modulated by any one of the five Audio Frequencies.

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The Model 1230 comes complete with tubes, shielded cables, moulded carrying handle and instructions. Size 14"x6"x11". Shipping weight 15 pounds. Our net price..... **\$12.85**

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CIRCUIT: The Model 1230 employs an improved electron coupled oscillator circuit for the R.F. affording positive protection against frequency drift and a Hartley oscillator circuit for the A.F. section.

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APPEARANCE: The front panel is etched by a recently perfected process which results in a life-long attractive finish and the instrument comes housed in a streamlined shielded cabinet.

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Repair radios expertly

This book gives the essentials of theory and technique that clarify radio troubles and help you make quick, accurate repairs.

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Principles and Practice of RADIO SERVICING

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Radio Instructor, Hadley Vocational School

300 pages, 6 x 9, 212 illustrations, \$3.00

INCLUDES CHAPTERS ON:
—selecting and using test equipment
—servicing public address systems
—getting and keeping service business

Shows how to install, test, and repair radio receivers, giving not only instructions in all the servicing procedures, but also plain treatment of the theory of electricity and radio needed for most effective approach to servicing problems. Written in excellent self-study style for servicemen who want to improve their skill and readers who want to learn this practical field from the ground up.

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A public address favorite that also fills a long standing demand for a really good low priced microphone for universal use. Wide range (JT-30) and voice range (JT-40) available. See Astatic Jobber.

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Closing out several demonstrator models at special price. Perfect sound on film recording with Filmograph at only 25¢ per hour (this is cost of film only—no other expense). Permanent and instantaneous playback. Dept. RR, Miles Reproducer Co., Inc., 812 Broadway, New York City.

REPRESENTATIVES WANTED

Manufacturer of classical phonograph records, record racks, carrying cases, needles, and home recording blanks has several desirable territories available for sales representatives and distributors in the South, West, and abroad. Write fully as to territory covered. Box RW-139, Radio & Television Retailing, 330 W. 42nd St., New York, N. Y.

BUSINESS ON A BUDGET

(Continued from page 31)

knowledge, week by week, of just what is happening—and why.

Use this knowledge and you know just what the profit and growth of your business will be.

When you plan accurately and work the plan continuously, the control of your business becomes fascinating as well as profitable.

You cannot really operate your business on a budget without learning a lot more about your business than you ever knew before.

If your business is now profitable, you can make it more profitable.

And if your business is not profitable, a sound budget is the only sure means of turning the red ink to black.

Of course, it isn't the budget that is important, but how you use it.

In business, there is no substitute for management and merchandising skill, and the will to follow through.

As you compare your actual performance with your plan, every difference between the two is a signal—a signpost along the road to your chosen destination.

Whether you read them or not is up to you. But getting to your chosen profit destination depends upon obeying the signs, losing a lot of time, or just plain luck.

The signs are there to help you.

SOUND RENTAL CHARGES

(Continued from page 32)

a total of five hours labor or \$1.50 per hour for labor with \$2.00 for overhead and depreciation on his equipment. A charge of \$1.50 per hour for labor of this nature is not so terribly out of line. Many men in the business actually charge less. They should not, of course.

Re: Extras

Many readers stated that the "suggested" rehearsal charge of \$2.00 per hour was out of line. This could have been included in the installation time if the equipment was being installed and microphones being placed at the same time the rehearsal was in progress.

The reason for the rehearsal charge being included was mainly for large dramatic presentations and



**Plan now to attend the
Radio Parts
National
Trade Show**

June 11 to 14

You'll see at first hand what your entire industry is planning and doing for Fall. You'll get a complete preview of next season's products—of Home Recording Devices, Parts, Public Address, Tubes, Laboratory Apparatus, Ham Gear, etc. You'll pick up tangible sales and merchandising ideas which you can convert into profits in your own business. Look ahead—plan now to go to the Show. It pays!

JOBBER DAYS

Tues., Wed., Thurs., June 11, 12, 13

OPEN HOUSE

Friday, June 14

STEVENS HOTEL, CHICAGO

**Radio Parts
National Trade Show**

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53 West Jackson Boulevard · Chicago

tableau's that involve a "dress" rehearsal the day prior to the actual performance. (It is understood that no rehearsal would be required in the event of the example cited previously for the 8 p.m. to midnight occasion.)

No objection was raised by correspondents concerning the minimum charges for extra microphones. It was generally agreed that the scale of \$1.50 for one; \$2.75 for two; \$3.50 for three was equitable.

The turntable charge of \$4.00 came in for quite a few long mail discussions. The charge of \$4.00 was intended to compensate for the actual cost of records. Assuming that an average of six new records must be purchased weekly or bi-monthly at the very least, this charge covered the cost to the soundman.

On rentals without an operator, all accepted the \$5.00 charge as a satisfactory minimum for a small system. Many suggested that a deposit be obtained for the equipment, to be refunded if same was returned promptly as agreed. Retention of the deposit was frequently suggested for tardiness.

Accurate cost bidding on sound

installations is a sensible way to determine just what profit your sound endeavors are paying you in the long run. Every successful sound bid means that you are *selling* your sound service and the selling price, like that of any article, should cover all expenses and a net profit.

There is plenty of competition in sound, as everyone in it has found out. But the *service* end is something that not everyone can offer and it is a repeat business source and advertisement that cannot be overlooked. It is better to overlook small and unimportant low-paying installations in favor of the medium and larger sized jobs that present an opportunity for a profit.

More and more radio and sound dealers are adopting a systematic course in bidding on sound. They, in the long run, may not get *all* the business—but it will all be *profit* business. That's what we're all in business for and on the alert to secure.

The more discussion there is about costs, the better off all of us will be. If I have again made statements here with which any

disagree I *expect* them to "swing," and swing freely.

That's the way sensible bidding will be developed in the sound business and it can't come too soon.

ROOM COOLERS

(Continued from page 35)

who suffer from any of the pollen fevers, or hay fever.

And in winter, room-coolers filter and circulate fresh air in the sleeping rooms without danger from drafts.

Tell the story of the health and comfort resulting from the year-round use of these room-coolers, consistently, and your cash register will ring more frequently.

If you're alert, willing and able, to do a specialty selling job, room-cooler opportunities are cut to your order.

But next year may be too late, for distribution is finding its channels now, and if the radio-appliance dealer doesn't take the driver's seat at once some other retailer will soon hold the wheel.

Room-coolers are coming—fast. And they are your meat.

If he sells
RADIO

and other modern home equipment, he's the
LIVEST DEALER IN TOWN!

And **RADIO RETAILING** is
his preferred trade paper

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Write **NOW** for Literature and Discounts.

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and **DOUBLE CHECK**
THEN STOCK

Sentinel

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**THE EXTRA FEATURE LINE THAT
MAKES EXTRA PROFITS FOR YOU**

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Where You Tell Us...

"Right" Prices, Wrong Man

The Steinhart Coal Company, of which I am also president, just received from a Philadelphia radio and electrical appliance jobber a catalog listing many items in these fields at wholesale prices.

Now my thought in writing you this letter is that if Coal Company officials and office employees and possibly other industries all receive such catalogs how are we dealers going to exist?

The only customers we will have left to work on will be WPA workers and the Finance Companies will not accept any paper on them so you see what is happening. Soon, legitimate dealers would be wiped out and jobbers will have to sell retail at wholesale prices and have all the service headaches and carry the time sale paper.

I cannot say how many such catalogs come into this city but I can say this. They go only to the few folks who are legitimately employed and could afford to buy at retail prices and then later these customers, when in need of service, expect the legitimate dealer to have specially trained men respond promptly and do their dirty work at servicemen's wages.

SHAMOKIN, PENNA. ED. F. STEINHART
Steinhart's Auto Supply Co.

Tabs For Swap

How can we get a pushbutton station "tab" exchange started with a group of midwestern stores. I mean to exchange the little call letter tabs that must be inserted by dealers?

Here's the idea. Out here we use from three to six station call letter tabs

out of a sheet of a hundred or so supplied by typical manufacturers. The rest are set aside and never used. And when users lose or dirty or tear tabs, as they frequently do, we must purchase a complete new set to obtain just one station call-letter tab.

We could swap with dealers in distant cities with mutual profit.

LONG BEACH, CALIF. H. E. WARD, JR.
Radio Technician's Ass'n

One Man's Meat . . .

We are moving to a new locality and would like you to advise us what you consider the best service department location for a store.

Is it advisable to have the service department in the front or partitioned off in a separate room at the back?

CLEVELAND AL BUDIN
Budin's Auto Supply, Radio & Sound

Beyond saying that most dealers seem to prefer service shops at the rear we hesitate to lay down any hard and fast rule. So much depends upon the exact nature of the business, its primary objectives and, particularly, the selling "style" of its proprietor.

We've seen both methods work out very satisfactorily. Both have their advantages and disadvantages.

E TU India?

The first and the foremost thing that India has to complain against the American businessman is that whenever they contract agencies and agreements they do not keep up to that and whenever anybody works up for them after a short while they withdraw all the arrangements after having gained their reputation and built their name at the cost of the dealers.

The radio sets if America wants them to be better known in this country, they should build these better. Cabinets should be more robustly built. Transformers and components should be heavier duty and tropical proof so that even though these sets may be a bit more expensive they are more lasting and the average client receives real value for his money.

BOMBAY, INDIA
Eastern Elect. & Engineering Co.

Not So Hard

I agree with correspondent C. M. Caldwell that F. W. Smith's recent article on service pricing recommends rates much too high. I believe that a fair price should be charged but in small towns and outlying rural districts this thing of asking sixteen dollars or so for replacing a part or two and balancing the set is completely out of the question.

I realize that in places like New York and other big cities it is hard to find many people whose weekly earnings go below \$75 to \$100 per week but that is not true out here.

KNIGHTSTOWN, IND. MARION L. RHODES

Why Editors Turn Gray

I am going to stop Radio Retailing on account it is not interesting enough for me. I also get another and I may stop it also.

If you are going to do something in radio why don't you print out a *photo* of sets as they are showing connection of circuit, that is what is needed as well as wire diagrams.

KANSAS CITY, Mo. R. H. SCHICK

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Here is the Most Startling Innovation in Radio Today!

The HOWARD Radio-Recorder and Automatic Phonograph



- FULL TONED HOWARD SUPERHETRODYNE RADIO—receives both foreign and domestic broadcasts.
- AUTOMATIC RECORD CHANGING PHONOGRAPH—PLAYS TEN INCH, TWELVE INCH OR MIXED SIZES OF RECORDS.
- EXCLUSIVE HOWARD RECORD DUPLICATOR SYSTEM—ENABLES YOU TO DUPLICATE THE FINEST RECORDS BY PLAYING THEM ON THE AUTOMATIC PHONOGRAPH IN THE LOWER COMPARTMENT.
- PRECISION BUILT MICROPHONE RECORDER—provides crystal clear voice or music reproductions on records at lowest cost.
- "OFF THE AIR" PROGRAM RECORDER—puts any type of radio reception in permanent record form.
- EXCLUSIVE HOWARD "FADING-MIXING" SYSTEM—allows mixing of voice or music from microphone with program coming in over radio. Provides dozens of unique, novel and entertaining combinations.
- POWERFUL "HOME AMPLIFIER" SYSTEM—sound picked up by microphone is amplified and reproduced through loud-speaker.

NEW • NOVEL • ULTRA-BEAUTIFUL . . .

The new HOWARD Radio-Recorder-Phonograph Combination incorporates more sensational selling features than any home entertainment instrument in existence. In one complete unit of unmatched beauty and style, the basic performance of the radio, recorder, automatic record changing phonograph and record duplicator have been expanded to include dozens of new, novel and thrilling expressions of entertainment. Each of the four superb models—outstanding in value and sales compelling interest will mean record profits for every HOWARD distributor and dealer.

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START AT
\$119⁹⁵

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Price Range: \$119.95 to \$199.50

Every Demonstration Starts a Sale!

Wherever displayed, the new HOWARD Radio-Recorder has literally stopped people in their tracks. The remarkable human interest features of this instrument provide a radical departure and a welcome relief from conventional selling appeals. A new market with thousands of eager prospects has been thrown wide open with the announcement of this amazing new HOWARD Combination.

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You'll reap the richest profit harvest in years if you are in a position to offer the new HOWARD Radio-Recorder to your trade. This is the golden opportunity that distributors and dealers alike have awaited for years. Exclusive territories are available in many sections. For complete details, telephone, wire or write at once!

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Cabinet Dimensions: 32½" x 33⅝" x 15¾"

All Models Housed in Beautiful Hepplewhite Cabinet

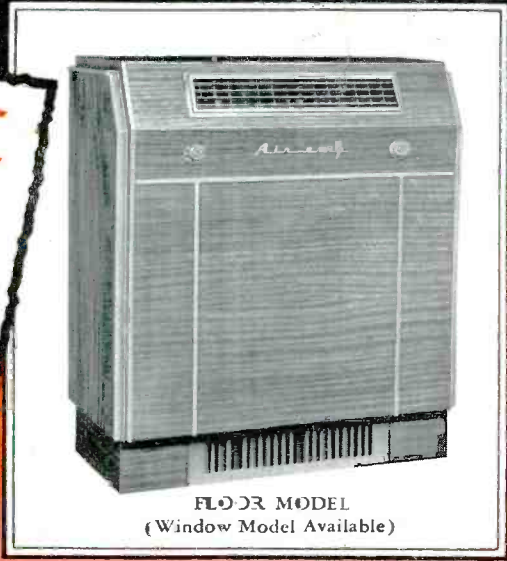
Right! and we're sending for all the dope pronto!

Boss, this is the one big chance to sell something that pays a man size profit



High Spots

1. Merchandise—right from the standpoint of design and construction.
2. A virgin field of prospects. *No Trade-Ins.*
3. Made by a company whose name stands for *Integrity, Success and Public Acceptance.*
4. Your present Sales Force can sell without engineering experience.
5. Your present customers are potential buyers.
6. *It is Salable Everywhere!*



FLOOR MODEL
(Window Model Available)

Photo of Progressive Dealer and Star Salesman Discussing Money-Making Certainties of the 1940 AIRTEMP COOL-BREEZE Summer Air Conditioners

You're a busy man. So we'll make this message short and snappy. The "high spots" are listed in the panel, so we'll skip those, save time and not repeat.

The gist of the whole story is this.

Any of your salesmen—*without engineering experience*—can sell *this* line.

And in these days, with price-cutting wars raging, what a break to get a line where price-cutting is out of the picture and where every sale means a man-size profit for both *you* and your *salesmen*.

Territories are being snapped up eagerly. The wise thing, the sensible thing to do is to mail the handy coupon today and get all the money-making facts quickly.

By spending 3 cents for a stamp and mailing the coupon *now*, you may reap hundreds—perhaps *thousands*—of dollars in profits before the summer is over.



Mail This Today

AIRTEMP DIVISION, Chrysler Corporation,
Dayton, Ohio.
Your proposition looks good to me. I'd like to know more about the money-making possibilities you offer with AIRTEMP COOL-BREEZE Summer Air Conditioners. Rush all the Facts and Proof at once.

Name.....
Address.....
City..... State.....
(Do you handle a room cooler now? If so, please give make.)

AIRTEMP DIVISION
CHRYSLER CORPORATION, - DAYTON, OHIO