

# RADIO

*and  
Television*

# RETAILING

SEPTEMBER • 1941

A McGRAW-HILL Publication Price 20c

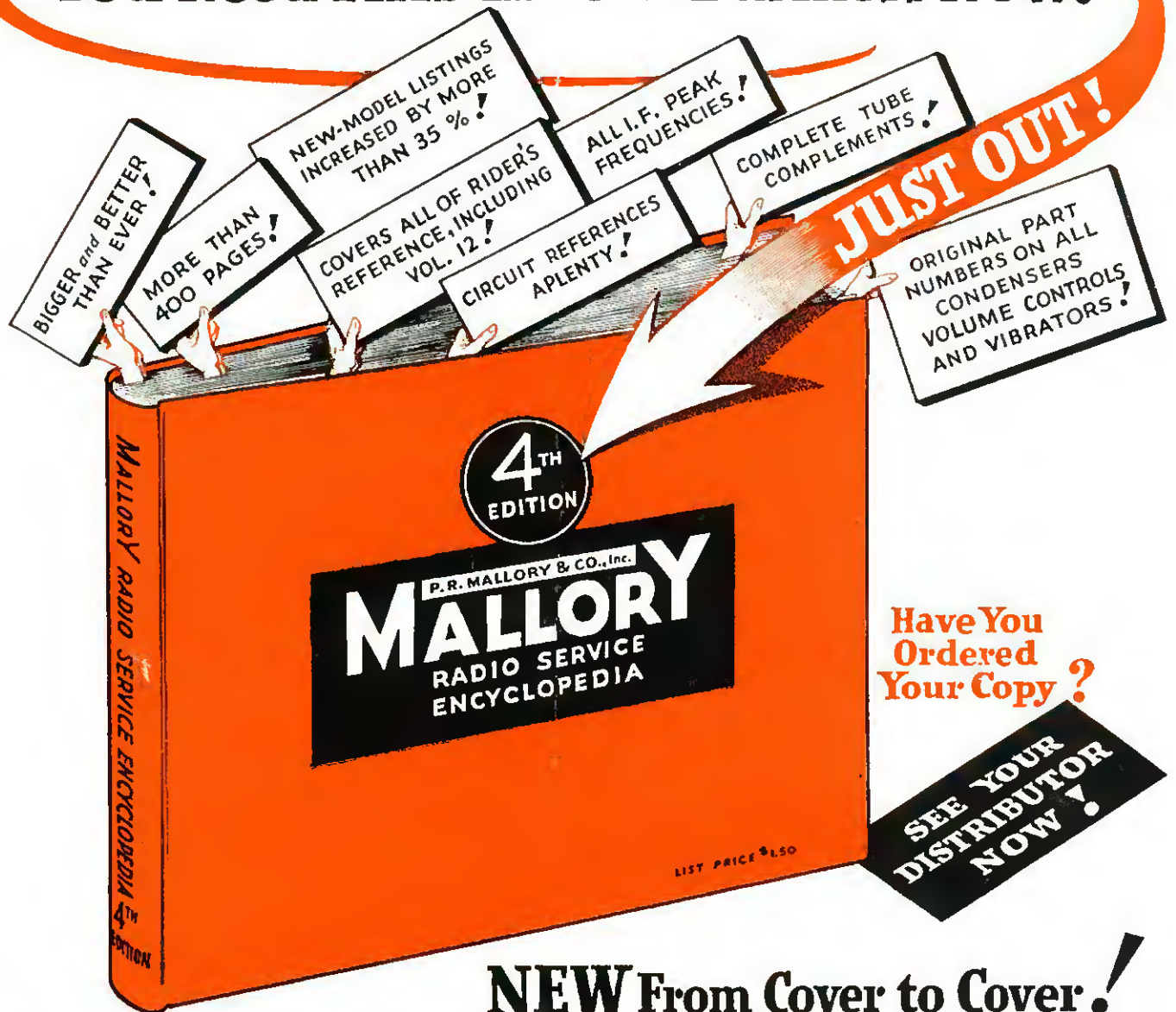


## HOME Again!

VACATION  
over, Mr. and  
Mrs. America  
return to the  
greatest in-  
door sport...  
*radio and rec-  
ord playing*

Read . . . Latest Facts and Figures about Factory PRODUCTION and Dealer SALES

**You Need THIS In Your Business NOW!**




**Have You Ordered Your Copy?**


**SEE YOUR DISTRIBUTOR NOW!**

## **NEW From Cover to Cover!**

### **Here's a Volume Control That's *Something!***

 . . . a real contribution to the speed and quality of your service work. New mechanical and electrical precision. Rugged! An A-C switch that snaps on and stays on. Quiet! Start using them *today!*

### **Mallory Replacement Condensers are Tops!**

 More service engineers are using more Mallory Replacement Condensers than ever! Save time and protect your reputation with Mallory Replacement Condensers!

*save your old Aluminum parts. It is patriotic to give them to National Defense.*

You better order your copy of this new, 4th edition MYE *right this minute!* Because our Mallory distributors tell us that they're practically sold out. And, Mister, you're going to kick yourself, if you don't get a copy. You need this MYE in your business—and you need it NOW!

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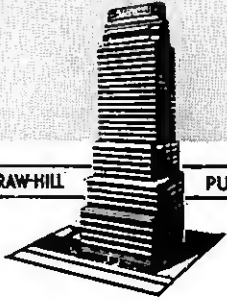
**More than ever  
—INSIST ON**

P. R. MALLORY & CO., Inc.  
**MALLORY**  
APPROVED  
PRECISION PRODUCTS

VIBRATORS • VIBRAPACKS • CONDENSERS •  
VOLUME CONTROLS • ROTARY SWITCHES •  
SINGLE AND MULTIPLE PUSH BUTTON SWITCHES  
• RESISTORS • RADIO HARDWARE

# RADIO

# and Television RETAILING



A MCGRAW-HILL

PUBLICATION

SEPTEMBER 1941

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**SALES STATIC . . .** If you really knew anything about radios you could tell what's wrong without testing it

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**THE VALUE LEADER FOR 1942**

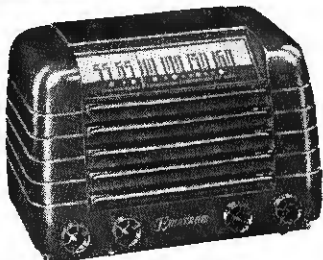
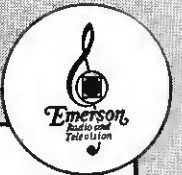
**AMAZING  
NEW FEATURES**

**SENSATIONAL  
NEW DEVELOPMENTS**

**REVOLUTIONARY  
NEW STYLING**

**Emerson**  
with "MIRACLE TONE"

EMERSON FOR 1942 means faster turn-over . . . increased volume and greater dealer profits! Get the facts today!



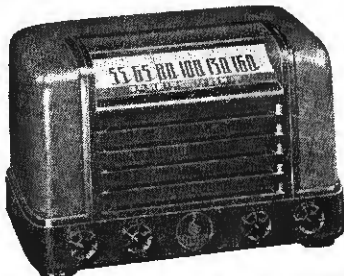
**Model 421**

AC-DC Superheterodyne . . . Standard Broadcasts and Police . . . Magnivision Slide-Rule Dial . . . 6" Oval Dynamic Speaker . . . Tone Control.



**Model 426 — "3-Way" Portable**  
NEW STYLE PORTABLE

SMALLER—LIGHTER—SMARTER  
1. Plays on Own Power—2. On AC—3. On DC.



**Model 413 — Gets Europe Direct**  
6-Tube AC-DC Superheterodyne . . . Foreign and American Broadcasts, Police . . . Slide-Rule Dial . . . 6" Oval Dynamic Speaker . . . Tone Control.



**Model 423 — PHONORADIO**

AC Superhet . . . Standard Broadcasts, Police . . . Plays all size records including 12" . . . Feather-Weight Crystal Pick-Up.



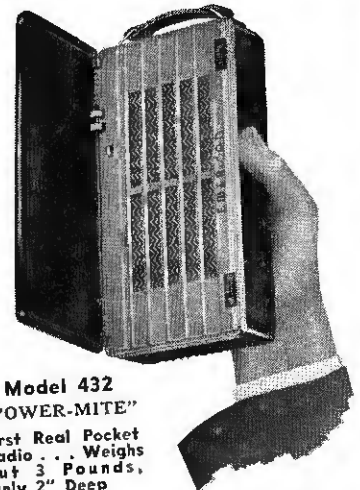
**Model 447, Automatic Phonoradio**

FOR CONTINUOUS PLAYING OF 10" or 12" RECORDS 7-Tube AC Superhet (Incl. Extra Rectifier) . . . Standard Broadcasts, Police . . . Feather-Weight Crystal Pick-Up . . . Handsome table model of selected walnut veneers in "waterfall" design.

**Model 434 Portable  
Electric Phono** →

COMPLETE PHONOGRAPH  
WITH 3-TUBE POWER UNIT

Feather-Weight Crystal Pick-Up . . . Plays all size records including 12" . . . Sturdy portable of simulated leather.



**Model 432  
"POWER-MITE"**

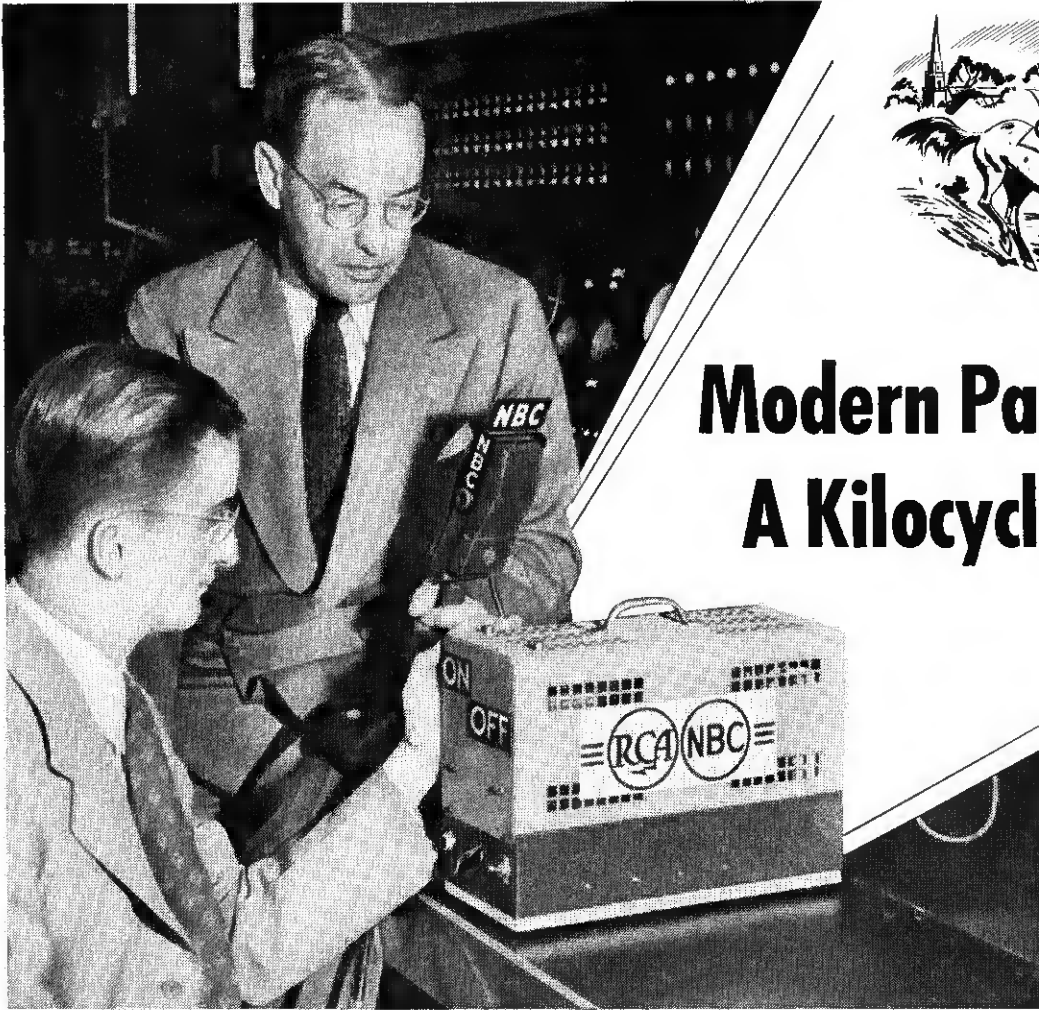
First Real Pocket Radio . . . Weighs but 3 Pounds, Only 2" Deep

Plays on Own Power, No Outside Wires . . . Standard Broadcasts, Police . . . Automatic Safety "On-Off" Switch . . . Efficient Enclosed Loop Antenna.



**50 New  
1942  
Emerson's  
to Choose  
From**

**EMERSON RADIO & PHONOGRAPH CORPORATION • 111 Eighth Avenue, New York, N. Y.**



# Modern Paul Revere A Kilocycle Rider!

*Newest development of RCA Laboratories, the RCA Alert Receiver is about the size of a portable radio set and as easy to carry. It operates from an ordinary light socket, either AC or DC, and can be switched to batteries in the event of damage to power lines*

## NEW RCA LABORATORIES DEVELOPMENT...

*RCA Alert Receiver a notable contribution to civilian defense.  
Turned on and off by broadcasting station!*

An emergency warning signal is flashed through space by a radio station. Instantly and automatically, the new RCA Alert Receiver in the home leaps into action, ringing a bell or sounding a siren.

Sleepers are aroused. Listeners are summoned. And then, through its loudspeaker, this modern Paul Revere brings them air-raid instructions or other important messages with the speed of light.

Amazingly simple in design and construction, the RCA Alert Receiver can be produced at a cost approximating that of the average low-priced table model radio. Requiring very little power for oper-

ation, it can be used with surprising economy, 24 hours a day over a long period of time.

Even more simple is the transmitting apparatus, which consists of a vacuum tube oscillator generating two sub-audible frequencies. One turns the receiver on, the other turns it off. Installation requires no change in normal broadcast station wiring.

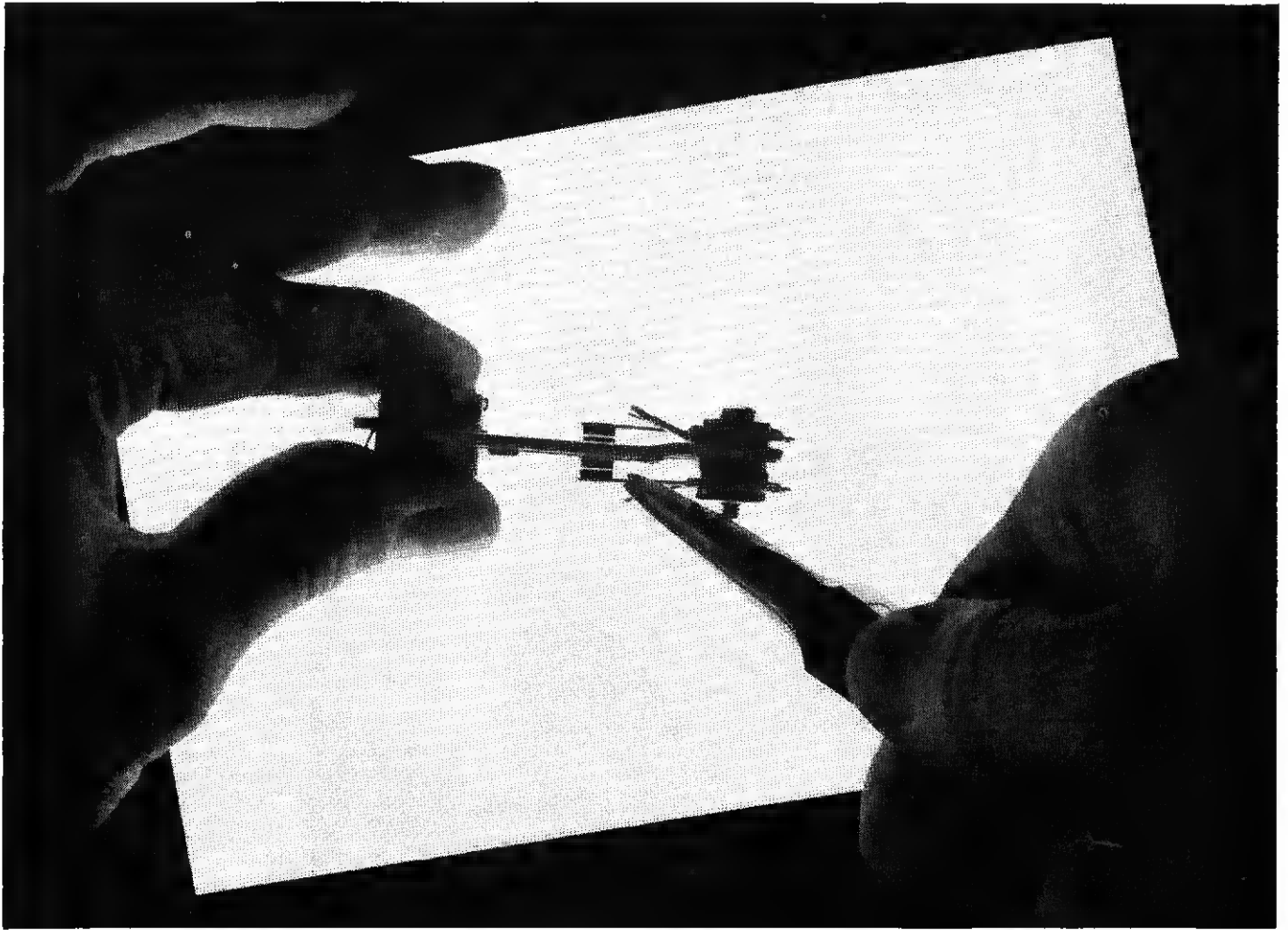
The RCA Alert Receiver is important to National Defense because it makes possible a local, regional or nation-wide instantaneous radio call service. With this new development, the public service of radio is once more expanded—thanks to RCA research.



## RCA LABORATORIES

A SERVICE OF THE RADIO CORPORATION OF AMERICA

*Other RCA Services: RCA Manufacturing Co., Inc. • Radiomarine Corporation of America  
R. C. A. Communications, Inc. • National Broadcasting Co., Inc. • RCA Institutes, Inc.*



## *Heart Trouble Avoided by This Utah Operation*

**H**ANDS as skilled as any surgeon's perform this delicate operation in the Utah factory. This precision adjustment of the contact points in Utah Vibrators is responsible for their long life, correct electrical balance, current output and freedom from noise.

Because Utah contact points are adjusted to a specified clearance, with a variation of less than .0005 in., they eliminate the causes of failure so frequently found in ordi-

nary vibrators. Pitted or locked points, unsatisfactory performance and short life are avoided.

Only high quality materials conforming to rigid standards are used in the manufacture of Utah Vibrators. The points, for example, are made of the best grade Tungsten, fully capable of standing up under the terrific punishment to which they will be subjected.

Write for information about the complete line of high-value, dependable Utah Vibrators. Utah Radio Products Company, 810 Orleans Street, Chicago, Illinois. Canadian Office: 560 King Street West, Toronto. In Argentine: Ucoa Radio Products Co., SRL Buenos Aires. Cable Address: Uтарadio, Chicago.



**V I B R A T O R S**  
SPEAKERS • TRANSFORMERS • UTAH-CARTER PARTS

**RINGLING BROS and  
BARNUM and BAILEY**

**THE GREATEST  
SHOW  
ON EARTH**

**Depends on**

**RAYTHEON  
TUBES**

**WHAT A THRILL!** . . . when you hear the Ringling Bros and Barnum and Bailey announcer say L-A-D-I-E-S and G-E-N-T-L-E-M-E-N. Then you know you are about to witness The Greatest Show on Earth . . . a circus that is known to every man, woman and child in America.

When on tour the Ringling sound system is packed and unpacked twice each day . . . it is a gruelling test on radio tubes—always subjected to sudden shocks in transportation from truck to train . . . but twice each day the sound system goes into perfect operation because RAYTHEON TUBES are always on the job!

Ringling Bros, like thousands of radio servicemen, wanted a radio tube that will stand up no matter what the operating circumstance . . . that's why they choose RAYTHEON!

Your RAYTHEON distributor has an interesting offer . . . it will pay you to ask him!

**RAYTHEON PRODUCTION CORPORATION**  
NEWTON, MASS. NEW YORK CHICAGO  
LOS ANGELES ATLANTA

**RAYTHEON**  
MAKES THEM ALL

**WORLD'S LARGEST**

**EXCLUSIVE RADIO TUBE MANUFACTURERS**

# How to sell an FM radio-phonograph

**"You'll want your new set to get FM, as well as standard broadcasts!"**

Remind your customer that with a long-time investment like a new radio-phonograph he can't afford *not* to provide for the new and growing Frequency Modulation broadcasting.

**"And you will want to get all of the benefits of Frequency Modulation."**

Point out that virtual elimination of static and interference, with FM under the Armstrong system, is only part of FM's advantage. Just as important is FM's enormous musical scope. A Stromberg-Carlson, with the widest range of natural tone, gives full enjoyment of FM.

**"This exclusive Stromberg-Carlson device eliminates 'radio-set boom.'"**

Explain that a Stromberg-Carlson's exclusive Acoustical Labyrinth blots out wild tones in both radio programs and records. The result is concert-hall clarity and naturalness. And the exclusive "full-floating," tone-true Speaker prevents tone distortion at any usable volume.

**"Play these records and hear the difference for yourself!"**

Have handy a clean set of good records, all of same tone characteristics, with good program variety. Invite your customer to play them on the automatic record player of the Igor Stravinsky Autograph Model.\* Call attention to the permanent point pick-up — *no needles to change!*

**"Stravinsky, famous composer, favors this set!"**

Your customer will be interested that the great musician is enthusiastic about how perfectly a Stromberg-Carlson captures music lost by ordinary radio-phonographs. For years to come your customer will know for himself why "*There is nothing finer than a Stromberg-Carlson!*"



## STROMBERG-CARLSON

ROCHESTER, NEW YORK

**A FINER RADIO FOR STANDARD PROGRAMS • THE ONLY RADIO FOR FM AT ITS BEST...**

\*Licensed under Armstrong FM Patents



# FALL *Prospects*

**SELLING** may have to be different than in past seasons but shortages will be no substitute for it

**F**ALL IS HERE and, with it, the beginning of the stay-at-home season in which radio really comes into its own.

Automobile receivers and, more recently, portable sets, have removed much of the sting from summer slump so dreaded in the industry's early years but business still benefits from winter weather.

This reminder would be trite indeed if it was not for the abnormality of these times. That it isn't is due to the fact that many of us, very humanly engrossed in the movement of armies overseas and confused by emergency measures here may well forget to sell.

**N**O season can be better than its salesmanship. In spite of increased consumer purchasing power providing more cash for household equipment, continued avidity for fast news which gives broadcasting a special edge, imminent gasoline rationing and higher movie taxes furthering our

**HOME AGAIN**—And there's where Mr. and Mrs. America will lie doggo with their old radios unless we talk the new ones up



competitive advantage, business will suffer from inertia unless we talk it up.

There is plenty to sell.

Sets permitted to deteriorate throughout the summer should now be checked and repaired. Tubes tottering on their last legs and nursed along because users expected to be outdoors most of the time anyway should be replaced. Compacts for second-set use that people, in their lassitude, have repeatedly put off purchasing should now be pushed. Consoles should supplant small sets forced temporarily to perform big set duties. Record-players should be kept in the limelight to insure continuation of the boom in disc sales and, particularly, people who already own such accessories should be initiated into the mysteries of automatic changers and permanent needles featured in combinations.

**S**ELLING must not only be aggressive at this time but may also have to be different from past seasons in many respects, in view of the emergency program. The keynote will obviously be net profit rather than just volume.

Dealer ingenuity will probably be strained selling sets that can be obtained rather than models the public first asks for.

Salesmen may have to fight off even more demands for discounts if the new credit restrictions lead people to bargain with cash.

Servicemen will almost certainly be called upon to sell their work as well as perform it if merchandise shortages force the trade to rely more heavily upon the profits from repairs.

These things are not beyond our abilities.

This season can be the best since 1929 despite all handicaps *if the trade gets down to business and makes it so.*

*W Mac Donald*

Editor

# PHOTO *Shorts*

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

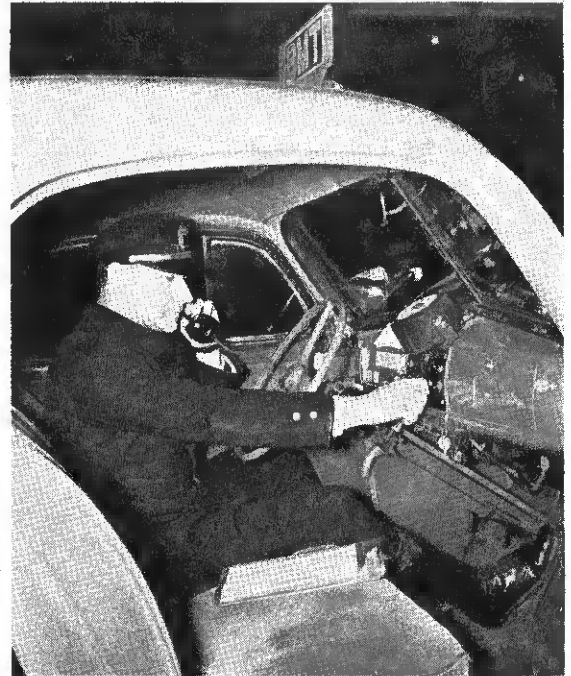


## MESSERSCHMITT VIVISECTION

Lear Avia engineers remove radio equipment from captured Luftwaffe model 109, report that it is good but no modern marvel mechanically or electrically, find many inferior "ersatz" materials which increase weight and reduce efficiency

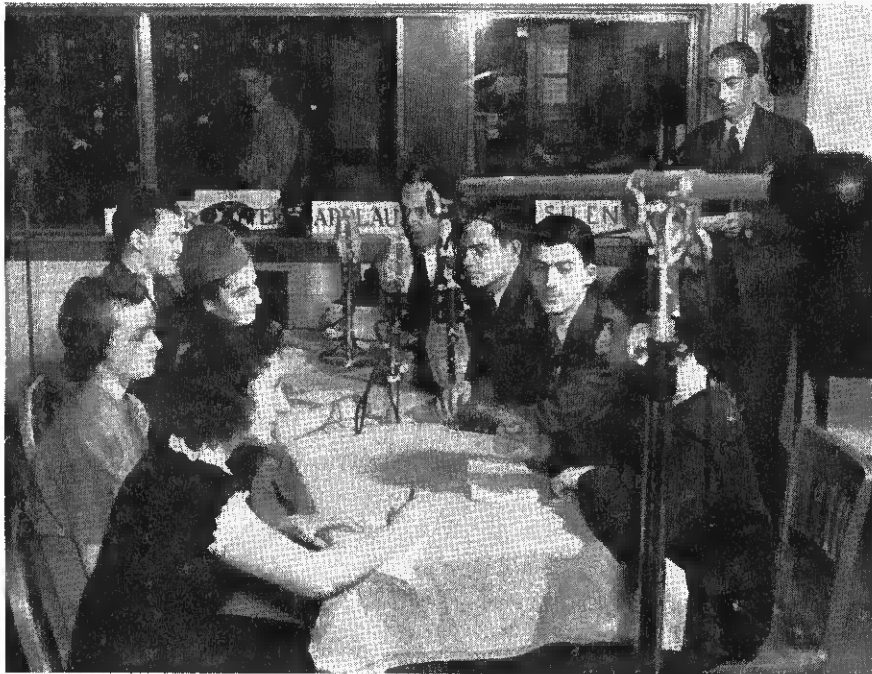
## SALES BY SIGHT AND SOUND

Shown for first time at recent Music Show was this effective double-duty dealer display board. Switch to which demonstrator at right points starts up noise-radiating vibrator on back, simultaneously makes lightning flash in window of upper drawing. C. H. Bell (left) shows reception difference, FM against AM



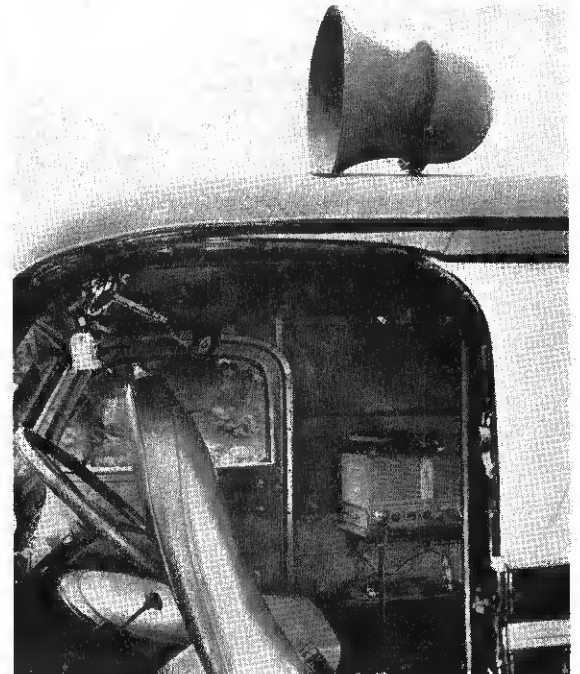
## HE'S NOT A COP

Riding continually over roads plied by 1,235 trolleys and 300 buses maintained in Brooklyn and Queens by the New York Transit System are 20 patrol cars equipped with Westinghouse two-way radio. Directed from a centrally located control station, they clear traffic jams almost before they start, re-route rolling stock around bad tieups



### COMMENTATORS OF THE FUTURE?

Seniors of Eastern District High air an unrehearsed forum on the subject "Guns or Butter" over Brooklyn Tech's educational station WNYE while other students of current events throughout Greater New York listen in



### MODERN MEDICINE MAN

Shipped to South America recently by RCA were 18 sound trucks like this, ordered by Sterling Products International. Four are already rolling around that continent advertising, of all things, a well known medicine

### NOVENA AT SEA

On the Great Lakes during a seven-day cruise, Rev. Francis Gissler conducts via Hallcrafters radiotelephone Novena said to be first such Catholic Church service ever broadcast

### CLASS WITH A CAPITAL "C"

Here's how Wm. Knabe & Co., well known piano firm only recently attracted to the radio field, thinks Musaphonic instruments in period cabinets should be displayed for best results



# First Half

## FIGURES

**JANUARY-JUNE factory output exceeded consumer purchases by a comfortable margin but reports received since mid-August indicate balance between supply and demand is now beginning to swing the other way 'round**

**A**MERICAN radio receiver manufacturers produced 23 per cent more sets in the first six months of 1941 than in the same period one year earlier.

Dollar volume increased 21 per cent.

Scattered reports for July so far scanned by *Radio Retailing* statisticians show few sharp reductions and it becomes more and more obvious that the year's total will probably run 1940 a close race.

Curtailment due to material rationing would have to be deep indeed during the latter part of the third quarter and in the fourth to nullify early gains.

### Production By Types

Table type radio-phonograph production upped 119 per cent in units and 133 per cent in dollars during the first half by comparison with the

initial six months last year. Console combination manufacture increased 60 per cent in units and 78 per cent in dollars. Portables were up 54 per cent in units and 54 per cent in dollars. Automobile radios jumped 46 and 42 per cent, farm sets 42 and 38 per cent, compacts 12 and 8 per cent.

Production declined in only two major classifications, straight radio consoles (down 32 per cent in units and 35 per cent in dollars) and record players lacking radio (down 59 and 25 per cent). It is apparent that both equipment types suffered inversely in proportion to the rising popularity of combination instruments and, while this was undoubtedly to be expected in the second instance, the reason for such severe production reduction in the first is not so clear. Supply of straight consoles will probably be

adequate for big city demand but shortages are already developing in small towns and rural areas still interested in such sets and not yet especially combination-conscious.

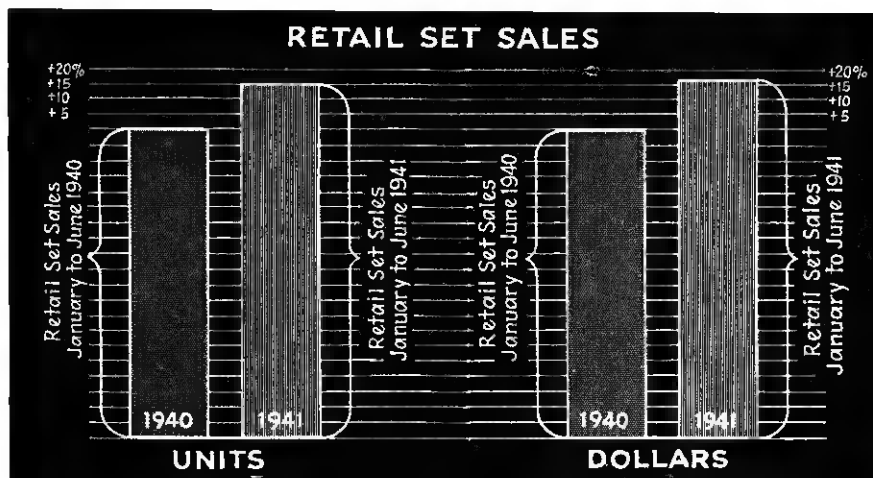
Relative importance of the various equipment types in the first six months of 1941 may be judged by the following preliminary estimate, showing percentage of total production represented by each, in units and in dollars: Compacts, 44 per cent of the total in units and 26 per cent in dollars. Automobile models, 25 and 28 per cent. Portables, 10 and 8. Farm sets, 6 and 5. Table combinations, 4 and 5. Consoles, 4 and 9. Console combinations, 4 and 15. Record players, 1 per cent in units and 1 per cent in dollars. (Miscellaneous equipment such as FM adapters, chassis without cabinets, make up the balance.)

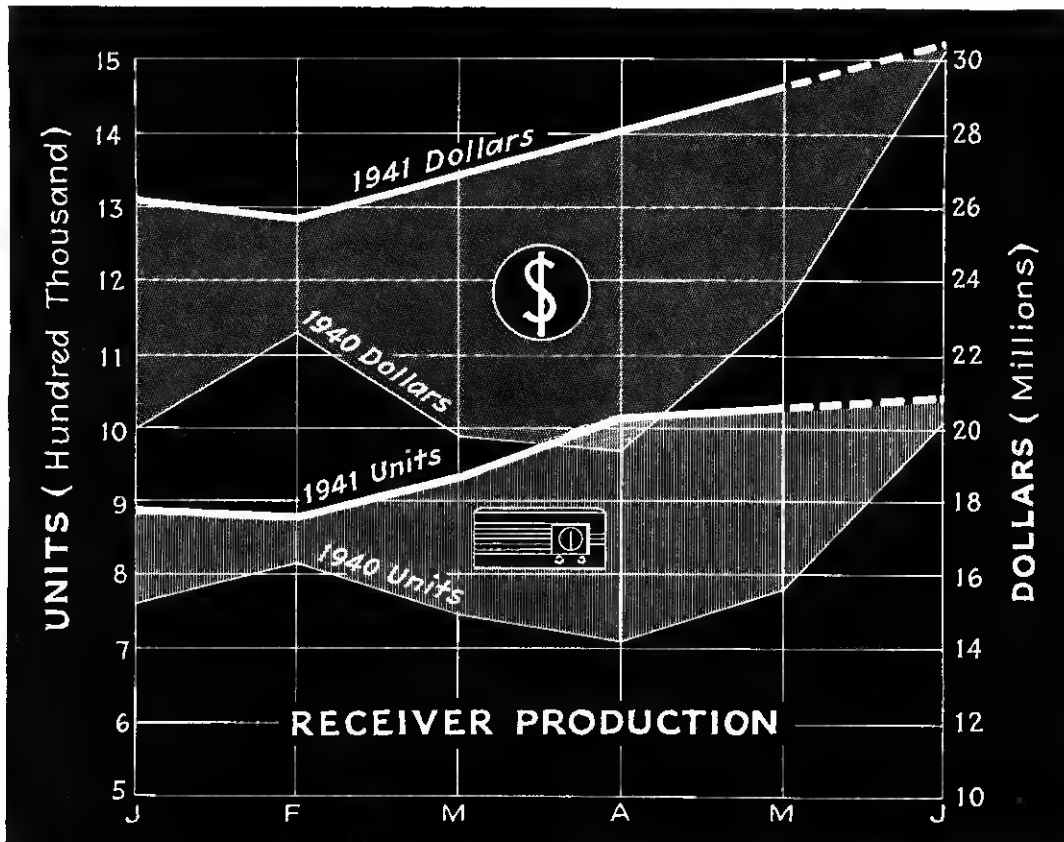
### Consumer Demand

Production must naturally lead dealer requirements but it is, nevertheless, interesting to note the leeway, particularly at a time when increased consumer purchasing power tends to swell demand while emergency edicts work to hold civilian equipment production down.

Set sales by radio dealers in the first six months of 1941 were up 15 per cent in units and 17 per cent in dollars over a similar period of 1940. (Service income simultaneously rose 22 per cent.)

It will thus be seen that retail sale of sets lagged very little behind production in the first half despite the fact that manufacturers undoubt-





edly crowded on all the steam they could in that period in anticipation of curtailment which might come later.

Demand will at least keep pace with supply in the closing months of the year if business expected by the trade materializes. Fully 65 per cent of all dealers contacted by reporters during August said that fall business prospects were "excellent," slightly less than half of these inferring that they expected sales to be the best since 1929 but including the proviso that "all bets are off if we cannot get the merchandise." (Shortages so far reported by most stores concern particular models rather than complete lines and a clear-cut tabulation is, therefore, not possible at this time).

#### Future Sales Trends

Limitation of retail radio paper to 20 per cent down and a maximum of 18 months, by government order, is important news. No recent figures covering trade practices were available so *Radio Retailing* included questions designed to unearth such up-to-date figures in its survey made primarily to check retail sales against manufacturer production.

It was found that the average

dealer sells 71 per cent of his sets on time, gets 15 per cent of the sale price in cash, lets credit run up to 11 months and finances 67 per cent of his own paper.

The industry is thus seen to be well ahead of Washington insofar as time itself is concerned but will have to up its cash demands. Precisely what effect this is likely to have upon business cannot be safely predicted. (The government naturally hopes that it will reduce civilian equipment sales and so ease up on productive capacity which may then be turned to emergency work.)

Some dealers contacted believe that higher cash down payment requirements will reduce sales very little or, putting it more accurately, reduce the number of *profitable* sales little. Others, relying to a greater extent upon the smallness of the down payment for sales, think the edict will seriously crimp their business. A majority appear to feel that the growing excellence of this "sellers market" will compensate for any possible demand decline due to tightened terms.

Many retailers believe that tightening of terms provides a means of improving the profit character of all radio sales and some intend to use the move as a springboard from which losses incurred by other things, such as excessive trade-in allowances, may simultaneously be reduced.

Certainly the number of cash sales will increase in the months ahead and, in this connection, it is thought that this may be either a blessing or an additional handicap. Under similar conditions in the past, other industries have noted an increased tendency to price-cut. The trade hopes that any swing from credit to cash will not aggravate the discount situation in this instance.

#### TIME PAYMENT Picture

Radios Sold On Credit .71%

Average Cash Down .15%

Typical Terms . . . . . 11 Mo.

Dealer-Financed Paper .67%

# FREQUENCY MODULATION

## F-M Station List

Location	Call	Owner	Freq.* (mc.)	Location	Call	Owner	Freq.* (mc.)
Albany, N. Y.		WOKO, Inc.	45.1 P	New York, N. Y.	W31NY	E. H. Armstrong (Alpine)	43.1 UC
Alexandria, La.		Alexandria Bdcg. Co.	44.7 P	New York, N. Y.	W2XMN	E. H. Armstrong (Alpine)	42.8 E
Amarillo, Texas		Amarillo Bdcg. Corp.	45.1 P	New York, N. Y.	W35NY	Municipal Bdcg. System	43.5 UC
Ashland, Ky.		Ashland Bdcg. Co.	46.1 P	New York, N. Y.	W47NY	Muzak Corp.	44.7 UC
Baltimore, Md.		A. S. Abell Co.	46.3 P	New York, N. Y.	W51NY	National Bdcg. Co.	45.1 UC
Baton Rouge, La.	W45BR	Baton Rouge Bdcg. Co.	44.5 C	New York, N. Y.	W2XWG	National Bdcg. Co.	45.1 E
Battle Creek, Mich.		Federated Publications	48.1 P	New York, N. Y.	W55NY	W. G. H. Finch	45.5 UC
Binghamton, N. Y.	W49BN	Wylie B. Jones Ad. Agy.	44.9 UC	New York, N. Y.	W59NY	Interstate Bdcg. Co.	45.9 UC
Boston, Mass.	W43B	Yankee Network	44.3 C	New York, N. Y.	W63NY	Marcus Loew Book. Agcy.	46.3 UC
Boston, Mass.	W67B	Westinghouse Radio Sta.	46.7 UC	New York, N. Y.	W67NY	Columbia Bdcg. System	46.7 UC
Boston, Mass.		Columbia Bdcg. System	44.1 P	New York, N. Y.	W75NY	Metropolitan Tele., Inc.	47.5 UC
Boston, Mass.		Boston Edison Co.	44.7 P	New York, N. Y.	W99NY	Frequency Bdcg. Corp.	49.9 UC
Cedar Rapids, Ia.		The Gazette Company	44.7 P	New York, N. Y.		Wodaam Corp.	46.7 P
Chicago, Ill.	W51C	Zenith Radio Corp.	45.1 C	New York, N. Y.		Bremer Bdcg. Corp.	47.1 P
Chicago, Ill.	W47C	WJJD, Inc.	44.7 UC	New York, N. Y.		New Jersey Bdcg. Corp.	47.9 P
Chicago, Ill.	W59C	WGN, Inc.	45.9 UC	New York, N. Y.		News Syndicate Co.	47.9 P
Chicago, Ill.	W67C	Columbia Bdcg. System	46.7 UC	New York, N. Y.		WBNX Bdcg. Co.	48.3 P
Chicago, Ill.	W75C	Moody Bible Institute	47.5 UC	New York, N. Y.		FM Radio Bdcg. Co.	48.3 P
Chicago, Ill.	W63C	National Bdcg. Co.	46.3 UC	New York, N. Y.		Knickerbocker Bdcg. Co.	48.3 P
Cicero, Ill.		WHFC, Inc.	46.7 P	New York, N. Y.		Debs Memorial Radio Fund	48.7 P
Cincinnati, Ohio	W8XFM	Crosley Corp.	43.2 E	New York, N. Y.	W2XQR	John V. L. Hogan	48.7 E
Cleveland, Ohio		United Bdcg. Co.	48.5 P	Oakland, Cal.		Tribune Building Co.	46.5 P
Columbus, Ohio	W45CM	WBNS, Inc.	44.5 UC	Philadelphia, Pa.	W49PH	Pennsylvania Bdcg. Co.	44.9 UC
Columbus, Ohio	W8XVH	WBNS, Inc.	43.0 E	Philadelphia, Pa.	W53PH	WFIL Bdcg. Corp.	45.3 UC
Detroit, Mich.	W45D	Evening News Assn.	44.5 C	Philadelphia, Pa.	W57PH	Westinghouse Radio Sta.	45.7 UC
Detroit, Mich.	W49D	John Lord Booth	44.9 C	Philadelphia, Pa.	W69PH	WCAU Bdcg. Co.	46.9 UC
Detroit, Mich.		WJR, The Goodwill Sta.	45.3 P	Philadelphia, Pa.		Gibraltar Service Corp.	46.1 P
Detroit, Mich.		James F. Hopkins, Inc.	46.5 P	Pittsburgh, Pa.	W47P	Walker-Downing Radio C.	44.7 C
Detroit, Mich.		King Trendle Bdcg. Corp.	47.3 P	Pittsburgh, Pa.	W75P	Westinghouse Radio Sta.	47.5 UC
Evansville, Ind.	W45V	Evansville On the Air	44.5 UC	Pittsburgh, Pa.		Pittsburgh Radio Sup.	43.9 P
Ewing Township, N. J.		Mercer Bdcg. Co.	44.7 P	Providence, R. I.		Outlet Company	48.5 P
Falmouth, Me.		Portland Bdcg. System	47.1 P	Providence, R. I.		Cherry & Webb Bdcg. Co.	47.5 P
Ft. Lauderdale, Fla.		Tom M. Bryan	44.5 P	Rochester, N. Y.	W51R	Stromberg-Carl. T. Mfg. Co.	45.1 C
Fort Wayne, Ind.	W49FW	Westinghouse Radio Sta.	44.9 UC	Rochester, N. Y.		WHEC, Inc.	44.7 P
Glenside, Pa.	W81PH	Seaboard Radio Bdcg. Corp.	48.1 UC	Rochester, N. Y.	W8XAD	WHEC, Inc.	42.6 E
Grand Rapids, Mich.		Federated Publications	46.1 P	Rockford, Ill.	W71RF	Rockford Broadcasters, Inc.	47.1 UC
Grand Rapids, Mich.		King Trendle Bdcg. Corp.	45.5 P	Salt Lake City, Utah	K47SL	Radio Service Corp. of Utah	44.7 UC
Hartford, Conn.	W65H	WDRC, Inc.	46.5 C	St. Louis, Mo.	K51L	St. Louis University	45.1 UC
Hartford, Conn.	W53H	Travelers Bdcg. Service	45.3 UC	St. Louis, Mo.	K59L	Columbia Bdcg. System	45.9 UC
Hartford, Conn.	W1XSO	Travelers Bdcg. Service	43.7 E	St. Louis, Mo.		Globe Democrat Pub. Co.	44.7 P
Hollywood, Cal.	K31LA	Columbia Bdcg. System	43.1 UC	St. Louis, Mo.		Pulitzer Publishing Co.	45.5 P
Hull, Mass.	W1XX	Westinghouse Radio Sta.	42.6 E	St. Louis, Mo.		Star-Times Pub. Co.	44.7 P
Indianapolis, Ind.		Indianapolis Bdcg. Co.	45.3 P	San Bernardino, Cal.		Sun Co. of San Bernardino	44.1 P
Kansas City, Mo.		Commercial Radio Eqm. Co.	44.9 P	San Francisco, Cal.		Don Lee Bdcg. System	43.5 P
Kansas City, Mo.	W9XER	Midland Bdcg. Co.	46.5 E	San Mateo Co., Cal.		Hughes Productions, Inc.	44.5 P
La Crosse, Wis.		La Crosse Tribune Co.	46.5 P	Schenectady, N. Y.	W47A	Capitol Bdcg. Co.	44.7 C
Lansing, Mich.	W77L	WJIM, Inc.	47.7 UC	Schenectady, N. Y.	W57A	General Electric Co.	45.7 UC
Lansing, Mich.		Federated Publications	47.1 P	Schenectady, N. Y.	W2XOY	General Electric Co.	43.2 E
Lexington, Ky.	W51SL	Am. Bdcg. Corp. of Ky.	45.1 UC	South Bend, Ind.	W71SB	South Bend Tribune	47.1 UC
Louisville, Ky.		Louisville Courier-Journal	45.7 P	Springfield, Mass.	W81SP	Westinghouse Radio Sta.	48.1 UC
Los Angeles, Cal.	K45LA	Don Lee Bdcg. System	44.5 C	Springfield, Mass.	W1XSN	Westinghouse Radio Sta.	44.6 E
Los Angeles, Cal.	K53LA	Standard Bdcg. Co.	45.3 UC	Superior, Wis.		Head of Lakes Bdcg. Co.	44.5 P
Los Angeles, Cal.	K61LA	Met.-Gold. Mayer Studios	46.1 UC	Superior, Wis.	W9XYH	Head of Lakes Bdcg. Co.	43.0 E
Los Angeles, Cal.		Earl C. Anthony, Inc.	43.5 P	Syracuse, N. Y.	W63SY	Central New York Bdcg. Co.	46.3 UC
Los Angeles, Cal.		Hughes Productions	44.5 P	Washington, D. C.		M. A. Leese Radio Corp.	47.1 P
Los Angeles, Cal.		Echo Park Evangelistic Assn.	45.5 P	Washington, D. C.	W3XMC	McNary & Chambers	42.6 E
Manchester, N. H.		Radio Voice of N. H.	43.5 P	Washington, D. C.	W3XO	Jansky & Bailey	43.2 E
Milwaukee, Wis.	W55M	The Journal Co.	45.5 C	Winston-Salem, N.C.	W41MM	Gordon Gray	44.1 UC
Mt. Wash'ton, N.H.	W39B	Yankee Network	43.9 C	Winston-Salem, N.C.		Piedmont Pub. Co.	46.7 P
Nashville, Tenn.	W47NV	Nat. Life & Acc. Ins. Co.	44.7 C	Worcester, Mass.		Worcester Tel. Pub. Co.	46.1 P
New Bedford, Mass.		E. Anthony & Sons	45.7 P	Worcester, Mass.	W1XTG	Worcester Tel. Pub. Co.	43.4 E
New York, N. Y.	W71NY	Bamberger Bdcg. Service	47.1 C	Youngstown, Ohio		William F. Maag, Jr.	43.5 P

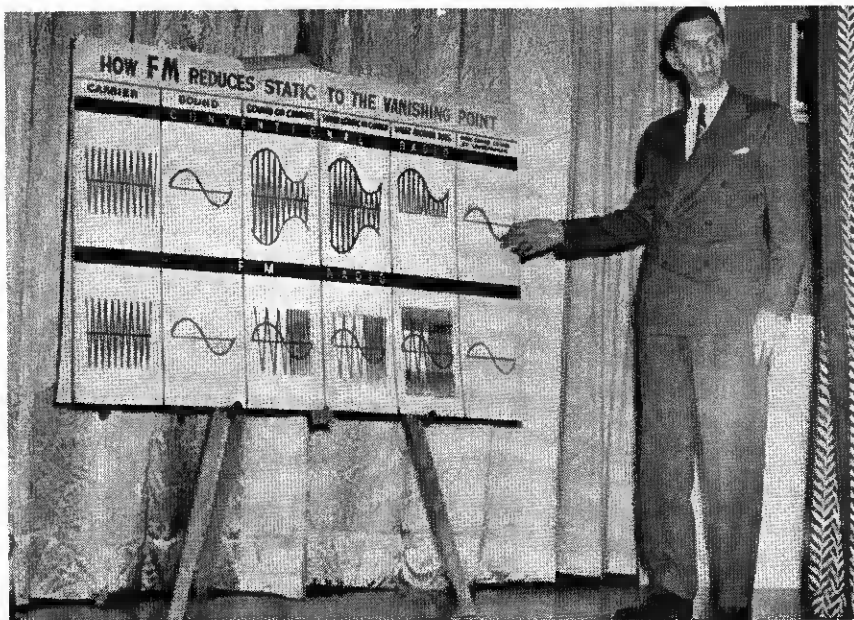
\*C=Commercial Station E=Experimental Station

UC=Under Construction P=Application Pending

# Gathers *SPEED*

EXPANDING slowly but surely since January commercial "green light," noise-free quality system now appears headed for rapid acceleration as additional station applications are filed and more set makers exhibit interest

By **W. CARL DORF**



**BROADCASTERS BROADEN PROGRAMS**—Mutual's Bryan Field, here shown describing a horse race at an eastern track, is said to be FM's pioneer announcer for such outdoor events

**MANUFACTURERS SPREAD STORY**—Chart-talks like this one, prepared by factory experts, are familiarizing the trade with the operating principles of FM

**I**N JANUARY FIRST of this year FM broadcasting received the "green light" for commercial transmission. During the succeeding eight months frequency modulation has been moving forward, conservatively yet steadily adding new stations and gaining new backers.

From this point on, FM should accelerate more rapidly on all fronts. This is clearly indicated by the following facts:

In the past month more set makers have announced their entry into the FM ranks, many following the announcement with previews of smart new AM/FM combinations. Companies already producing such sets are enlarging '42 lines with additional FM fall models. A number of new stations are ready to make their commercial bow to the public.

And dealers are reporting country-wide public interest in "wide swing" transmission.

### *40 Million People*

As of August 25th, there were 14 FM commercial stations "on the air." These stations are located in 11 states, from New Hampshire to California, and their transmissions are designed to cover a population of nearly 40 million people. All are on a regular daily schedule. In New York City, for example, station W71NY operates daily from 8 a.m. to 11:30 p.m.

Forty other stations have received authorization from the FCC and are in the course of constructing their transmitter. Many of these stations are expected to start service before the end of the year. Stations nearest completion are: W59C, Chi-

cago; W45CM, Columbus; W45V, Evansville; W71SB, South Bend; and W53PH, Philadelphia.

In addition to these station authorizations there are some 56 applications on file in Washington waiting for authorization from FCC officials. The accompanying FM station list classifies all commercials, also shows 15 experimental stations offering programs.

### *New York Leads the Way*

Checking the list, New York state is seen to lead the way with 3 commercials on the air, 13 under construction, 4 experimental, and 10 waiting for approval. In the last figure, 8 are New York City applicants.

Already the FCC reports that applications for FM broadcast stations in New York City exceed the



**"OSTRICH EGG"**—Actor Bill Janney, star of six-days-a-week serial "We Are Always Young," demonstrates the realism with which a new mike plus the new transmission system reproduce the striking of a match

number of available frequencies for operation in that locality, is considering a reallocation of the New York-New Jersey service area to permit greater number of stations in the metropolitan area.

FM is fast capitalizing on its commercial status. Over three quarters of the stations operating commercially have sold time. K451A, Don Lee's outlet on the west coast, began operations on August 11, now has 18 different sponsors. Station W47A of Schenectady, at last report, had 26 sponsors.

#### Promotion Plans

*Admiral* announces two FM models, using 10 tubes and a 10 inch speaker. Both are consoles and feature a double limiter circuit. Model 4207 features an automatic phono player and lists at \$144.95. *Ansley*, in latest brochure and advertising, emphasizes the fact that all consoles and chairside models include provisions for frequency-modulation reception. *Fada* is set to break with sales portfolio and cooperative distributor advertising announcing new AM/FM line. FM set now on assembly line is a 15-tube job with automatic phono facilities. Designs now in works for smaller models.

*Farnsworth*, at recent New York and San Francisco conventions, presented 1942 models with spotlight focussed on three new FM receivers, (two combinations and one con-

sole). New units use 11 tubes and are equipped with built-in antennas. *Freed-Eisemann*, in latest promotion, stressed the fact that its entire line, comprising nine models, has frequency modulation as an integral part of the receiver. That every model is a phono-radio combination and sets are available in both period and modern styles. *General Electric*, at Music Merchants Show in New York City, introduced a new demonstrator for dealers. Comes with display board to illustrate how FM reproduces full range of overtones, how it eliminates interference.

Howard C. Briggs, vice president of *Howard Radio Co.*, is touring the western states demonstrating new FM sets to dealers and jobbers. Looks for a very profitable year on "wide swing" receivers.

*Philco*, in latest promotion, highlights modern "sell up" features of '42 line, with a large star pinned to its frequency-modulation system. Has 62 models in this year's line, nine of which provide FM as well as AM reception. *Pilot* has just broken with a combination four-page letter folder on new 200 series receivers. Also broadside on complete FM line. Now planning big local newspaper and magazine advertising campaign to break in September. To follow with spot advertising in FM centers, like Milwaukee and Chicago. At this time dealers are previewing FM table model, T301, for a.c. or d.c. supply lines, listing at \$59.50.

#### New Engineering Developments

*Stromberg-Carlson's* latest release on FM sets features two new engineering developments under the head of "automatic range shifting" and simplified pushbutton control. New series is scheduled to break

in middle of September. Expects 80 percent of total sales for coming year to be in FM models. Key promotion is based on "Igor Stravinsky" combination receiver.

*Zenith*, in national advertising, presents 15 potent points on its FM receiver line. Sets have double limiter and automatic pushbutton tuning.

In addition to the above manufacturers, the following concerns are also producing frequency modulation sets or have announced plans to put models on the market this fall: *Brunswick*, *Capehart*, *Crosley*, *Espey*, *Galvin*, *Hallicrafters*, *Magnavox*, *Meissner*, *National*, *Philharmonic*, *Scott*, *Sentinel* and *Wilcox-Gay*. The August issue of *Radio Retailing* on page 36, carries a listing of all models as manufactured at that time by 22 concerns.

#### New Applications

The use of frequency modulation for applications other than broadcasting has been going on steadily during the past year.

A little over a year ago, the Connecticut State Police installed two-way FM communication in all state police cars. Since this state's enthusiastic response to FM communication, nine others are employing this new type of transmission in their law enforcement work. They include: Maryland, Indiana, New Jersey, Ohio, North Carolina, Virginia, Delaware, Michigan, and Pennsylvania Turnpike Police.

FM is playing no small role in defense activities. The FMBI reports its use in arsenal police communication systems, defense manufacturing plants, the Navy, U. S. Signal Corps, the FBI, Coast Guard, and other Federal organizations.

## ARMSTRONG LICENSEES

Ansley Radio Corp.  
Espey Mfg. Co.  
Fada Radio & Electric Co.  
Freed Radio Corp.  
General Electric Co.  
Hammarlund Mfg. Co., Inc.  
Hallicrafters, Inc.  
Howard Radio Co.

Magnavox Co.  
Meissner Mfg. Co.  
National Co., Inc.  
Philharmonic Radio Co.  
Pilot Radio Corp.  
Scott, E. H., Radio Lab., Inc.  
Stewart-Warner Corp.  
Stromberg-Carlson Tel. Mfg. Co.  
Zenith Radio Corp.



*Sales are Booming!*

# ARVIN

*Radios*

Never before has there been such a demand for Arvin Radios. More dealers have sold more Arvins this year than in any previous year. And here are some of the "hot numbers" they are selling—

**1** MODEL 422—Smallest and lowest-priced Arvin, but a mighty good little set. 5-tube AC-DC superhet. Unbreakable cabinet—5½" x 5" x 4"—brown finish. Attached aerial. One year factory-to-user service guarantee. Model 422A ivory finish.

**2** MODEL 524A—A 5-tube AC-DC superhet. Attractive, unbreakable cabinet, ivory finish—7½" x 5½" x 4¾"—20 foot extension aerial with set. Model 524 brown.

**3** MODEL 532—The "beauty contest" winner. 5-tube AC-DC superhet with performance that matches its beauty. Cabinet of Catalin—the jewel of plastics—in rich burgundy. Ivory knobs and grille—size 8½" x 6" x 5¼". Model 532A in Onyx Catalin cabinet, amber grille and knobs.

**4** MODEL 616A—The price and value leader of 6-tube sets. AC-DC superhet. Attractive ivory plastic cabinet—9¾" x 6½" x 5½". Built-in loop antenna. A beautiful set and a splendid performer at a low price. Model 616 walnut plastic.

**5** MODEL 722A—Finest radio most people want or need. 6-tube AC-DC superhet. Attractive ivory plastic cabinet—21½" x 7¾" x 7". Built-in loop antenna. Tone control and other deluxe features. Convenient carrying handle. Model 722 walnut.



SMART-LOW PRICED

*Radios  
for  
Every Room*

• This fast-selling, low-priced line includes 15 models. And every one is outstanding in performance and appearance—especially when you consider the low list price, the good discount and the fast turnover. It's a big job to keep up with the demand for Arvin Radios now—but we are doing our best to supply the requirements of Arvin jobbers and dealers. Your Arvin jobber will be pleased to serve you.

NOBLITT-SPARKS INDUSTRIES, INC. • COLUMBUS, INDIANA

*Free* . . . while supply lasts  
... this fine floor display with an order  
for one each of six Arvin models. Ask  
your jobber.

*The Fast-Selling Low-Priced Line!*

# In Defense of

**W**HEN the *Reader's Digest* published its now-famous article exposing 64 out of 100 radio servicemen interviewed by their "investigators" as being dishonest, it didn't uncover an exclusive condition. The same thing exists to a varying degree in any profession you can shake a stick at.

So, even though it may hurt our pride to find ourselves placed in the same bed with a bunch of cheats and chiselers, let's not be unduly alarmed. Let's admit that the cheats and chiselers had it coming to them. But let's also recognize that the competent, honest serviceman cannot fail but benefit from anything that helps eliminate quack competitive practices with which some of his bed-fellows have long tormented him.

Remember that the honest serviceman has suffered more from these practices than the gullible public who only paid the bill. He has lost business, friends and profit—and all because he refused to cheat customers who ignorantly continued to go where they would be cheated.

If millions of radio owners now know something about recognizing a radio gyp when they meet one, by the same token they will also know better how to recognize an honest man.

## Public Partly to Blame

If there has been an overdose of dishonesty in radio servicing, the public is not altogether without blame.

Most people who get gypped do so because they literally invite someone to gyp them. They get gypped because they refuse to pay fair prices

## YOUR Fight is OUR Fight

CARBON copies of letters mailed to reporter Riis, received by *Radio Retailing* in the last month, indicate that in this instance at least servicemen have known how to defend themselves.

SORRY we couldn't print all those excellent replies, boys, but they simply snowed us under. We did take our own private crack at the subject in an editorial on page 30 of the August issue. Here's another adding our voice to yours.

**READER'S DIGEST blast will rebound to industry's benefit if it steers the public into the better shops and prepares repair customers for a moderate minimum charge**

based on an honest explanation of what was done and why. They get gypped because they go looking for bargains as exemplified by "free inspections" and the like. If they thought twice about it, they'd realize such a serviceman almost has to gyp them in order to make a living.

As a matter of fact, I have a strong suspicion that the investigators did not go looking for honest servicemen. If they had, I feel sure they would have found a far higher percentage of them. Like good reporters, they probably called on shops of a type likely to prove the point they wanted to prove; namely, that servicemen, by and large, are dishonest. This was the only point likely to make their story acceptable to the publisher who paid them. No magazine would be apt to publish a story entitled "Your Radio Serviceman is an Honest Man."

I'll wager I could pick out ten Philadelphia servicemen unknown to me and get an honest shake from at least eight. Or, if I wanted to do the thing in reverse, I could pick out another ten of whom at least eight would gyp me.

It all depends on where you go.

Therein lies the competent, honest serviceman's opportunity to rise above gyp competition.

## Servicemen Rarely Get Rich

No doubt some of those servicemen classified as being dishonest were all of that. Others were probably not half as dishonest as circumstances might seem to indicate. They were simply poor businessmen. They did not know how to charge what a job was worth.

Instead of telling the "customer" what was done, and charging a minimum fee, they resorted to trickery in order to get the profit out of the transaction to which they felt they were honestly entitled. They sold him a tube he didn't need, or they gave him a cock-and-bull story about some complicated bit of work they didn't actually do.

There is no defending this sort of thing. However, it should be worthy of note that, in most cases, *the serviceman probably didn't make any more out of the job than he would have been entitled to if he had told the truth and levied a minimum service charge of anywhere from 50¢ to \$1.50, depending on local and individual conditions.*

Let's all agree that service is worth more money than we usually get for it—but that more money must nevertheless be obtained on a fair, equitable and thoroughly honest basis.

## What Customers Pay For

Most of us have heard of the expert mechanic who was summoned post haste by the superintendent of a big factory where production was

# SERVICEMEN

By  
**HARRY P. BRIDGE**

How radio repair men profit dishonestly from the public's ignorance

## The Radio Repair Man Will Gyp You If You Don't Watch Out

By  
Roger William Rife

In the July issue Roger William Rife described the results of a Reader's Digest inquiry into the honesty—or dishonesty—of garage men ("The Repair Man Will Gyp You If You Don't Watch Out"). As they traveled across the continent, the same investigators who found that time and by every five garages to service stations had or serviced also listed 324 radio repair shops. Here follows an account of how they were treated.

WHEN the average American takes his radio set into a repair shop, his profound ignorance of the set's workings will be duly rewarded, for he will be charged 64 out of every 100 times by repair men who will sell him tubes, batteries and service which his set doesn't need, or charge him for new parts they didn't put in. In some cases they will even remove good parts and add them to the supply on their shelves, substituting inferior equipment.

Such is the conclusive evidence produced by The Reader's Digest investigation which tested 324 radio repair shops of every type, in 48 states from coast to coast, from the Great Lakes to the Gulf.

The investigators (the same two, John Patrie and Miss Lucy May, who conducted the automobile inquiry) started out with brand-new portable radios of two nationally known makes, in flawless condition. A few minutes before each shop was entered, the radio had been playing perfectly, but was deliberately put out of order by the investigators, sometimes by disconnecting a snap-on wire, usually by loosening a tube. When the backs of the sets were taken off—which could be done with the fingers—even a layman would not fail to notice either the dangling wire or the wobbly, projecting tube. A repair man who didn't see them, and spoke up, was taking the first step toward petty thievery.

That the feat was fair is proved by the 76 repair men who spotted the trouble as soon as they opened the back of the set, and made no charge; 13 others made a charge so trifling as 10 cents then also as honest. But these 89 honest men were in a small minority.

Of the 324 shops tested, 105 tried by one judge or another to take advantage of the customer. That's a

THE RADIO REPAIR MAN WILL GYP YOU

score of 64 percent in favor of gyping.

As was found in the automobile investigation, the larger the town, the more frequent the swindling. Shops in places under 10,000 population were 51 percent dishonest; in larger cities, 66 percent were dishonest. In New York and its metropolitan area, 17 out of the 19 shops tested had and yoked up wholly unjustified bills, for a total of \$33.75. The first 26 shops visited, in eastern towns and cities, sold the investigators 35 new tubes. Not one was needed.

Cheerily did not protect the woman investigator. She was charged 68 out of every hundred things, the man only 62.

Why is the retail servicing of radios so riddled with deceit? The best answer was given by a disarmingly frank repair man in Chicago. Caught in the act of cheating, he confessed over the phone:

"Mister, you've got me. I didn't put in a new tube. We'll give you ten cents back if you'll give us the tube and that bill. We have no do that sort of thing. Every body else in the radio business does it. Follow comes a here with a 50c radio and says, 'Gyp it.' Why shouldn't we get two, three bucks from him? We've got cost, we've got taxes. Most of the time, there's nothing much more wrong with radio than there was with yours. But suppose we charged 20 cents—the customer would think we didn't really fix it. See, that customer just went out? I need his set with to cover word of wire, charged him 45-55, and he's tickled to death."

"You can't get away from them around here for less than a couple of dollars. Why? Because the public doesn't know a damned thing about radios. Let the public learn something about them. That's the only way they can keep from paying too much."

Compare the plea of guilty with the statements of two of the men who would make no charge:

One, No. 24, Cheyenne, Wyo.: "Why, heck, a wire off. That's all. Now the price, too. No—I wouldn't charge for snapping a wire on."

No. 36, Suffolk, Va. A friendly-looking kid smiled on me. He quickly found the loose tube, and the set played. "What was the matter?" I asked, pretending not to notice what he had done. "Just pushed a tube in, that's all. There won't be any charge for that." Then he explained that he was a student, learning the radio business for high school credit.

Much of the cheating involved tubes. The investigators used highest-grade standard tubes, all marked "Made in U.S.A.," and they identified each tube, by scratching off the periods of the "U.S.A." By means of the unpatented "U.S.A." it was possible to spot the mechanics who charged for new tubes when they had not changed any; to track out the set's costly tubes and installed inferior kinds; or deliberately burned out the tubes in fictitious "tests."

Case No. 18. Exceptionally well-equipped shop in Baltimore. Upon my return, after leaving the radio set, the proprietor greeted me affably. "You needed three new tubes." The bill was \$6.00.

at a standstill because a mammoth machine had suddenly stopped.

The mechanic rushed to the factory, looked over the machine for a minute or two, then called for a hammer. He gave the machine a few lusty wallops and, lo and behold, it began to run.

A few days later, he sent the factory a bill:

For hitting machine with hammer .....\$100

Indignant at such a charge, the superintendent wrote back, stating it would be necessary for him to itemize the bill. A few days later the itemized bill came back. It read:

For hitting machine with hammer .....\$ .50  
For knowing where to hit.... 99.50  
Total .....\$100.00

Radio servicing is a good bit like this.

The customer cannot buy specialized service solely on the basis of actual labor and parts involved. He must pay for the skill, equipment and organization required to go promptly to the seat of the trouble and fix it, whether it be a simple trouble or a complicated one. He also must pay for the very convenience of having a skilled technician available in his neighborhood, and he must pay his share of that mechanic's cost of being in business.

### One Bad Break

From its survey of obviously dishonest trade practices, *Reader's Digest* swings to a denunciation of service test equipment which it classified generally as a lot of "Rube Goldberg contraptions" with which

the serviceman might "prove" just about anything he wanted to prove in order to justify his charges.

This one point, at least, is laughable.

It may be true that a skilled man can spot almost any radio trouble with instruments no more complicated than a voltmeter, screw driver and pliers. What those reporters didn't point out, however, is that it is equally true a good mariner can cross the ocean in a glorified whaleboat, using no more motive power than a sail—or a good accountant can add a long row of figures using nothing more complicated than a lead pencil and his head.

It is notable, however, that glorified rowboats have gone out of style for ocean travel since the time of Columbus, and most accountants use an adding machine whenever they have a chance. Doctors, however skilled they may be in judging a patient from personal observation, prefer to check their findings on X-rays, cardiographs and a long list of similar hospital-type equipment which certainly cannot be classified as "Rube Goldberg" contraptions even though they might still permit

of a dishonest diagnosis when used by a quack.

Test equipment isn't an illegitimate expense to the serviceman. It isn't an expense to the customer, even though every cent of its cost be amortized in the charges for the jobs on which it is used.

It is an investment that spells better, faster, and more accurate work. This means more economical work as well.

### Opportunity for Honesty

Aside from its silly comment concerning modern test equipment, it is probable that the *Digest's* controversial article will do servicemen more good than harm.

Radios still need service. People aren't going to quit patronizing servicemen just because of this or any other consumer magazine story. They're simply going to be more particular about the ones they choose.

Like Diogenes of old, they're going to go looking for honest men.

And, by using a little common sense, they'll have not the slightest trouble finding plenty of them!

**AUGUST BOMBHELL**—In this consumer magazine article, two roving reporters profess to prove that 64 out of every 100 radiomen are gyps

# DEMONSTRATION

## Discs . . . . By JOHN R. THORNTON

**F**EW SALESMEN today realize the importance of using specific discs to show radio-record-player combinations at their best advantage. Neither are they aware of the tremendous increase in music appreciation among the so-called "middle class" that represents the majority of combination purchasers.

It is a common occurrence for salesmen, exhibiting a combination, to rush to the library and come dashing triumphantly back with Strauss' "Blue Danube." They take it for granted that everyone is fond of the famous waltz. And they are invariably correct. But a few minutes spent discussing the customer's taste in symphonic music may lead to more profitable negotiations.

### *Effective Piano Recordings*

A modern piano recording makes an excellent test disc to illustrate the brilliance of a good speaker. An orchestra provides a more sonorous test. A combination of two instruments, as in a piano concerto, would therefore seem the perfect recording to play for the customer.

The *MacDowell Piano Concerto No. 2* opens with high, subdued violin string tones which introduce a spectacular solo passage for piano. Brilliant middle-register chords, followed by sweeping, thunderous roulades, taking in almost the entire range of the piano, constitutes a demonstration packed with drama, melody and amazing dynamics.

A year ago, I played this concerto on a high-quality booth machine at a New York shop on Sixth Avenue. Glancing up, after the first side had been completed, I discovered a middle-aged woman craning her neck to see the title on the album. After being invited in, she listened for about five minutes, then purchased

a duplicate. She had never heard the work before, but was visibly impressed with its power and tone quality.

More than a dozen sets were sold by another Sixth Avenue shop through the medium of one album of records used for demonstration. This was the *Tschaikowsky Concerto for Piano and Orchestra*. The incredible clarity of piano with the ensemble, at near-maximum volume, astounded customers, who gathered around in open-mouthed wonder.

For a single disc, the *Bach Toccata and Fugue in D Minor* is an ideal exhibition record for extreme tones, surging from lowest bass to high, piercing upper tones.

There is no orchestra in the world that has surpassed the broad, rich tones of the Philadelphia Orchestra when it was under the direction of Leopold Stokowski. One of the outstanding discs made by this orchestra is the well-known *Dance Macabre*, by Saint-Saens. About four inches in the cellos and contrabasses take up the principal theme, resulting in a tone of remarkable warmth. I have seen three of these

recordings sold while a salesman was playing the disc for a customer interested in buying a combination.

### *Suggested Orchestral Numbers*

The following list of recordings is also recommended for show purposes:

*Beethoven Symphony No. 9—"Choral."* The second movement, Scherzo, contains sudden kettle-drum tones, and is one of the best examples of this attention-commanding instrument ever recorded. The principal theme is rhythmic, easy to listen to. Near the middle of the disc the recording has excellent crescendo passages with rolling kettles beneath.

*Rossini's Semeramide Overture.* Probably the best recording Toscanini has ever made with the Philharmonic Orchestra. Filled with gigantic crescendo chords, snapped off with the suddenness of an explosion. Sides one and three offer wonderful exhibition tones to show off speaker quality.

*Tschaikowsky Symphony No. 6 "Pathétique."* The most perfect reproduction of the true sound of a symphony orchestra I have yet heard. First side, first movement, illustrates extremely low woodwind tones, rising gradually to high string passages. Side 3, first movement, after low passage is interrupted with huge crescendo, exceptionally clean brass tones. (Advise turning tone control to highest pitch.)

These are but a few recordings which the salesman should keep in mind. By familiarizing himself with other stock, and analyzing closely customer music preferences, the salesman can build his own additional list of "records to sell combinations."

### For RECORD SALESMEN:

**EVERYBODY** likes Strauss' "Blue Danube" but there are many recordings that show off the qualities of combinations better.

**THE AUTHOR**, a music editor with the "Hartford Courant," tells what some of them are, and why

**FIVE REASONS WHY  
PHILCO  
IS THE MOST  
VALUABLE FRANCHISE  
IN THE RADIO TRADE!**

The features that Philco gives you to sell are *exclusive... only Philco has them!* They are the *modern* features which the public demands today... the big *sell-up* features which make Philco the *profit line* of the radio and phonograph industry.

- 1. Music on a Beam of Light**
- 2. Philco Automatic Record Changer**
- 3. Stroboscope Pitch and Tempo Control**
- 4. New 1942 Philco Tilt-Front Cabinet**
- 5. Exclusive New Philco FM System**

**SEE YOUR PHILCO  
DISTRIBUTOR NOW!**



**PHILCO 1013  
RADIO-  
PHONOGRAPH**  
One of the many beautiful Philco *sell-up* models with the features the public demands today!

**Philco All Year 'Round for Profits All Year 'Round**

# Service PICKUP PLAN

**COULD YOU HANDLE 25 to 50 per cent more work?  
There's a way to get it without much promotional expense**

*By*

---

**HAROLD F.  
JENKINS**

---

*Fred C. Harrison Co.,  
Elmira, N. Y.*

**C**AN your service shop handle more jobs than it is handling now? Would you welcome a 25 to 50 per cent increase in business . . . with practically no additional investment required to get it?

Back in 1932, in the midst of the depression, I was struggling along as an independent radio serviceman and needed more work. It seemed to me that the best place to get it was from the neglected rural trade. So I established regular service routes out through nearby small towns and suburban "whistle-stops," making the rounds about once every two months, offering tube checkups in homes and pulling more serious jobs back to the shop.

A pretty good volume of extra business resulted. But the cost of travelling and especially the fact that on each trip I had to waste time making about ten calls to find one job made this extra business only mildly profitable.

Then I got smart.

### **How It Works**

"Pickup Agencies" were established in nearby small towns. They were not hard to find, were easy to get started and cost nothing to maintain except commissions on work unearthed.

Almost any store in any small town seemed willing to act as my agent. Owners permitted me to place a card advertising radio service on their counters, or in their windows. When customers noticed the card and said their radio needed repairs these agents really did their best to land the calls for me. I made it easy to get in touch with me

by supplying penny postcards already addressed, with blank space for insertion of the prospect's name. On hurry-up calls my agent telephoned and reversed the charges.

This idea was worked within 25 miles of the shop. Agents received 10 per cent of the final charges to the customer and my agreement made it clear that all future business from the customer would carry this same commission so long as the agency was retained.

(Since 1935 I have been sales manager for a radio parts distributor and have helped many servicemen served by my firm to establish similar pickup agencies. In almost every instance they have been as successful as I was originally.)

### **A Few Details**

Almost any kind of store in a small town makes a good agency for

radio service and, among them, I had gas stations, garages and general stores.

Curiously, barber shops were among the most effective. Sounds odd, I know, but where except over the mirror of such a shop can you place an ad which the prospect is practically forced to stare at until its message sinks in? And remember, too, that when a man is virtually at the mercy of a talkative barber from whom he just can't walk away half shaved the guy with the razor might just as well talk radio and make a few dollars as waste time discussing the international situation!

Second only to barber shops in effectiveness were dry cleaning establishments. I'll let you in on something not too generally known. Every city has a few dry cleaners . . . and at least four times as many dry cleaning stores. When you take a suit to one of the latter maybe you think that it is cleaned and pressed in the back room. Usually, it is picked up by a route truck from a central station and returned next day. Such shops are already in the agency business, on a commission basis. So all of them will listen to your proposition without undue surprise, particularly since your business does not in any way conflict with cleaning.

Everybody in a community uses some cleaning service during the year. I think dry cleaners see their customers an average of about once a month. It is even practical for such sub-servicers to slip cards in the pockets of newly cleaned suits, the cards bearing your name, address and 'phone number.

### **Few People Beat Paths**

---

**MAYBE** repair business will automatically increase in inverse proportion to new set production limitations but chances are you'll still have to sell it

# WE RATHER SURPRISED OURSELVES!

It was embarrassing.

We didn't know our own stren'th, honest!

We knew the new Magic Brain RCA Victrola (Model V-215) was the hottest piece of merchandise we ever had to offer you. We knew your customers would go for them like a hungry bass for June bugs. But even *we* were surprised at the way you, and dealers all over the U. S. A., soaked up all we had to offer like a thirsty sponge and yelled for more.

Doggone, we wish we could ship you all you want. But, as you know, some of the strategic materials which go into these magnificent Magic Brain RCA Victrolas are getting scarce as hen's molars.

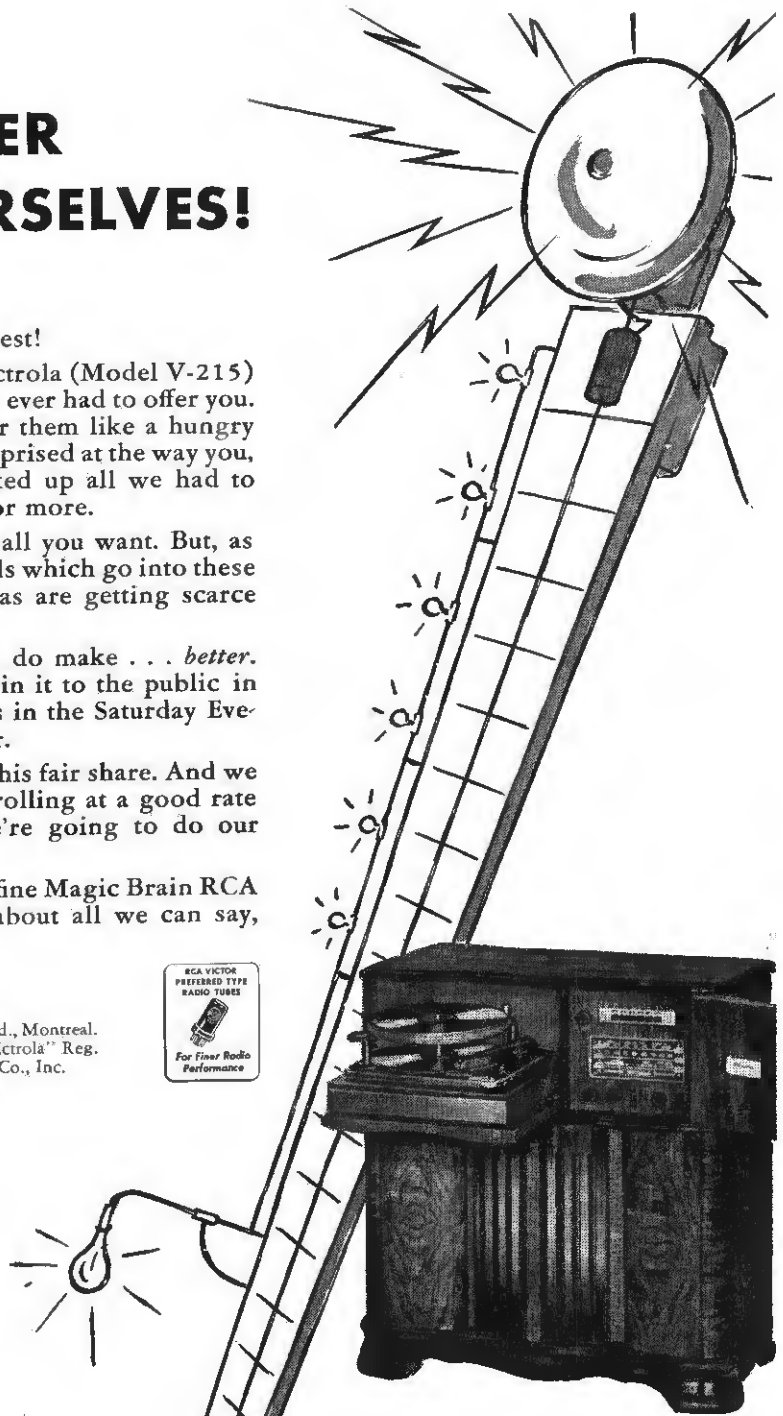
About all we can do is make what we do make . . . *better*. "Fewer but Finer" is the way we explain it to the public in our big advertising campaign that runs in the Saturday Evening Post, Life, Time and New Yorker.

We try to see, too, that each dealer gets his fair share. And we hope to be able to keep our shipments rolling at a good rate throughout the months to come. We're going to do our durndest.

If you can't always get as many of these fine Magic Brain RCA Victrolas as your customers request, about all we can say, brother, is:

It burns us up as much as it does you!

In Canada, RCA Victor Co., Ltd., Montreal.  
Trademark "RCA Victor", "Victrola" Reg.  
U. S. Pat. Off. by RCA Mfg. Co., Inc.



RCA Victrola Model V-215 has Magic Brain, Magic Tone Cell, Jewel-Lite Scanner, Flexible Tone Bridge, Teletube Radio with 9 RCA Victor Preferred Type Tubes and many other outstanding sales features.



# RCA Victor

RCA MANUFACTURING CO., Inc. • Camden, N. J.  
A Service of the Radio Corporation of America



# INSIDE Stuff

**S**ERVICEMEN having ready access to many homes may render the nation an invaluable service by keeping their eyes open for evidence of espionage or sabotage inimical to its welfare. Some have already had their suspicions aroused by requests to repair radio equipment scarcely suitable for legitimate uses such as amateur communication, ask where such things should be reported. Information should, we are told, be telephoned to agents of the FBI at any of the following numbers:

ALBANY	5-4595	LOUISVILLE	Wabash 2133
ATLANTA	Walnut 3605	MEMPHIS	8-4236
BALTIMORE	Plaza 6776	MIAMI	3-5558
BIRMINGHAM	4-1877	MILWAUKEE	Daily 3431
BOSTON	Liberty 4080	NEWARK	Market 2-5613
BUFFALO	Cleveland 2030	NEW HAVEN	7-1217
BUTTE	2-2304	NEW ORLEANS	Magnolia 7643
CHARLOTTE	3-4127	NEW YORK	Rector 2-3520
CHICAGO	Randolph 6226	OKLAHOMA CITY	2-8186
CINCINNATI	Cherry 7127	OMAHA	Atlantic 8644
CLEVELAND	Prospect 2456	PHILADELPHIA	Walnut 0555
DALLAS	Central 9086	PHOENIX	4-5766
DENVER	Main 6241	PITTSBURGH	Grant 2000
DES MOINES	3-8998	PORTLAND (Ore.)	Broadway 0469
DETROIT	Cadillac 2832	RICHMOND (Va.)	3-0169
EL PASO	Main 1711	ST. LOUIS	Central 4115
GRAND RAPIDS	6-5337	ST. PAUL	Garfield 7509
HOUSTON	Capitol 9717	SALT LAKE CITY	4-4338
HUNTINGTON (W. Va.)	8928	SAN ANTONIO	Garfield 4216
INDIANAPOLIS	Riley 5416	SAN DIEGO	Main 3044
JACKSON (Miss.)	3-5221	SAN FRANCISCO	Yukon 2354
KANSAS CITY	Victor 3113	SAVANNAH	3-3054
KNOXVILLE	4-2721	SEATTLE	Main 0460
LITTLE ROCK	2-3158	SIoux FALLS	2885
LOS ANGELES	Madison 7241	SPRINGFIELD (ILL.)	3-8618
WASHINGTON		Republic 5226	

**P**RIOITIES situation was to be given feature editorial treatment in this issue but the rapidity with which OPM and OPACS issued new rulings, plus Roosevelt's last-minute resolution to set up some sort of coordinating committee over both, made such a report impractical. We can report, however, that critical metals sufficient to virtually assure an adequate production of replacement radio tubes until at least November 30 were released, that priorities were relaxed somewhat on aluminum, nickel and magnet steel insofar as makers of electrolytic and paper condensers plus pm speakers were concerned. On the negative side of the ledger were developing shortages of copper, steel and certain plastics. The first appeared to be nearly as critical as aluminum and the last sufficiently tight to boom demand for compact wooden cabinets. (E. I. du Pont de Nemours & Company, surveying uses of plastics in radios, says the average 1941 model contains 30 separate plastic parts, that some six-tube sets contain as many as 60).

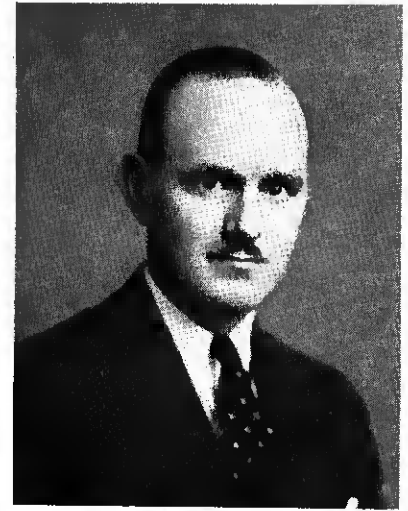
**K**EEP THEM LISTENING would make a swell slogan for the radio industry to rally around. We notice now that even the army is urging its public relations officers to use broadcasting freely in selling the efficiency of the service to the American public. The government itself has quite obviously been convinced that the effectiveness of radio as an emergency tool and weapon can only be maintained by freeing sufficient materials to keep receivers in repair. And we take this opportunity to again insist that new sets will also be necessary if the number

of listeners is to be kept at its present peak.

**I**NDUSTRIAL uses of radio type parts are legion and, while manufacturers have been hot after this market for some time with distributors not too far behind, servicemen by and large are still neglecting an opportunity. We've already published a number of articles under the general title "How to Sell Industrials" and more are in preparation. When readers do roll up a consistent amount of industrial business, incidentally, we'd like to know about it. With details regarding uses. And methods by which industrialists are approached, sold and kept coming back for more.

**A**MUSING yet at the same time pointed use of capital letters is noted in the latest bulletin from the Technicians Guild of New England, wherein a tabulation of typical serviceman expenses appeared. Watch for those capitals and you'll get the point:

Per Year	Store	Home	Total
Rent .....	\$480	\$360	\$840
Food .....		520	520
Clothes .....		50	50
Telephone .....	60	50	110
Electricity .....	84	24	108
Heat .....	40	70	110
Insurance .....	80	24	104
New Equipment..	50		50
Wages .....	780		780
Advertising .....	125		125
Transportation ..	175		175
Miscellaneous ..	30		30
READER'S DIGEST .....		3	3
Total .....			\$3005



**STANLEY H. MANSON**—Son of Dr. Ray H. Manson, general manager of Stromberg-Carlson, has just been named sales promotion manager of the company with offices at Rochester, was southwestern sales manager with headquarters at Kansas City

## DCB Communication Plans

In the event of emergency will use nation-wide network to broadcast air raid warnings

**WASHINGTON**—Nation-wide plans to use standard broadcasting stations for air raid warnings and other messages, communiques and announcements in the event of military emergency were outlined on Aug. 8th by the Defense Communications Board through James Lawrence Fly, Chairman of the DCB and of the Federal Communications Commission.

The Chairman emphasized that broadcasting would remain in private hands and that all utilization of broadcast facilities will be on a cooperative basis except for possible areas of actual combat. The defense studies have been made in considerable part by the industry itself.

Current reports to the DCB indicate that of approximately 880 standard broadcast stations in operation, nearly 500 are already connected to the potential supernetwork carried on telephone lines. An additional 132 have studios in cities now served by the supernetworks, so that only local links need be secured; and 240 are located along the lines of the supernetwork and so can be tapped in.

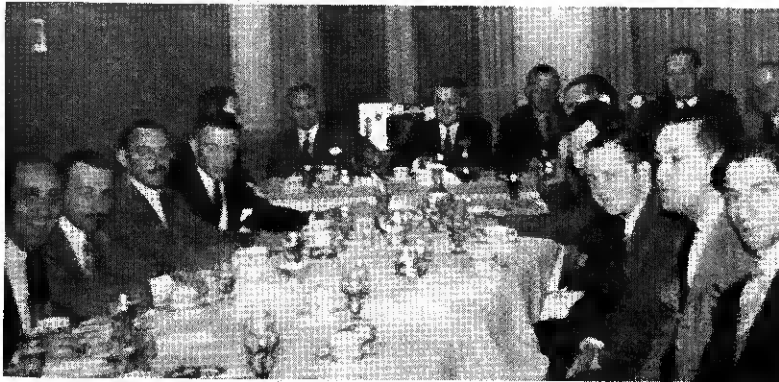
## Defense Appointment

U. S. Signal Corps retains G. E. Smith as civilian adviser

**CINCINNATI**—Crosley Corporation's vice president, George E. Smith, was recently called in by Brigadier General Dawson Olmstead as civilian adviser and counsellor in the reorganization of certain activities of the U.S. Signal Corps. In his executive capacity with Crosley, Smith has had many years of organization experience in manufacturing and communication fields.



# On the Newsfront



**PERMO CONFERENCE**—Annual get-together breakfast and sales meeting, held during recent Chicago Trade Show, by Permo Products Corp. In attendance were: (left to right) Martin Friedman, Oscar and Marvin Roye, Grant Rice, Burton Browne, Arthur J. Olsen, Sherman Pate, William Falck, Eugene Steffens, William Hemminger, Norman B. Neely, Fred Williamson, Edward J. Crowley, William E. McFadden and Robert Milsk

## NEMA Report

**Appliance sales up 40 percent over last year**

NEW YORK—According to a survey issued by the National Electrical Manufacturers Assn., sales of electrical appliances for the first half of this year recorded unprecedented highs.

Sales for major appliances, not including refrigerators, were 40 percent ahead of last year and 66 percent above 1939. Refrigerators were said to be ahead 36 percent for the first half of the year over similar period of 1940 and 88 percent ahead of that period in 1939.

## RMA Reelects Coogan Export Head

NEW YORK—The Radio Manufactur-

ers Assn. has reappointed W. A. Coogan (Hygrade Sylvania's foreign sales manager) chairman of the R.M.A. export committee for the coming year. Four important meetings are held during the year, two in New York and two in Chicago, for discussion and cooperative action on radio export problems, for example, exchange, priorities and licenses.

## S. N. Shure and J. J. Kahn Head Sales Managers Club

CHICAGO—S. N. Shure and Jerome J. Kahn have just been elected chairman and vice chairman respectively for the ensuing year by the Sales Managers Club, Western Group. They succeed John J. Robinson and W. S. Hartford.

## Television News

**Chicago, Hollywood and Philadelphia receive authorization for commercial television**

NEW YORK—The FCC on August 12th gave television its first "big lift" when it granted Zenith Radio Corp., Chicago, Ill., and Don Lee Broadcasting System, Hollywood, California, construction permits for commercial television.

Zenith Radio Corp., is authorized to operate unlimited time on channel No. 1 (50-56 mc.) using special emission for FM. Applicant proposes to use the facilities of its present experimental station W9XZV for the purpose. Don Lee will also operate on 50-56 mc. and contemplates using its experimental station, W6XAO.

Both concerns are pioneers in experimental television and their practical experience is bound to expedite the switch over to a commercial basis.

To start the ball rolling for Philadelphia tele. fans, the FCC has given the Philco Radio & Television Corp., authorization to operate its experimental station W3XE, on a commercial basis for 60 days beginning September first. Present power of the station is 3000 watts, operates on channel No. 3 with a wavelength of 66-77 mc.

Earle C. Anthony has filed application with the FCC for authority to construct a commercial tele. station in Los Angeles, Cal., on channel No. 6, (96-103 mc.).

John David, Inc., New York City retailers of men's wear, recently signed a contract with the National Broadcasting Company for a half-hour weekly television program, to be telecast over WNBT from 9-9:30 p.m. beginning September 24.

Columbia Broadcasting System is transmitting its black and white test pattern an extra hour daily from 3:30 to 4:30 p.m. to facilitate testing of the change-over required by existing television receivers to pick up channel No. 2 on which WCBW, is operating.

## EIGHTEENTH BOARD of DIRECTORS R.M.A. 1941-42



E. A. NICHOLAS    DAVID T. SCHULTZ    P. S. BILLINGS    JAMES P. QUAM    ROY BURLEY    H. E. OSMUN    PAUL V. GALVIN    H. C. BONFIG    JAMES T. BUCKLEY



RAY H. MANSON    B. G. ERSKINE    OCTAVE BLAKE    W. R. G. BAKER    J. S. KNOWLSON    A. H. GARDNER    A. S. WELLS    E. F. McDONALD, JR.    BEN ABRAMS



JAMES C. DALEY    RAY F. SPARROW    JEROME J. KAHN    E. ALSCHULER    JOHN W. MALLON    BOND GEDDES    LESLIE F. MUTER    ERNEST SEARINS    G. W. THOMPSON    R. C. COSGROVE



**HOTPOINT DISTRIBUTOR SALESMEN**—And company executives posed for this photo at famous Mackinac Island. Top jobber salesmen were brought here by Edison General Electric to receive awards and round of pleasure as leaders in 10-weeks sales campaign. Left to right: A. B. Moore, H. E. Warren, H. K. Dewees, J. Jones, F. B. Williams, Dick Reilly, R. W. Turnbull, and B. McGlinchey

### Ansley Has New Delivery Plan

LONG ISLAND CITY—Ansley Radio Corp., announces a new plan to assure its dealers regular deliveries throughout the coming fall and winter seasons.

Watchword for the campaign is "Profit Lies In Planning," and specially prepared message on the plan is titled "Are You Ready For Business."

Prepared forms and inventory protection plan provide instructive information and serve as a guide in deciding upon fall merchandise requirements.

## San Francisco Holds Annual Market Show

Visiting dealers from all parts of the West set new attendance records

SAN FRANCISCO—The fifty-second annual Western Home Furnishing Market held at the Western Furniture Mart in this city week of Aug. 4 set a new record for attendance. It was said that over 600 manufacturers were represented at the convention. All types of home products were exhibited, including radios and appliances.

Radios held the center of attention with many of the visitors asking about AM/FM models.

### Queens Dealer Outing

NEW YORK—The fourth annual outing of the Queens Electrical Appliance Merchants Assn., was held on August 18th at Glenwood Landing, Long Island. Several hundred dealers, representatives, and distributors were in attendance for this annual get-together.

### Knoop Joins Du Mont

PASSAIC—Walter A. Knoop has joined Allen B. Du Mont Laboratories, in the capacity of sales engineer. He is assisting Len Cramer who heads the instrument and television transmitter sales.

### SUPPLEMENT TO SYLVANIA TECHNICAL MANUAL

THIS supplement lists all the types of tubes announced since the Fifth Edition. Second Printing of the Sylvania Technical Manual was released.

Base views and operating characteristics are either given—or referred to equivalents. This saves time and space. Cross references used are clear and easy to follow.

Distribute these supplements to Sylvania Radio Tube Division

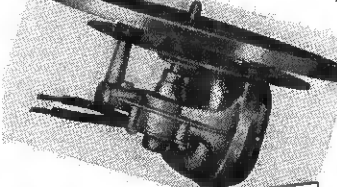
such of your customers as you know own Sylvania Technical Manuals. Estimate the number of Supplements you will need . . . and write to Sylvania Radio Tube Division, Hygrade Sylvania Corp., Emporium, Penna., for your supply. The current Manual is being shipped with the supplement already fastened in place. The price remains unchanged: 35c to Servicemen and dealers.

### HYGRADE SYLVANIA CORPORATION EMPORIUM, PA.

- Please send me a copy of the new Sylvania Technical Manual Supplement FREE.
- Enclosed is 35c in Stamps or Coin for copy of Sylvania Technical Manual Book including supplement.

NAME ..... ADDRESS .....

## Insist On "Smooth-Power" Phono Motors



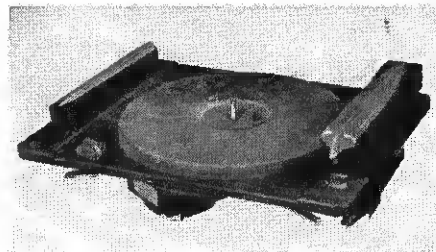
Model CX "Smooth-Power" Motor



More of your floor demonstrations of phonographs and combinations wind up as sales when you have G. I. "Smooth-Power" Motors in them. Because they deliver accurate turntable speed — vibrationless — strongly helping the set to produce the pleasing record tone that gets customers to buy. Specify G. I. "Smooth-Power" motors, changers, recorders and recorder-changer combinations. Most complete line of phono power mechanisms you can get

from any one manufacturer. Use this full-line supply service for your replacement and rebuilding jobs. Catalog and prices on request.

NEW! G. I. "Smooth-Power" dual-speed recorder and phonograph. 78 and 33 1/3 RPM. Dynamically balanced, self-starting rim-drive motor. Weighted turntable. Streamlined plastic trim on cutter and pickup arms.



### The GENERAL INDUSTRIES CO.

DEPT. 16, ELYRIA, OHIO

Order your Cutting and Play-Back Needles from our Affiliate, General Phonograph Mfg. Co., Inc., Putnam, Conn.



**PHILCO'S NEW CHAIRMAN**—Larry E. Gubb, newly elected chairman of the board of directors. Formerly executive vice-president

## Philco Names L. E. Gubb New Board Chairman

Ballantyne, Kennally, Wilson and Carmine also advanced

PHILADELPHIA—Election of Larry E. Gubb, former executive vice president, to the office of chairman of the board of Philco Corporation, was announced on Aug. 21st. Several other promotions were also made public at the same time. John Ballantyne, former treasurer, was elected vice president in charge of operations; Thomas A. Kennally, formerly general sales manager, was named vice president in charge of sales; W. R. Wilson, controller, succeeded Ballantyne as treasurer; and James H. Carmine, former assistant general sales manager, became general sales manager.

James T. Buckley, who has been president of Philco since 1939, will continue in that office. Mr. Buckley has been associated with Philco since 1912 and has served in an executive capacity for many years.

## Maginot Joins National Union

NEWARK—E. J. Maginot takes over the managership of sales engineering department for the National Union Radio Corp. according to a recent announcement by that company. Maginot is an old radio pioneer with considerable experience in both retailing and servicing. He helped organize the Radio Technician's Guild of Boston and has served three terms as its president.

## Webster-Rauland Moves

CHICAGO — Webster-Rauland has moved to its new plant at 4245 Knox Avenue, Chicago, Illinois. Just recently the Rauland Corp., purchased the Sound division of the Webster-Chicago Corp., giving the sound industry a new trade name "Webster-Rauland."

# MERCHANDISE "ON ORDER" THREATENS BUSINESS TODAY



Recordio dealers will cope with this situation because of Wilcox-Gay's H. U. S. sales policy.

Wilcox-Gay recognizes two responsibilities in the present situation. First, the manufacturer's responsibility to the defense effort. To this project Wilcox-Gay is now devoting a considerable portion of its manufacturing facilities.

The second responsibility is that of the manufacturer to his dealership organization. Wilcox-Gay was fortunate in having a proven sales policy which fulfills this responsibility and requires no radical revision to meet the present crisis. H. U. S. stands for "higher-unit-sale." The H. U. S. sales policy has been effective during normal periods. It will prove more effective now. The H. U. S. sales policy works because it is founded on a product of proven quality which is supported by a fast-growing quality-conscious market.

Recordio acceptance is solid and bankable. It becomes a valuable property to the dealer faced with merchandise "on order." For Recordio dealers can depend on sustained sales volume through fewer but larger sales. More people are buying higher priced merchandise this year. They represent the Recordio market.

**Consider the logic of Wilcox-Gay's H. U. S. policy. Realize, too, that it is a long-range policy that will outlive the present crisis.**

### SELL WILCOX-GAY RECORDING DISCS

This fast-growing market offers steady, substantial year around profits. Consider these advantages:

**SMALL INVESTMENT** • Like "five & ten" merchandise, Wilcox-Gay discs produce volume and quick turnover on a small investment.

**CONSISTENT TRAFFIC-BUILDER** • Disc buyers are steady customers. They afford a valuable contact for additional sales.

**READY-MADE MARKET** • A huge disc market exists and is expanding rapidly in stride with home recording.

Wilcox-Gay is the world's largest manufacturer of recording discs. Investigate Wilcox-Gay's new disc-merchandising program. Contact your Wilcox-Gay distributor or write the factory.

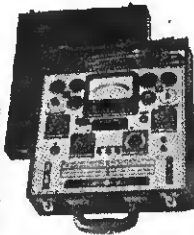
**WILCOX-GAY RECORDIO**  
**RECORDER-RADIO-PHONOGRAPH COMBINATION**  
**WILCOX-GAY CORPORATION • CHARLOTTE, MICHIGAN**

# Bigger Profits For You!

**BECAUSE RCP COMBINES TEST INSTRUMENT QUALITY WITH AMAZING ECONOMY!**

The real profit, as every business man knows, is in volume sales. RCP test equipment is engineered to bring you volume. Top quality . . . low prices and a test equipment performance record few in the industry can match—at any price! That's RCP test equipment, and that's why dealers employing this line are making money. Change to RCP for profit . . . push RCP for sales and add to your income on test equipment. Look at the money-making possibilities in such features as these—

### RCP-803 Combination Tube & Set Tester



Portable "service shop" tests all latest tubes . . . all filament voltages. Hot interelement short and leakage tests for individual elements. Individual section tests on multi-purpose tubes. Line voltage regulation 103 to 135 volts, meter indication. Noise test for tubes which otherwise test good. Complete ready to use with test leads. Dealer

Net Price . . . . . \$36.95



### RCP-702 Signal Generator

Latest circuit and mechanical design. Continuously variable 95KC to 100MC, direct reading. Unmodulated or modulated 30% at 400 cycles. Five-step calibrated attenuator, 1 to 500,000. No dead spots, ripple or feedback through line. Dealer Net

Price . . . . . \$25.45

**NEW CATALOG FREE!** Send for your copy of the latest, greatest RCP catalog describing this entire line of dependable, money-making test equipment. Write for it today.

IN THESE TIMES Uncle Sam gets first call on vital materials used in test equipment assembly. Shortages mean lower output, higher prices. To date RCP has absorbed the greater part of this increased cost. But with prices continuing to rise and defense priorities delaying delivery, it will pay you to order now.

**RCP**  
dependable  
TEST  
instruments

**RADIO CITY**  
PRODUCTS CO., INC.  
88 PARK PLACE • NEW YORK, N.Y.

## Stromberg-Carlson Ups Hunt

NEW YORK—L. L. Spencer, Stromberg-Carlson's general sales manager, announced the appointment of C. J. Hunt as manager of the radio division. Hunt is well known by dealers and distributors from coast to coast, having served in the capacity of manager of the distributor division for the past two years.

S. H. Manson, recently appointed sales promotion manager, will team up with Hunt and supervise the promotion of the company's products on a national basis.

## Adams Joins Admiral

CHICAGO—Continental Radio and Television announces the appointment of John Q. Adams as district sales manager for the states of Ohio, southern Illinois, eastern Missouri, Iowa and Nebraska. Formerly sales manager of the Champion Radio Works. He will make his headquarters at Admiral's home office in Chicago.

## Belden's Defense Officers

CHICAGO—In order to facilitate cooperation with the national defense program, the Belden Manufacturing Company has appointed a Defense Coordinator and a Manager of Priorities Division, it was announced by Whipple Jacobs, president of the company.

E. V. Blake, eastern manager for the firm, has been named Defense Co-

ordinator and will maintain contacts with Office of Production Management and Office of Price Administration and Civil Supply in Washington. J. V. Van Buskirk, formerly in the sales department, heads the Priorities Division of the company.

## Brunet and Cook Elected RCA Vice Presidents

CAMDEN—Meade Brunet and Jay D. Cook have been elected Vice Presidents of the RCA Manufacturing Company by the Board of Directors, it has been announced by George K. Throckmorton, President.

Brunet, whose service with RCA and predecessor companies dates from 1919, will continue his present duties as Manager of the Engineering Products Division, including United States Government business. Cook, whose 14 years with RCA and a predecessor company began in the cost accounting department, will continue in charge of the International Division.

## Raytheon Advances Akeroyd

NEW YORK—A. E. Akeroyd has just been named manager of Raytheon Production Corporation's "replacement tube division." Akeroyd was formerly assistant head of this department and succeeds Earl S. Dietrich who resigned from the company to go into another industry.

# The Accent is on QUALITY

IN FREED-EISEMANN 1942 PHONOGRAPH-COMBINATIONS!

- Armstrong Wide-Swing FM and Regular Radio Reception
- Fine Period and Modern Cabinets
- Garrard Mixer Record Changers
- Dual Panphonic Speaker System
- Full-range Reproduction (30-15,000 cycles)
- AC and AC/DC
- Restricted Territorial Franchises

Nowadays the trend is to *quality*, and that's why there's real profit in promoting Freed-Eisemann models—the 1942 *quality* line of radio-phonograph combinations!



Model 42  
The Freed-Eisemann Hepplewhite

# Freed-Eisemann

For catalogue, booklet "ABC of FM", complete details, write  
FREED RADIO CORP., 39 WEST 19TH ST., N. Y. C.

## Hallicrafters Takes Over New Plant

CHICAGO—W. J. Halligan, president of The Hallicrafters Company announces the acquisition of a new factory (known as Plant No. 2) in Chicago which will be used for fabricating steel chassis. This is the third expansion for this concern since 1940.

## New Frisco Agency

SAN FRANCISCO—A new manufacturer's representative organization under the name of Nickerson and Rudat recently opened an office at 383 Brannan Street, San Francisco, Cal. Both men formerly with the Burgess Battery Co., Nickerson, as distributor sales manager, and Rudat, as district representative.

## Sonora Moves in New Home

CHICAGO—The recent removal of Sonora Radio and Television Corp., to a vastly larger, modern plant at 325 North Hoyne Avenue, Chicago, has doubled the capacity of the company, it was announced by Jos. Gerl, president.

The management advises that the new factory follows the best contemporary planning, is one story in height and laid out for straight line production.

## Howard Appoints Schroyer

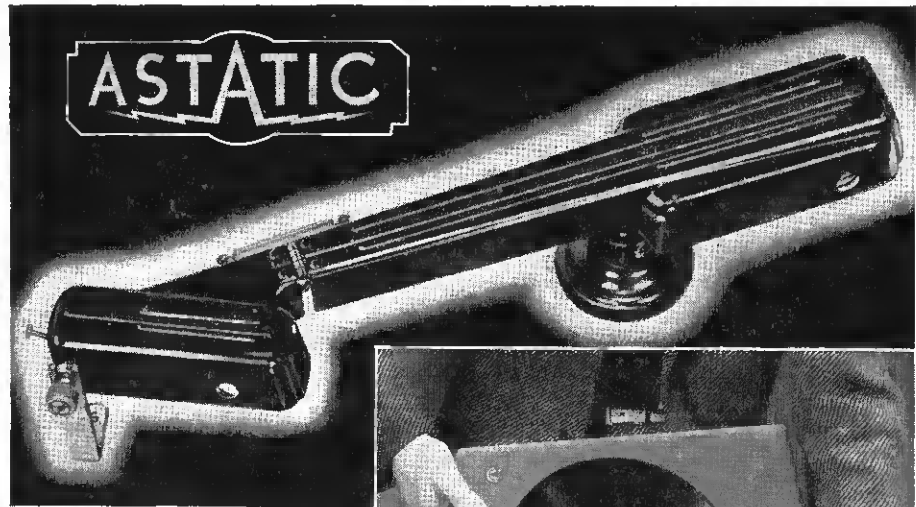
CHICAGO—Howard Radio Company announces the appointment of Sidney Schroyer and Co., 917 W. 18th St., of this city as its exclusive distributor of the Howard Household line for Chicago.

## Howard Opens New Plant

CHICAGO—Howard Radio Company have just opened its own cabinet plant under the supervision of Charles B. Shapiro, executive vice-president.

## Dealer Helps

**FALL PROMOTION DISPLAY—**  
*Recoton* offers this new three-color card display promoting its steel and "Stellite" cutting needles, and special playback points for home recording.



## MOBILE Model AB-8M PICKUP

Designed especially for sound trucks, airplanes, automobiles, trains and other mobile units.



Model AB-8M Astatic Crystal Pickup is mechanically counterbalanced so as to track on recordings even in a vertical position, as illustrated, without jumping the groove. Hinged head may be tilted upward for quick and easy changing of needles. Model AB-8M incorporates all the advantages of Astatic Models AB-8 and S-8, and provides wide range performance with full bass and brilliant highs, free from distortion and surface noise. Mounting center, 8 inches. List Price \$12.50.

## PUBLIC ADDRESS MICROPHONE

*Exceptionally Smooth Frequency Response*

Astatic N-Series Microphones, while highly practical to many uses, are especially desirable for modern public address installations. Here is a microphone that insures faithful reproduction and at the same time incorporates special features to facilitate directional or non-directional positions and the quick interchange of cables. Swivel joint tilting head, internal diaphragm protector and concentric cable connector. All chrome finish. Complete with 25-ft. cable and spring protector.



**N-SERIES**  
Model N-30, wide range, List Price \$17.50  
Model N-80, voice range, List Price \$17.50

**ASTATIC**

**THE ASTATIC CORPORATION**

YOUNGSTOWN, OHIO

Licensed Under Brush Development Co. Patents

In Canada: Canadian Astatic Ltd. Toronto, Ontario

CLEAR AS A BELL



## THE FUTURE IS NOW

This great new plant\* is the dynamic evidence of SONORA's progressive present and SONORA's faith in the future. Planned along streamlined, straight-line modern production methods, it provides adequate capacity for SONORA's expanding business, for defense activities and for progressive growth in the future.

Yes—"the future is now"! This is a fundamental SONORA belief—a concept toward which every SONORA plan and effort is directed . . . a policy that keeps faith, that is enthusiastically endorsed by our loyal trade . . . a policy that is sure to merit and win the confidence of an ever-growing SONORA jobber organization . . .

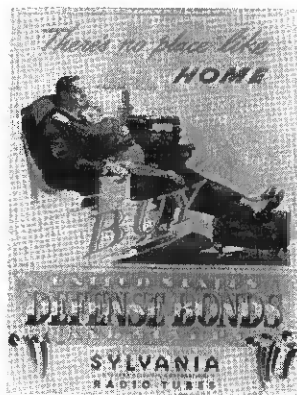
\*Illustration shows but a small section of the production lines.



**SONORA**  
RADIO & TELEVISION CORP.  
CHICAGO

**FOLDERS**—Howard Radio releases a new edition of its amateur folder No. 109. Contains information on complete line of communication sets with latest prices. This concern also has a new folder describing and illustrating its model 445 AC-DC receiver. Both available upon request.

**DEFENSE BONDS**—Hygrade Sylvania Corp.'s new promotion piece contributes to the sale of United States Defense Bonds and Stamps. This 8-color window poster (illustrated below) is available to servicemen and dealers through jobbers. In addition to this poster, this company also announces a football-theme window trim standing 32



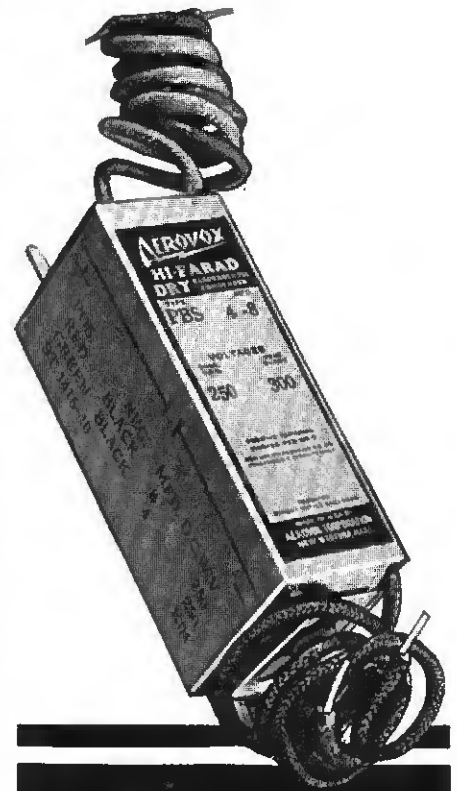
inches high. A cheering co-ed with oval pigskin as a background dramatizes this display. Also announces new olive green enameled metal cabinet base for radio tube stocks with provision for adding extra shelves. Measures 34 by 22½ by 12 inches deep. Please mention *Radio Retailing*.

**TUBE SUPPLEMENT** — Hygrade Sylvania has just printed a six page fold supplement for its Tube Technical Manual. Lists all the new types introduced since the printing of the manual. Offered free to holders of the book through jobbers or by writing direct to the company.

**CATALOG**—Pioneer Gen-E-Motor announces the issuance of a new catalog featuring its complete line of dynamotors for sound applications and other power supply uses.

### Distribution News

**ADMIRAL**—Continental Radio and Television Corp. appoints the following new distributors: *Texas Wholesalers*, 2105 Commerce St., Dallas, Texas, *R. P. McDavid Co., Inc.*, 2104 First Ave., Birmingham, Ala., *South Texas Appliance Corp.*, 605 S. Flores St., San Antonio, Texas, *City Electric Co.*, 518 So. Clinton St., Syracuse, N. Y., *Griffith Distributing Corp.*, 204 So. Pennsylvania St., Indianapolis, Ind., and the *Farrar-Brown Co. Inc.*, 492 Forest Ave., Portland, Maine.



ALWAYS a  
good bet ...

Yes, Aerovox PBS cardboard-case dry electrolytics always rate "tops" with successful servicemen when it comes to low-cost jobs. The compact dimensions; adjustable metal mounting flanges; polarity-indicating leads; generous voltage ratings; full capacity—these and other features brand them as ideal replacements—or original components, for that matter—when pennies count.

Single Section: 4 and 8 mfd., \$1.47, your net cost.	Type PBS600-600 v. D.C.W.
Double Section: 4-4 to 8-16 mfd., \$0.72 to \$1.14, your net cost.	Type PBS450-450 v. D.C.W.
Triple Section: 8-8 and 8-8-16 mfd., \$1.14 and \$1.26, your net cost.	Type PBS250-250 v. D.C.W.
Single Section: 5 and 10 mfd., \$0.42, your net cost.	Type PBS100-100 v. D.C.W.
Single Section: 5, 10 and 25 mfd., \$0.39 and \$0.48, your net cost.	Type PBS50-50 v. D.C.W.
Single Section: 5, 10 and 25 mfd., \$0.30 and \$0.36, your net cost.	Type PBS25-25 v. D.C.W.

### Ask Your Jobber . . .

He'll gladly supply you with these Aerovox money-saving PBS electrolytics. Ask for latest Aerovox catalog. Or write us direct.

**AEROVOX**  
CORPORATION  
NEW BEDFORD, MASS.  
IN CANADA: AEROVOX CANADA, Limited, Hamilton, Ont.

**CROSLY**—Major Appliances, Inc., 2414 South Lisbon Ave., Tampa, Florida, has been granted a franchise as a jobber for The Crosley Corp. in this area.

**EMERSON**—The Norge Products Co., Inc. New Orleans, La., Southern Furniture Sales Co., Knoxville, Tenn., and Electric Supply Co., of Grand Rapids and Kalamazoo, Mich., have just received distributorships from Emerson Radio and Phonograph Corp.

**FARNSWORTH**—The following companies were recently appointed distributors by Farnsworth Radio and Television Corp. American Distributors, Inc., New Haven, Conn., Buhl Sons Co., Grand Rapids, Mich., Coffin & Wimple Co., Portland, Me., Electric Appliance Co., Joplin, Mo., Electric Appliance Distributors, Jacksonville, Fla., M. E. Hegleman, Albany, N. Y., Frank Mayer Co., Inc., Corpus Christi, Texas, William Mee Co., Inc., Oklahoma City, Okla., Selle-Wilson Co., Little Rock, Ark., Aufford-Kelley Co., Miami, Fla., Sutcliffe Co., Louisville, Ky., Turner Department Store Co., Springfield, Mo., Specialty Dist. Co., Atlanta and Savannah, Ga., and Columbian Electrical Co., Kansas City, Mo.

**WILCOX-GAY**—Charleston Electrical Supply Co., Charleston, W. Va., has been appointed jobber for the West Virginia territory by the Wilcox-Gay Corp., Charlotte, Michigan.

## FIBRA offers: The ONLY CACTUS NEEDLE

FOR AUTOMATIC CHANGERS

Each Needle plays 8 or more Records.

A complete line of Cactus and Steel Needles for every Reproduction Need.

- The Best in Cactus Needles—4 types
- Fibra Sapphire
- Fibra Recording
- Fibra Shadows
- Fibra Pinpoints
- Fibra Automatics
- Fibra Steel

Desirable Territories open for Factory Representatives.

**FIBRA Development Co., Inc.**

1600 Broadway, NEW YORK CITY

## YOUR CUSTOMERS WILL USE A NEW KIND OF RECORDING DISC THIS YEAR!



**THE ALUMINUM** base recording blanks you have sold in the past will not be available this year because the entire aluminum supply is being used for national defense.

Here is the information you need to order the new Presto recording blanks and needles.

**PRESTO GLASS BASE DISC:** The highest quality disc now made, smoother, more rigid than the metal base discs, acknowledged by recording engineers to be the finest disc ever developed for sound recording. Recommended for use in broadcasting stations and recording studios. Overall thickness (.104"). Made in the following sizes:

TYPE	SIZE	LIST PRICE
912-A	12"	\$1.25
913-A	13½"	1.50
916-A	16"	2.50

NOTE:—The 12" and 13½" discs are packed 20 to a case, the 16" 15 to a case.

**PRESTO STEEL BASE DISC:** A new disc equal in quality to the Presto Orange Seal disc which was widely used for educational recordings. Gives excellent reproduction of both speech and music. Overall thickness (.036"). Made in the following sizes:—

TYPE	SIZE	LIST PRICE (Box of 10)
307-A	7"	\$4.50
308-A	8"	5.50
310-A	10"	8.00
312-A	12"	10.00

**PRESTO MONOGRAM DISC:** An eco-

nomical composition base disc ideal for test recordings of speech or music. Coated with the same compound as the Presto glass disc assuring long playing life and faithful reproduction. Used extensively in schools and recording studios. Overall thickness (.050"). Made in the following sizes:—

TYPE	SIZE	LIST PRICE (Box of 10)
706-A	6"	\$2.00
708-A	8"	3.50
710-A	10"	5.00
712-A	12"	7.00
716-A	16"	15.00

**PRESTO SAPPHIRE CUTTING NEEDLES:** Make as many as 100 perfect 5 minute recordings on one sharpening. Outlasts several dozen steel needles. List price per needle, \$6.00. Cost of resharpening, \$2.50.

**PRESTO STELLITE CUTTING NEEDLES:** Make 50 or more perfect recordings before becoming dull. Cutting point is a specially hardened alloy ground to a high polish to cut cleanly and quietly. More durable than sapphire. Will not break or chip. List price per needle, \$1.25. Cost of resharpening, \$.75.

**PRESTO SAPPHIRE PLAYING NEEDLES:** One needle will play 500 records or more. Highly polished point saves wear on valuable record libraries. Ideal for playing instantaneous recordings. List price per needle, \$1.25.

Write today for details of our new exclusive distributor's franchise.

**PRESTO**  
RECORDING CORP.  
242 WEST 55th ST. N.Y.

In Other Cities, Phone... ATLANTA, Jack. 4372 • BOSTON, Bel. 4510  
CHICAGO, Har. 4240 • CLEVELAND, Me. 1565 • DALLAS, 37093 • DENVER,  
Ch. 4277 • DETROIT, Univ. 1-0180 • HOLLYWOOD, Hll. 9133 • KANSAS  
CITY, Vic. 4631 • MINNEAPOLIS, Atlantic 4216 • MONTREAL, Wol. 4218  
PHILADELPHIA, Pennay. 0542 • ROCHESTER, Col. 3548 • SAN FRANCISCO,  
Yu. 0231 • SEATTLE, Sen. 2560 • WASHINGTON, D.C. Shep. 4003

World's Largest Manufacturers of Instantaneous Sound Recording Equipment and Discs

# ELECTRONIC Opportunities

**RADIO JOBBERS** can sell many specialized instruments needed by defense industries, or accessories, parts and testers required to keep them in operation

## TYPICAL INDUSTRIAL APPARATUS

Devices	Principal Users
Color Testers	Paint, lacquer, fabric companies
Densitometers	Glass companies, water works
Electronic Counters	Typewriter, cash register, clock firms
Flame Testers	Mfgs. of oil and gas burners
Frequency Meters	Clock companies, broadcasters, labs.
Humidity Testers	Paper, textile, air conditioning indus.
Illumination Controls	Theatres, schools, offices, factories
Insulation Testers	Cable, wire, telephone, telegraph co.
Light Meters	Lamp mfgs., photographers, utilities
Motion Controls	Metal stamping, auto body plants
Optical Pyrometers	Steel and alloy producers, utilities
Package Sorting Controls	Chemical, food companies
Permeability Testers	Milk processing, food packaging plants
Pin-hole Detectors	Sheet metal, paper manufacturers
Pressure Indicators	Engine, munition companies
Reflection Meters	Paint, paper, textile, metal finish ind.
Smoke, Dust Precipitators	Grinding mills, coal burning factories
Sound Level Testers	Makers of wall board, acoustic materials
Sound Pitch Testers	Automotive, airplane parts companies
Stroboscopes	Machine, engine companies, maintenance
Thickness Gauges	Paint, lacquer, varnish factories
Timers	Metal welding co., photo developers
Titration Meters	Chemical works, food companies
Transparency Meters	Paper, glass and textile industries
Vibration Testers	Mfgs. of engines, dynamos, motors
Weighing Controls	Chemical, food companies

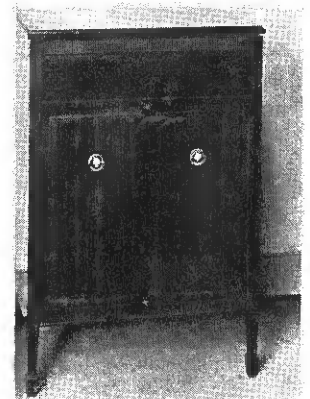
## MAINTENANCE ITEMS

Acoustic materials	Cones	Oscillators	Signal generators
Adapters	Controls	Oscilloscopes	Signal tracers
Ammeters	Couplings	Outlets	Sockets
Amplifiers	Cords	Output meters	Solder
Analizers	Crystals	Paint	Spaghetti
Attenuators	Decade boxes	Panel bulbs	Speakers
Baffles	Dials	Paper condensers	Staples
Batteries	Drills	Photocells	Switches
Bells	Dynamotors	Plates	Tape
Binding posts	Electrolytics	Plugs	Tap switches
Bridges	Filters	Pointers	Terminals
Bus bar	Flexible shafts	Potentiometers	Testers
Buzzers	Fuses	Power packs	Test leads
Bushings	Grommets	Pushbuttons	Tools
Cables	Ground clamps	Q meters	Transformers
Cathode ray tubes	Hardware	Racks	Trimmer condensers
Cement	Headphones	Reactors	Vacuum switches
Ceramics	Horns	Rectifiers	Vacuum tubes
Chargers	Insulators	Relays	Varnish
Charger bulbs	Irons	R-F chokes	Vibrators
Chassis	Jacks	Remote controls	Voltage regulators
Chokes	Knobs	Resistance wire	Voltmeters
Clips	Meters	Resistors	VT voltmeters
Coils	Mica condensers	Rheostats	Washers
Condensers	Microphones	Rivets	Wattmeters
Condenser analyzers	Milliammeters	Scales	Wavemeters
Connectors	Multitesters	Shafts	Wax
Contacts	Neon bulbs	Shield cans	Wire
Contact mikes	Ohmmeters	Shielding	Windings

*New*



**RADIOLA** RADIO & PHONOGRAPH table combination, model R-560P, has 5 tubes. The cabinet is of selected walnut and birch veneers. Phonograph plays 10 or 12-inch records with lid closed. Has self-starting motor. Measures 11 high, 16½ wide and 13 inches deep. RCA Mfg. Co., Camden, New Jersey.



**FREED-EISEMANN** FM CONSOLE COMBINATION, model 57, is known as the "Sheraton." Receives FM, AM and short wave bands. Has 15 tubes, 12- and 5-inch speakers, and automatic record changer. Mahogany finish cabinet measures 38 high, 24½ wide and 18 inches deep. List price \$240.00.



**FREED-EISEMANN** CONSOLE COMBINATION, the "Aristocrat," covers FM, standard and foreign short wave bands. Model 110, illustrated, has 22 tubes and 25 watt output, incorporates an automatic record changer and a dual Panphonic speaker. Mahogany cabinet. List price \$975.00. Freed Radio Corp., 39 West 19 St., New York, N. Y.

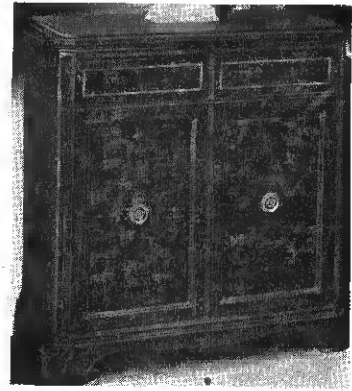
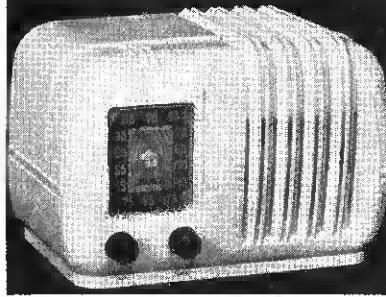


# Products . . .



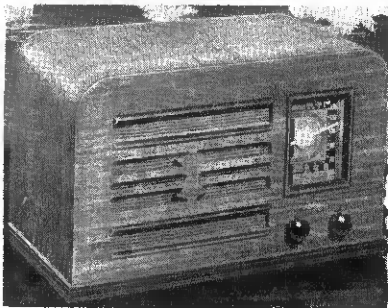
**MOTOROLA** WIRELESS AUTOMATIC record changer, model WRS, is concealed in a pull-out drawer. Walnut finish cabinet holds 6 to 8 record albums. Record changer plays ten 10-inch or eight 12-inch records. Galvin Mfg. Co., 4545 Augusta Blvd., Chicago, Ill.

**ARVIN** IVORY PLASTIC table-type radio, model 616A, is a 6-tube ac-dc superhet with quadruple tuned I-F amplifier. Band coverage is 540 to 1700 kc. Built-in antenna. Cabinet measures 9 11/16 wide, 6 9/16 high, and 5 9/16 inches deep.

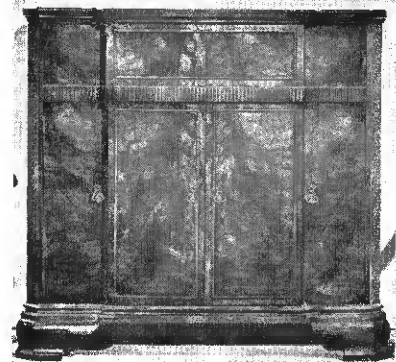
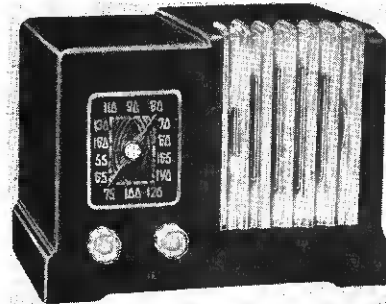


**PILOT** FM CONSOLE COMBINATION, the "Adam," is available in walnut and mahogany. Measures 38 high, 36 wide and 19 inches deep. This model, M-206, receives FM, shortwave and standard bands. Has 18 tubes, automatic record changer, and is equipped with 12 and 5-inch speakers. List price \$350.00. Pilot Radio Corp., 37-06 36 St., Long Island City, N. Y.

**ARVIN** TABLE-TYPE RADIO, model 532, in burgundy catalin plastic has 5 tubes. Air-plane type lighted dial has double-ended cameo pointer with fluorescent plastic insert for easy reading. Receives the standard American broadcast. Contains built-in antenna with connection for external aerial if desired. Measures 8 1/4 wide, 6 high, and 5 1/4 inches deep. Noblitt-Sparks Industries, Inc., Columbus, Ohio.



**ADMIRAL** TABLE TYPE RADIO, model 72-D5, housed in sliced walnut cabinet measures 12 3/4 wide, 7 3/4 high, and 6 3/4 inches deep. A 5-tube ac-dc superhet with 5-inch speaker covers standard American broadcasts. List price \$17.95. Continental Radio and Tele. Corp., 3800 Cortland St., Chicago, Ill.

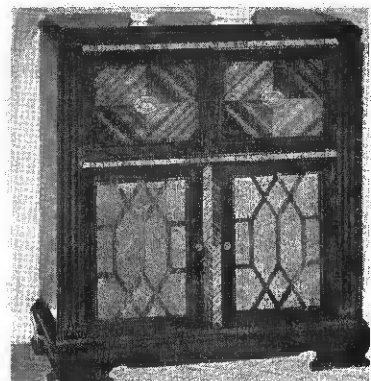
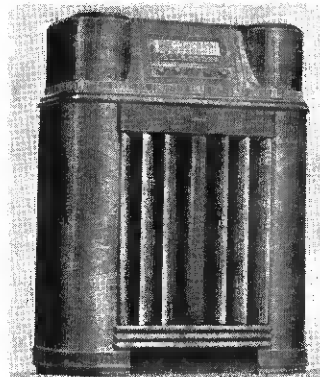


**FARNSWORTH** CONSOLE COMBINATION, model CK-111, is known as the Chippendale. This cabinet, available in either walnut or mahogany, is of authentic period design and houses an 11-tube chassis. Has 7 pushbuttons. Deluxe record changer. Receives 3 bands. Contains record storage compartment and has automatic illumination of changer compartment. Farnsworth Tele. & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.

**PHILCO** CONSOLE FM RECEIVER, model 370-X, in modern design cabinet covers the standard American, FM, and foreign short wave bands. Has 8 tubes, 12-inch speaker, 9 pushbuttons, separate bass and treble controls, two built-in antennas. Walnut cabinet measures 39 3/4 high, 30 wide and 12 5/8 inches deep. List price \$95.00. Philco Radio & Tele. Corp., Philadelphia, Pa.



**EMERSON** 3-WAY BAKELITE PORTABLE, model 426, is designed in streamlined styling, measuring 8 1/8 high, 12 1/2 wide, and 5 inches deep. Tuning and volume controls are located beneath handle. Has 5 tubes. Tunes standard broadcasts. Gleaming brown and stippled bakelite cabinet. List price \$19.95. Emerson Radio and Phonograph Corp., 111 Eighth Ave., New York City.

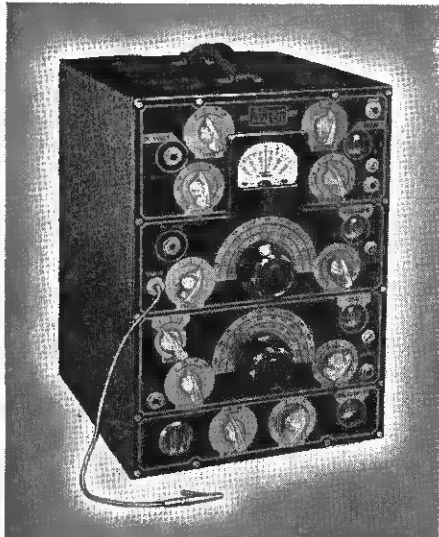


**HOWARD** FM CONSOLE COMBINATION, Model 718FM-C, has 14 tubes, 3 gang tuning condensers, special 12-inch speaker, tuned rf on broadcast band, automatic record changer. Receives FM, AM and two short wave bands. Chippendale period cabinet is available in stump walnut or diamond matched mahogany. Measures 37 1/2 high, 35 wide, and 8 1/4 inches deep. List price \$169.95. Howard Radio Co., 1735 Belmont Ave., Chicago, Ill.

# CONVENIENCE

the NEW Meissner

# ANALYST



**—has it!**

The NEW Meissner ANALYST, with Direct Reading Electronic Voltmeter, is designed for the Modern Service Bench. Built for SPEEDY trouble-shooting, its carefully planned convenience will save EXTRA time . . . when time counts! You can get those RUSH jobs out in really short order—and know they're right!

Convenience is built into the ARRANGEMENT of controls on the new panel! Each Channel has its own separate section, plainly marked, and every control is right where you would expect to find it! No groping around the panel (or back of the cabinet) for a switch or jack connection . . . it's right there on the panel . . . where it belongs!

For that matter, ALL controls and jacks are ON THE PANEL! If you want to mount this instrument in your wall rack . . . that's your business . . . you won't have to turn the ANALYST around after it's plugged in!

Complete with tubes . . . ready to operate Model 9-1040 ANALYST, Net . . \$96.25

SEE YOUR JOBBER—TODAY!



**NEW  
INSTRUCTION  
MANUAL**

F-M Data and valuable service information in addition to instructions on all Meissner Kits and equipment; 168 pages!

**Only 50c Net**

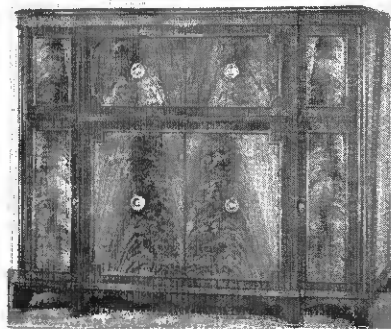
WRITE FOR FREE 48-PAGE CATALOG!

Dept. R-9

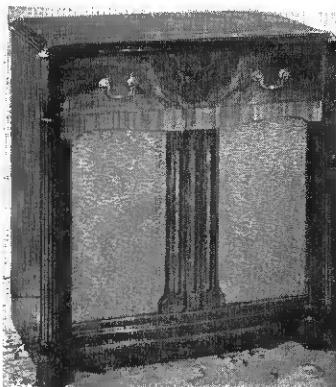
Meissner

"PRECISION-BUILT PRODUCTS"

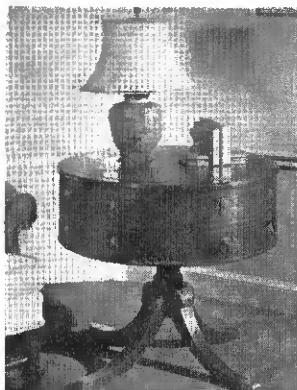
MT. CARMEL, ILLINOIS



**STROMBERG-CARLSON** FM RADIO-PHONOGRAPH, model 955-PF, is housed in authentic Georgian, genuine walnut cabinet. Has pushbutton tuning, 20 tubes, co-axial speaker, two built-in antennas. Automatic record changer plays and shifts 10 and 12-inch records mixed in any order. Provides album storage. List price \$695.00. Stromberg-Carlson Tel. Mfg. Co., 100 Carlson Rd., Rochester, N. Y.



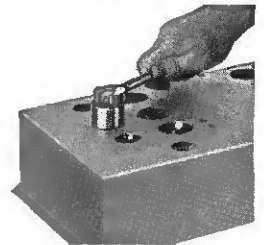
**WESTINGHOUSE** CONSOLE COMBINATION, model WR-42X4, has 8 tubes, receives the standard and foreign spread band, includes 12-inch speaker, AVC with 5½ watts push-pull output. Automatic record changer plays twelve 10-inch or ten 12-inch records. 18th Century period design cabinet of walnut. List price \$99.95. Available in mahogany, \$104.95. Westinghouse Radio Headquarters, 150 Varick St., New York, N. Y.



**BRUNSWICK** DUNCAN PHYE DRUM TABLE, model 289, incorporates a 9 tube radio with straight ac operation and an automatic record changer, both concealed in rollout drawers. Mahogany cabinet with hand tooled leather top measures 29 inches high and 32 inches in diameter. Phonograph plays fifteen 10-inch and twelve 12-inch records. List price \$225.00. Brunswick Radio & Tele. Div. of Mersman Bros. Corp., 244 Madison Ave., New York City.

## The EASY Way To Cut Holes In Radio Chassis

NO FILING . . .  
REAMING . . .  
OR TEDIOUS  
DRILLING

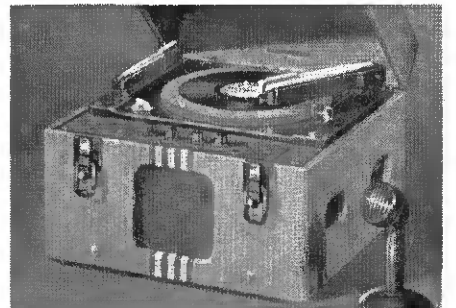


Here's a handy tool to help the radio worker save many hours of work when cutting holes for sockets, plugs, connectors, and other receptacles in radio chassis. A cap screw is inserted in a small drilled hole, and the punch is easily forced into the die by a few turns of the cap screw with an ordinary wrench. Smooth holes, requiring no filing or reaming, can be cut in metal up to 1/8-inch thick in 1½ minutes or less.

Ten punches are available for cutting ¼, ⅜, 1, 1½, 1-5/32, 1-3/16, 1¼, 1¾, 1½, and 2¼-inch holes. A Greenlee Knockout Cutter is also available for cutting holes up to 3½-inch size for meters.

**GREENLEE TOOL CO.**  
1708 Columbia Ave., ROCKFORD, ILL.

## NEW BEST SELLER IN HOME RECORDERS!



Here's Talk-A-Phone's newest hit—a sensational 2-Speed Home Recorder! (1) Makes Records at 33 1/3 or 78 RPM; (2) Plays Records at either speed; (3) Works as PA System. 5 Tube Amplifier; 3½ Watts Output; 6½" Speaker; Electric Eye; with Crystal Microphone. Plays 10" and 12" records with lid closed. In handsome luggage-type portable case; 16" x 16" x 11". Quality-built—priced for volume sales! Write for details.



**A Complete PHONO LINE—20 Models!  
COMPLETE INTERCOM SYSTEM LINE!**

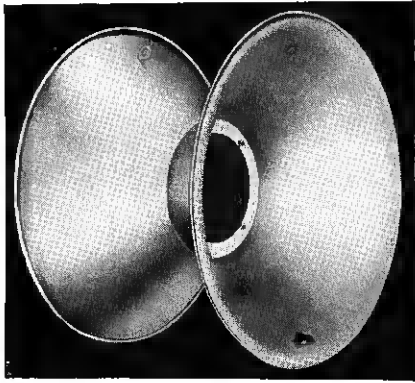
Profit-Builders all! Wired and Wireless Players, Player-Amplifiers, Changer Players, etc. Also fast-moving Intercommunication Systems priced to sell! Take on these profitable lines! Distributors—a few choice territories still open. Dealers—see nearest distributor or write to us direct. Prices, discounts, literature sent on request.

**Talk-A-Phone Mfg. Co.**  
1217J W. VAN BUREN ST.—CHICAGO

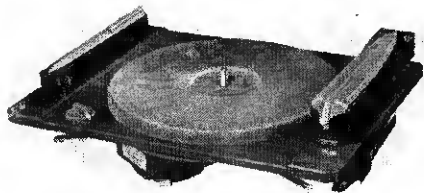
**AUTOMATIC TABLE COMBINATION** radio and phonograph, model 250, has a 6-tube receiver. Phonograph plays 12-inch records with lid closed. Housed in figured walnut veneer cabinet. Automatic Radio & Tele. Co., 122 Brookline Ave., Boston, Mass.



**ATLAS TWO-WAY BAFFLE**, model DF-8, for all 8-inch speakers is especially designed for locations requiring extensive sound coverage. Sound is projected in two directions with a single 8-inch cone mounted between the two bell sections. Two separate heavy-gauge flares are of pressed steel, finished in silver. Bell diameters 2 1/2 inches, total length 14 inches. List price \$10.00. Atlas Sound Corp., 1449-39 St., Brooklyn, N. Y.

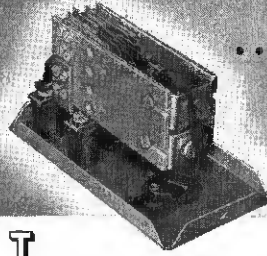


**GENERAL INDUSTRIES** TWO-SPEED RECORDER-PHONO unit for home use consists of motor, weighted turntable, speed-change dial, record-cutter and separate crystal pickup. Model G1-R90 cuts records up to 10 inches in diameter and plays recordings up to 12 inches. Cutter is equipped with depth-of-cut adjustment. Streamlined plastic trim on the pickup and cutter arms is in two harmonizing colors, green and rich brown. Each arm is engraved respectively with "Reproducer" and "Recorder." General Industries Co., Elyria, Ohio.



**IDEAL** NEON TEST LIGHT called "Test-Glo" can be used for testing electrical and radio circuits, motors, fuses, spark plugs, etc. It is made with the neon test lamp fully enclosed in plastic housing. Rated capacity is 80 to 550 volts ac or dc. Overall length is 8 inches. Test leads are 4 1/2 inches long and insulated for safety. Ideal Commutator Dresser Co., 4032 Park Ave., Sycamore, Ill.

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**PERMO POINT**

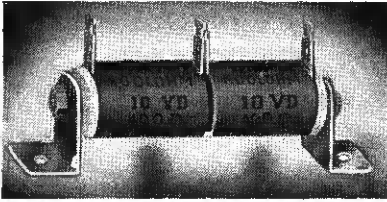
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Here's how to get those behind-schedule new models to *your* store—fast! Instruct the manufacturer or distributor to ship them by RAILWAY EXPRESS. We transport anything from consoles and refrigerators to small spare parts, efficiently and economically. Pick-up and delivery service at no extra cost within our regular vehicle limits in all cities and principal towns. A phone call brings service.

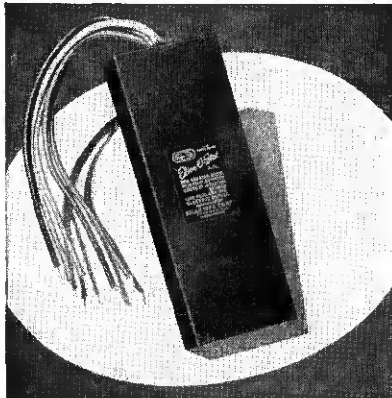
**RAILWAY EXPRESS**  
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**NATION-WIDE RAIL-AIR SERVICE**

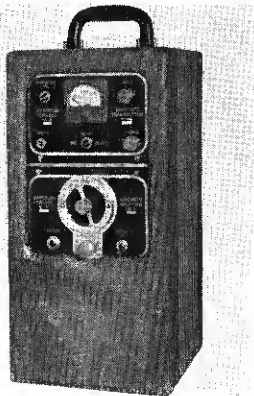
**SPRAGUE** KOOLOHM RESISTORS, type VD, are designed for making up tapped resistor sections. Come in compact 10- or 15-watt sections equipped with ball and recess interlock feature. This prevents turning and automatically connects the units electrically in series when mounted on a threaded steel rod which is provided. Overall length of the 10 watt is 1 1/8 inches and diameter is 3/8 inch. The 15-watt sections are 1 9/16 inches long by 11/16 inch diameter. The Sprague Specialties Co., North Adams, Mass.



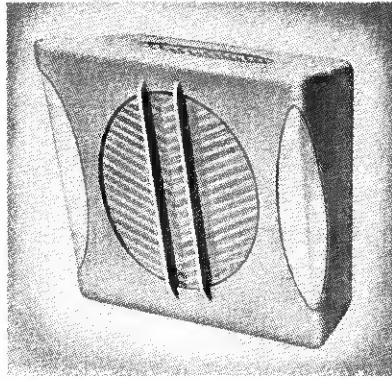
**SOLAR** ELIM-O-STAT radio noise suppressor, type AFL, is designed to eliminate radio interference caused by fluorescent lighting equipment. It is a small and narrow unit and is designed for channel mounting. Solar Mfg. Corp., Bayonne, New Jersey.



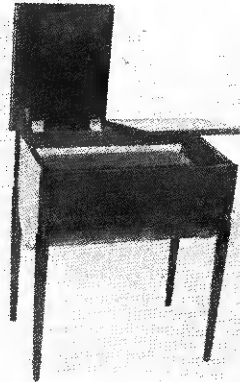
**JEFFERSON-TRAVIS** PORTABLE AIRCRAFT transmitter and receiver, model PTR-5, housed in a two-tone grey fabric case is designed especially for use aboard planes where permanent installation of radio communication equipment is impractical. Has 5 watts output and weighs 31 lbs. Jefferson-Travis Radio Mfg. Corp., 380 Second Ave., New York, N. Y.



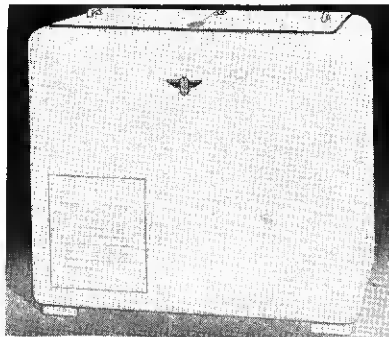
**WALSCO** WALL RACK introduced by this company holds an assortment of Walsco Unibelts (new adjustable dial belts), a spool holding several kinds of dial cords and cables, and a bottle each of radio cement, cement solvent, contact cleaning fluid, and dial oil. It is free with the purchase of the Walsco products it holds. Walter L. Schott Co., 5264 W. Pico Blvd., Los Angeles, Calif.



**MASCO** "MUSIC-BOX" SPEAKER CABINET, model MM-12, is finished in Spanish antique leatherette. As shown, side and front vents are provided with translucent colored material which permits light from bulb inside cabinet to penetrate through the plastic. Measures 14 wide, 15 1/2 high, and 9 1/2 inches deep. Supplied with hardware for mounting speaker. List price \$11.50. Mark Simpson Mfg. Co., Inc., 185-194 West Fourth St., New York City.



**MANUAL ARTS FURNITURE** FYLA-REC-ORD cabinet, No. 109, holds 100 records and measures 24 1/2 long, 16 wide and 28 inches high. Cabinet is of selected mahogany or walnut veneers combined with other woods. Both sections of top are hinged, thus permitting ready access to any record while affording a convenient place for stacking the records while making a selection. Compartments are numbered. The Manual Arts Furniture Co., Cincinnati, Ohio.



**STEWART-WARNER** ESKIMO PANTRY, home freezing locker plant, a new compact quick-freezing unit is designed to maintain fruits, vegetables, meats, poultry and sea-food frozen fresh the year 'round. Table high and opening from the top in double door picnic basket fashion. Has 5.14 cu.ft. net capacity. Features handy removable wire basket compartment for foodstuffs. Convenient for the farm homes, restaurants, and hospitals. Stewart-Warner Corp., 1836 Diversey Parkway, Chicago, Ill.



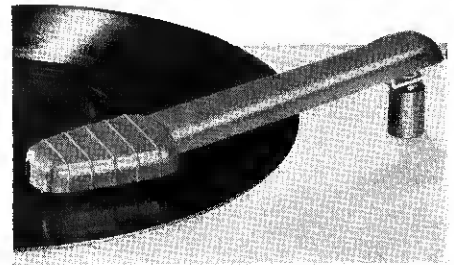
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*You 'ain't heard nuthin'' till you hear the marvelous tone fidelity of a*

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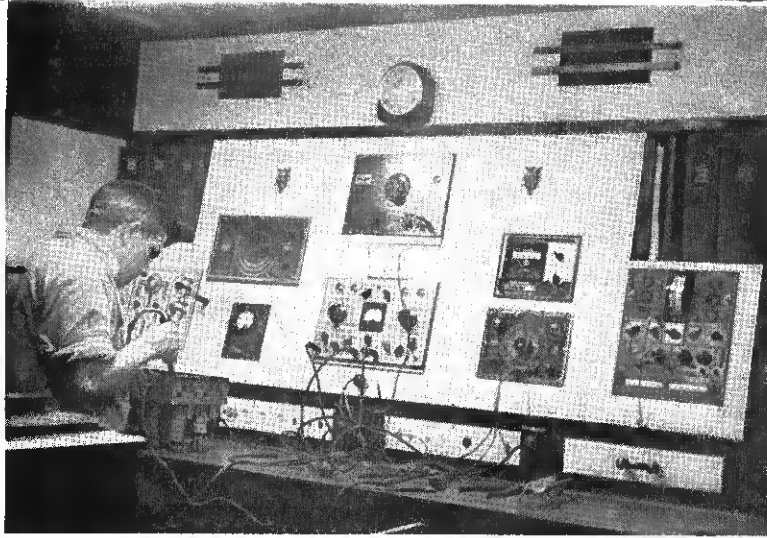
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 Racine, Wis., U. S. A. Established 1909  
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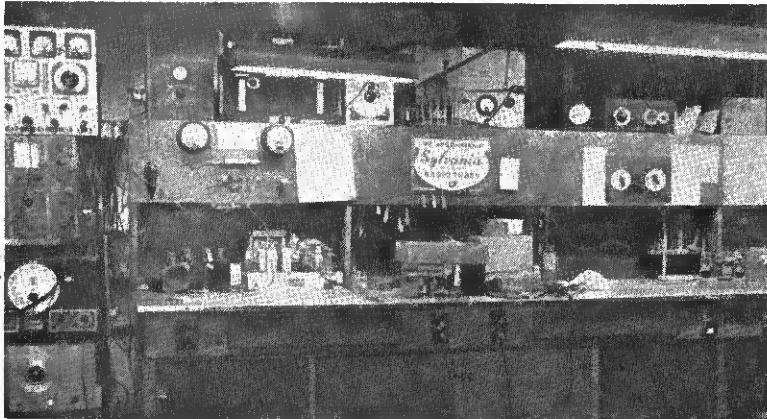
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*"Where Quality is a Responsibility and Fair Dealing an Obligation"*



SHOWS PROOF—With the slogan, "Best Equipped to Serve You Better," on all advertising, Eric Swenson of Monmouth Radio Service, Monmouth, Oregon, backs up claim with this well equipped bench

## BENCH Business



DISPLAY AND USE—Test equipment, normally displayed in the rack and panel at the left, can be placed right at the chassis under test when needed at Winkel's Radio Service, Racine, Wis. Space beneath the meter panel helps.



TINY TOWN—Located in the small town of Horseheads, N. Y., George Sponburgh services sets in the surrounding rural area, passes up possible repairs in nearby city where competition is great.

# New

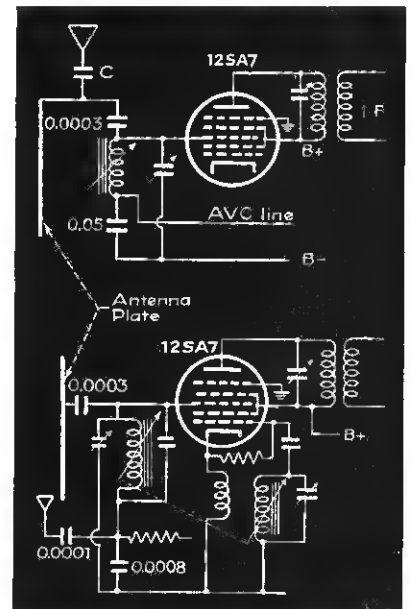
## Capacity Antennas

Several million sets now in use have built-in antennas and most of these consist of a loop arrangement that couples to the antenna coil or is in itself the antenna coil.

The inductive loop antenna however has marked directional properties and many users of table models of this type have found it necessary to orient the receiver in several positions to receive their desired stations.

This condition may be minimized if a metal plate is used for the antenna as shown in the top diagram. This is encountered in several of the Ward table models. The metal plate is coupled to the grid end of the antenna coil by a .0003 mfd condenser as shown.

In locations where the signal strength is low an external antenna is often necessary. This could be connected to the antenna plate but the resultant loading of the grid circuit would greatly detune and broaden this



circuit. In the circuit shown the outside antenna is connected through the condenser C. This is actually quite small, on the order of 10 mmf, and thus prevents an abnormal loading effect.

The mechanical construction of this condenser consists of a clip for the leadin mounted on and insulated from the antenna plate. The washers and bushing that comprise the mounting form the capacity C and allow the use of an antenna up to 75 feet in length.

The antenna coil is permeability

# Circuits . . .

tuned and ganged to the oscillator coil, also tuned in the same manner. As the dial is turned the cores of these coils are pulled in and out of the coil assemblies by the dial cord in the method used by this company in recent models.

Other models of the line employ the circuit shown at the bottom of the illustration. Here the antenna plate is coupled in the same manner as before, while a wire lead from the chassis is provided for connection to an outside antenna. This lead connects to a .0001 mfd condenser that conducts the signal into the grid return circuit of the 12SA7 converter stage.

It will be noticed that the point where this takes place is not bypassed with the usual .1 or .05 condenser. Instead a .0008 mfd condenser is employed and the bottom end of the antenna grid coil is relatively "hot" to r-f. Thus a sufficient amount of signal is introduced into the grid coil at broadcast frequencies.

This method of antenna coupling is found in other makes of receivers and one of these is discussed in greater detail on these pages.

## Line Antenna for Short Waves

In the circuit shown in the diagram a loop antenna is provided for broadcast reception and the external antenna may be coupled to this when needed. An extra winding on the loop permits this for weak signals.

When short wave reception is desired the segments of the bandswitch move clockwise in the diagram disconnecting the loop antenna from the mixer grid and grounding it. The mixer grid is now connected to the upper winding of the short wave antenna coil. The other two windings of this coil are in series with the power line leads and signals intercepted by the line are conducted to the set input circuit by inductive coupling. Although one side of the line is usually grounded the use of two coils insures one coil functioning no matter how the line plug is inserted in the socket.

It will be noticed that no low frequency padding condenser is employed in the oscillator circuit on the broadcast band, indicating the use of a tuning gang having different capacities in each section. On short waves

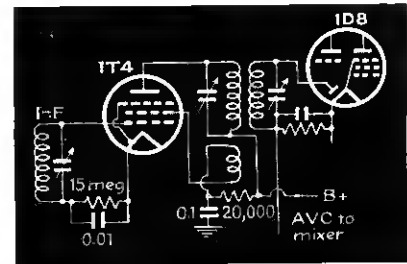
the smaller oscillator section tunes from 16 to 25 meters, bandspreading stations in this range. The mixer section of the gang must vary at about the same rate of capacity change yet its normal capacity and rate of change is quite large in comparison with the oscillator section. The 460 mfd condenser connects in series with the mixer section on short wave tuning and allows the rate of capacity change across the rather narrow short wave band to hold within a close limit to the oscillator section sufficient for proper superheterodyne tracking action.

## I-F Feedback

If each amplifying stage in a receiver could be operated near the point of regeneration the increase in overall sensitivity would be enormous. However the problems involved in producing such a set for home use would also be enormous.

Regeneration in one stage of a receiver may be used to advantage and has been occasionally used in the smaller models where a limited number of tubes have made it necessary to increase the sensitivity.

Shown in the diagram is the i-f stage of the Automatic P-60, a small three tube portable that uses a 1R5 converter, 1T4 i-f stage and a 1D8 tube. The latter combines a diode, audio

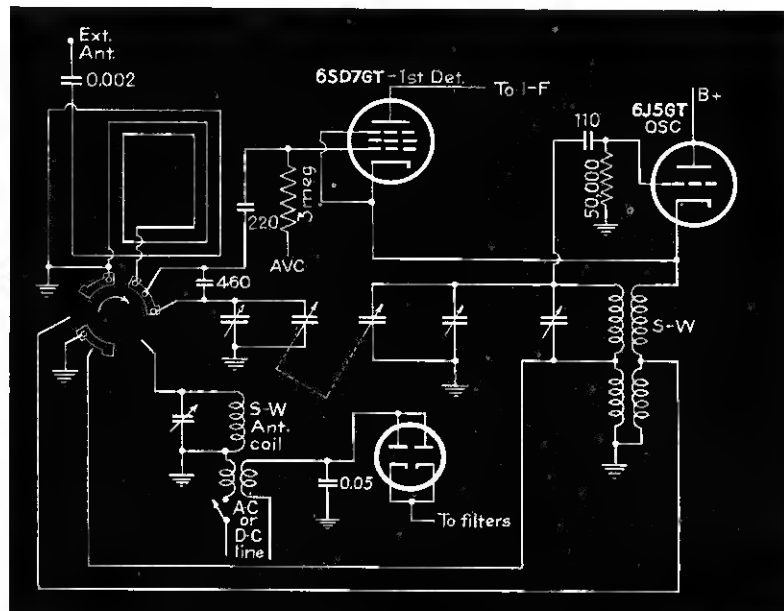


triode and power pentode in one glass envelope.

The output i-f transformer contains the usual primary and secondary windings with a third winding inductively coupled to the plate winding. This is connected in the screen grid circuit of the i-f amplifier tube to provide a certain amount of feedback for increased gain. Under this condition of operation a varying grid voltage such as that usually supplied by the avc voltage introduces further complications but the i-f stage is divorced from the avc line, the line being used to supply only the 1R5 mixer stage.

Bias for the i-f stage is provided by the 15 megohm resistor in the grid return circuit, similar to the method now widely employed in audio stages.

The receiver also contains a 35Z5 rectifier tube for line operation. A switch permits this to be connected in a charging circuit when the batteries have run down. If let on charge for 25 to 30 hours and then removed from the line it may be operated from the batteries for another 20 to 25 hours at the end of which time the batteries may be recharged by the same method. The recharging may be repeated many times and it is reported by the factory that it is often possible to obtain from two to five times the normal life of the batteries.

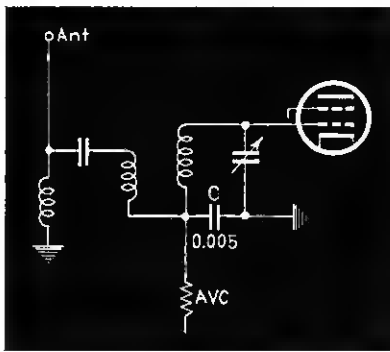


## Antenna Coupling

The antenna coupling system of many receivers consists of a lattice wound coil mounted inside the cold end of the first transformer and having a one turn coil connected to the antenna terminal end and wound around the grid end of the secondary.

This one turn is actually a condenser however and is depended upon to provide uniform antenna coupling across the frequency range covered by the receiver. Another way of obtaining the same result is shown in the diagram.

Here a .005 mfd condenser is connected in the grid return of the first stage. Condensers of greater capacity than this that operate to completely bypass this point are usually employed. With the size shown the impedance is



quite low at the high frequency end of the band and it is essentially a bypass, allowing the signal to transfer to the secondary by the inductive coupling from the primary winding.

At the low frequency end of the band this inductive coupling is less but here the impedance of the condenser is much greater. This allows a sufficient amount of capacity coupling to take place to provide practically constant antenna coupling across the broadcast band.

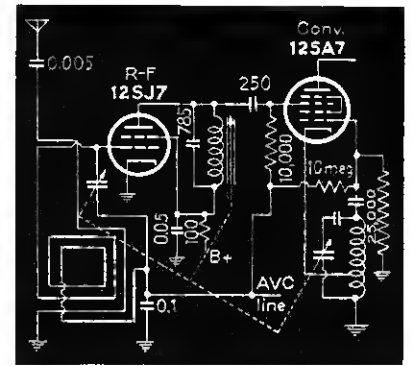
## Two Condenser Three Gang Tuning

All servicemen are familiar with the method of tuning three stages of a superheterodyne receiver by means of a three condenser tuning gang.

Many technicians have also encountered a system of three stage tuning consisting of three coils that are permeability tuned by three movable iron cores ganged together.

A combination arrangement is shown in the diagram that has a two gang condenser connected to a movable core which tunes a third circuit. As illustrated it is found in the Admiral BX-XB6.

A 12SJ7 tube is employed as an r-f amplifier with its grid circuit comprising the loop antenna tuned by one



condenser section. The other section of the condenser gang tunes the oscillator portion of a 12SA7 converter stage.

The plate load of the r-f stage consists of the permeability tuned coil which is brought to resonance by the capacity of 785 mmf. This is a mica condenser having a tolerance of 2½ percent. When the tuning gang is rotated the mechanically coupled core moves in and out of the coil, varying the inductance in step with the capacity changes of the other two tuned circuits.

Capacity coupling to the following converter stage is accomplished by the 250 mmf capacitor. The grid of this stage is tied to the avc line by the 10M ohm resistor. It will be noticed

**SUPREME**

Presents  
A NEW

## Beat Frequency Audio Oscillator

The SUPREME Beat Frequency Audio Oscillator has many important service applications. Provides an ideal source of test voltage for signal tracing in radio A.F. amplifiers, locating cabinet booms and speaker rattles, running frequency response curves, adjusting pick-ups and cutters, modulating of standard test oscillators for fidelity tests on R.F. and I.F. stages. It provides three output impedances of 250, 500 and 5,000 ohms; output frequency of 30 to 15,000 cycles; ±1 db. from 30 to 10,000 cycles; down 2 db. at 15,000 cycles. Power output is 125 milliwatts; distortion less than 5% RMS over entire range; hum level —60 db. below maximum output; large ratio dial, calibrated scale over 12" in length; tube complement of 2 type 6SK7, 2 type 6C5, and 1 6X5; power consumption 35 watts—fuse protection. The Model 563 will meet the most exacting requirements wherever an accurate control source of audio voltage is needed. See your jobber, or write direct for full information.

**SUPREME INSTRUMENTS CORP., DEPT RR-8  
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**GENERAL ELECTRIC**



that minimum bias for the avc line is maintained by the negative voltage developed at the grid of the oscillator and conducted to the avc line by the ten megohm resistor.

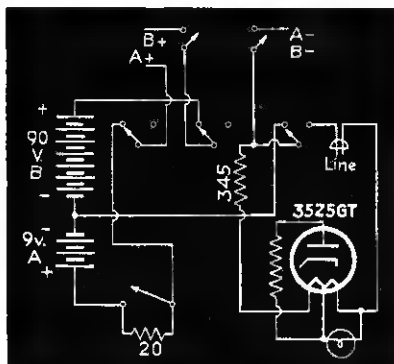
### Filament Economizer

Many battery portables are provided with a switch on the back of the chassis that, when thrown to the "economize" position, connects a resistor into the bias circuit of the power tube. Operating under a greater than normal bias the power tube then has decreased output and draws four or five milliamperes less from the B batteries, thereby prolonging their useful life.

A similar switch and resistor may be installed in the filament line and the circuit shows such an arrangement as it occurs in the Belmont 6P11 model.

When dry batteries are fresh their terminal voltage is usually somewhat higher than the voltage at which they deliver their greatest useful life. During this initial period the tube filaments receive a voltage that may shorten their own life.

In the simplified circuit shown a

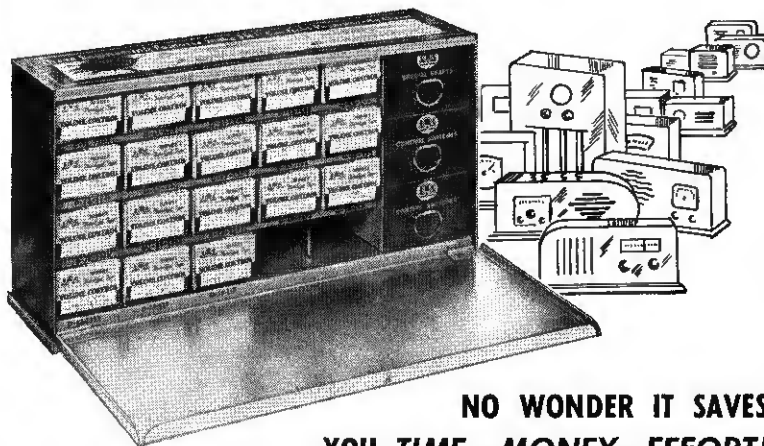


20 ohm resistor is connected in series with the nine volt A battery and a switch on the back of the chassis is connected across the resistor.

When the battery is fresh the economizer switch should be pushed to the left. The resistor then drops the voltage supplied to the series connected filaments about one volt. After the set has been in use for several weeks and reception becomes weaker the switch is pushed to the right, when a white dot will show. The resistor is then shorted out and the battery is connected directly to the filament string. The switch can then be left in this position until new batteries are installed.

The receiver includes a rectifier tube for line operation. The cathode of this tube supplies both A and B voltage to the set but the 20 ohm resistor is not needed in this instance and does not become a part of the filament string when the set is supplied by the line.

## 10,859 SET MODELS USE CONTROL TYPES INCLUDED IN THIS CABINET



**NO WONDER IT SAVES YOU TIME..MONEY..EFFORT!**

By ACTUAL COUNT, 10,859 of the radio receiver models listed in the new IRC Volume Control Replacement Manual (Edition No. 3) call for one or more replacements that can be supplied from the 18 Type D Universal Controls, 6 switches and 5 extra Tap-in Shafts included in the IRC Control Cabinet. In other words, Cabinet owners are equipped for fast, accurate control replacement service on as high as 75% of all radio sets they are likely to be called upon to repair—and that isn't all!

Thanks to Tap-in Shafts, you can often use standard controls instead of more costly special replacements. What's more, Tap-in Shafts simplify installations, especially in crowded chassis where they avoid removing other parts in order to insert the control. And remember! Type D Universal Controls themselves are small enough to fit in anywhere—large enough for utmost dependability.

### ASK YOUR JOBBER FOR THIS MANUAL!

If you haven't already received your copy of the new IRC Volume Control Replacement Manual (Edition No. 3) ask your IRC jobber today. It's a "must" for every serviceman who makes volume control replacements. Larger—more accurate—easier to use—contains more information and 35% more listings than ever before.



**INTERNATIONAL RESISTANCE CO.**

401 N. Broad Street, Philadelphia, Pa.

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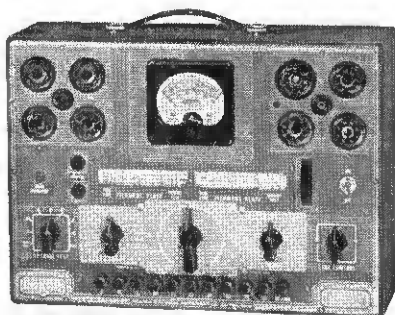
NATION-WIDE RAIL-AIR SERVICE

# Refinements in RECORD CHANGERS

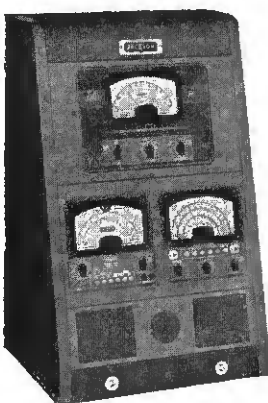
**"Take  
My Advice!"**



I have been through the mill in the Radio Repair game. First as apprentice, then as a repairman, now as owner of my own shop. I've tried every make of tube tester. Known 'em all! Take my advice: The Jackson Dynamic Tube Tester is clear tops for accuracy and dependability. It tests every element of the tube simultaneously—just as it would operate in a set. A Jackson will simplify tube testing and increase your tube profits.



Model 636-B Tube Tester



## LAB UNITS

Jackson Service Labs enable faster handling of work as various related instruments are grouped together in a rack. Every Jackson instrument is built to fit such a unit. Assembly shown is one of 24. It includes Audio Oscillator, Condenser Tester and Oscillator.

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Instrument Co., Dayton, Ohio



HOW some of the new  
phonograph panels operate

**T**HE NEW CROP of record changing mechanisms shows that progress has been made in simplifying their methods of operation, providing less critical adjustments and permitting longer record life.

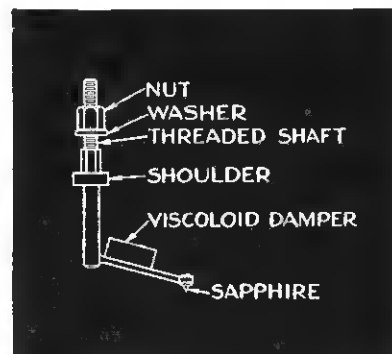
All models so far encountered are much easier to remove from the cabinets when adjustment or repair is necessary and some can even be operated or serviced in various positions on the bench, eliminating the need for X-ray eyes or mirrors under the panel.

Not all the refinements benefit only the serviceman however. The listener has had his enjoyment increased as well. Moving parts are quieter during operation and silencing of the pickup by a shorting switch during the change cycle is featured in several changers. The length of time required for the change cycle is shorter and clutches that release the mechanism when a jam occurs are being adopted.

## Lighter Pickups

Many pickups of the crystal type now contain a low inertia crystal to which a sapphire is permanently or semi-permanently attached. Combined with the lowered weight on the stylus of about one ounce pressure the new tone arms permit longer record life and a lowering of acoustic and background noise.

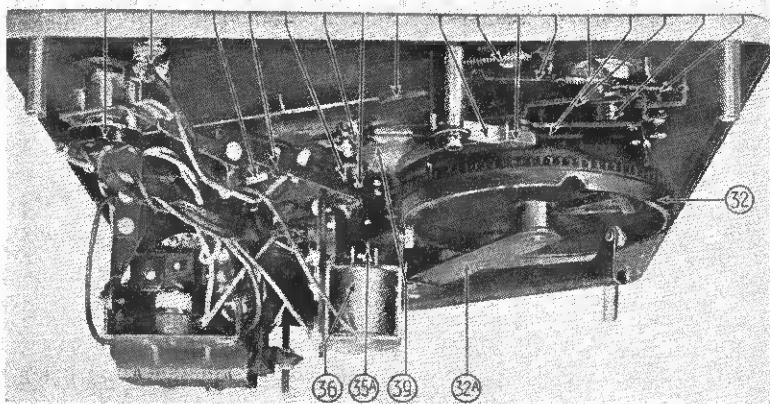
In some changers the sapphire is not mounted at the end of a vertical needle assembly as before but instead rides



the record grooves at the end of a flexible arm that extends almost horizontally. An example of this low noise mounting is illustrated in this article and may be found in several of the RCA phono panels.

Objectionable needle chatter has been minimized in these by mounting the sapphire at the end of a thin wire whose low mass acts as a spring suspension for the jewel. Movement of the wire in a too great direction is blocked by the viscoloid damper. Thus extensive sound vibration of the rigid shaft does not occur as in the vertical needle mounting type where excessive vibration of the needle is acoustically transmitted into the room on loud passages.

This type of stylus may be readily replaced when necessary by removing the nut on the top of the assembly. A cement holds the nut secure during



Part number 32 is the cam gear that controls three mechanisms in the Philco panel

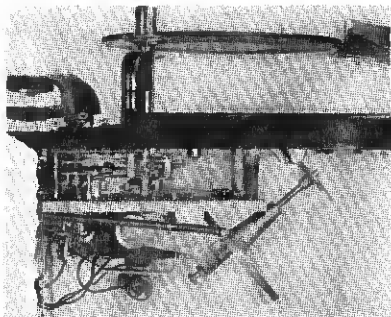
the playing of records and a drop of light cement should be applied after replacement is made.

The complete pickup is mounted in a plug-in arrangement on the tone arm. Connections to the cartridge are made through contact springs on each side of the unit and these clip in place to hold the head in the tone arm.

### Double Pickup

Two of these units are employed in one model of this manufacturer's line. Mounted one above the other they alternate, one playing the grooves on the top of the record and the other engaging the grooves on the record bottom. A switch reverses the direction of the motor while the bottom side of the record is being played. This motor is used only to rotate the necessarily small turntable.

An additional motor drives the mechanism during the record changing cycle. After a record is finished the turntable shaft tilts until the record slides off the center post into a com-



Two pickups play both sides of the record in one RCA model

partment at the side of the cabinet. The counterbalanced turntable and shaft are shown in this position in the illustration. After returning to the playing position the turntable receives another record dropped from separator shelves above the turntable. Fifteen records may be played on both sides in this manner. A knob permits playing of one side of each record if desired.

### Cam Controls Mechanisms

For the several operations of putting the record on the turntable and raising and moving the tone arm to the proper position Philco employs three mechanisms, each separate in its operation. These are interconnected and built together on the phono panel.

Motion for each of these mechanisms originates in one central cam gear that has three different cam surfaces. This cam gear is normally at rest during the playing of a record but when the record changer goes into a change cycle it is put into operation by a saw tooth clutch which takes its power from the turntable and drives

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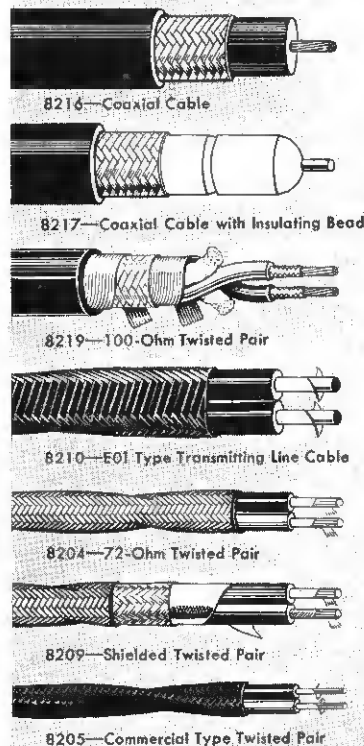
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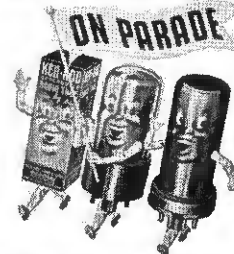
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an intermediate drive gear. The cam gear then makes one full revolution to complete the change cycle and comes to rest in the normal position.

Record changing is accomplished by a lever with a roller at one end. Operated by a notch under the cam gear the lever moves the record mounting post slightly and releases the bottom record of the pile onto the turntable.

Movement of the pickup out beyond the turntable when a record is being dropped is accomplished by a raising lever which receives a swinging motion from an eccentric track on the top outside surface of the cam gear.

The travel of the light beam pickup arm toward the turntable for lowering on a ten or twelve inch record is stopped at the proper point for lowering by a movable track on the cam gear. This movable track is operated by a lever which is moved by a spring lever connected through a cord and spring attached to the ten-inch shelf plate. When this plate is lifted the movable track shifts to the outer groove of the cam gear surface to allow the pickup to set properly on the

outer edge of a twelve inch record. On ten inch records the cord holds the spring lever and causes the movable track lever to shift to the inner groove as the cam gear revolves.

An electric reject trip operates through a pulsating plate and movable contact on the tone arm raising lever. As the record comes to an end the plate and contact make connection and energize a solenoid that releases the clutch so that the cam gear can be revolved.

This method of operation is employed in both the standard and the deluxe changers.

## TRICKS of the TRADE

### CROSLLEY 637

Erratic oscillation when tuned . . . change screen bypass condenser on first det. and the i-f tubes to 0.1 mfd 200 v. Present value .02 mfd.

### G-E 6D60

Fading . . . antenna primary or

secondary windings may increase in resistance. May also be caused by the secondary winding of second i.f. coil increasing resistance due to poor soldered connection to resistor inside of can.

### McMURDO SILVER 15-17

Shrill tone in fidelity position . . . if primary trimmer screw of first i-f transformer is all the way in, add a 50 mmf low drift condenser to the primary and align with a scope.

Low sensitivity on short wave . . . the screen bleeder near the antenna lead shield tunnel may change in value to as low as 125 ohms. Replace with a 15M ohm ten watt unit.

### McMURDO SILVER Masterpiece VI

Motorboating from r-f portion . . . if a new 6L7 does not cure and the set uses a doublet antenna try the doublet as an L antenna. Some doublets may not load the antenna coil properly and high gain in the r-f section then causes motorboating.

Dial pointer sticks . . . when replacing the 6G5 tube use a 6U5.

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### SERVICING BY SIGNAL TRACING

by John F. Rider

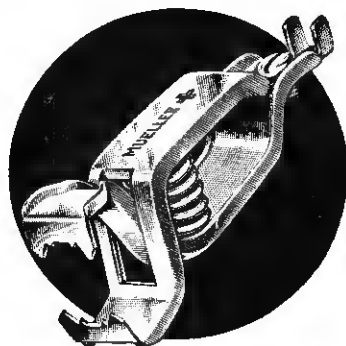
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his preferred trade paper

RCA 118

Intermittent crackling sound on carrier . . . sometimes traceable to an i-f coil but may also be due to the cathode bypass condenser of the mixer.

RCA K105

Sudden oscillation and drifting of the station off frequency . . . intermittent open in bypass condenser of avc line.

RCA 18

Unable to tune to new frequency assignments . . . take off one plate from each rotor section of tuning gang.

RCA R8 (Superette)

Excessive hum . . . connect a 10 mfd 450 volt electrolytic from center tap of high voltage winding of power transformer to 80 tube filament. This then bridges the open section of the block.

RCA 6T2

Dead . . . if .25 mfd 300 volt condenser, C32 in schematic, breaks down frequently replace with a condenser having a higher voltage rating.

## QUALITY PAYS—OR WHY MR. VAN DROOL DROPPED HIS SPOON IN THE SOUP

It happened during the dinner hour at the Van Drool mansion.

Rich Mr. Van Drool was sipping soup in perfect rhythm to the music of his super de luxe radio console. Suddenly came a noise like a firecracker as a midget condenser—which serviceman Wilbert Fixit had installed just the day before—exploded. Mr. Van Drool jumped, dropped his spoon and swore. What made him so mad, he said afterwards, was not that he dropped his spoon in the soup, but that he burned his fingers getting it out.

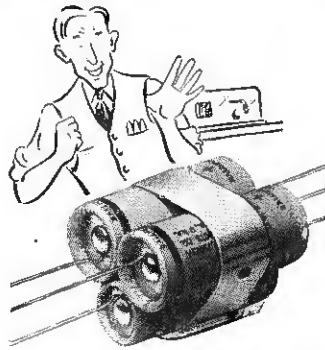
That experience taught Serviceman Fixit a lesson. No more midget dry electrolytics for him. He'd use big, full-sized replacements and play safe. One day, however, his jobber gave Wilbert a sample Sprague Atom and some literature about it.

"Guaranteed not to explode!" snorted Wilbert as he read the literature. "Phooy!"

But Wilbert was a methodical man. He put the Atom under test. No matter what he did, it wouldn't explode. Although the condenser was only rated at 450 Volts, he had to smack it with over 750 volts before it even broke down. Then Wilbert bought a dozen more Sprague Atoms and found they tested equally good.

While he was testing them, Mr. Van Drool's chauffeur dragged one of the upstairs radios into the shop.

"The boss wants this fixed in an hour,"



he explained. "And no foolin'. He says it's your last chance."

"Lordy," groaned Wilbert, after examining the set. "A three-sect on condenser gone bad. It'll take a week to get one."

Then he thought of his Sprague Atoms and the ST mounting strap the jobber had supplied with them. He could take two 8 mfd. 350 V. Atoms and a 25 mfd. 25 V. Atom, strap 'em together—and

the job would be done. It was the only thing Wilbert could do, so Wilbert did it.

To his surprise the three Atoms when strapped together were actually smaller than the original three-section condenser. Also, his total net cost on the Atoms was only 96c. A duplicate unit would cost \$1.20.

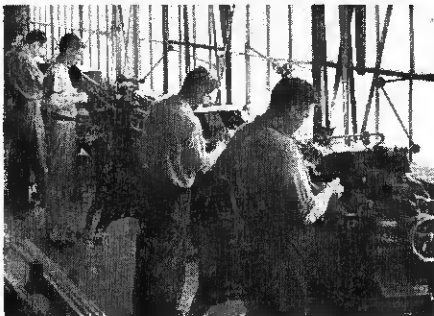
What's more, the Atom stayed put. Mr. Van Drool was more than pleased—and that meant Wilbert was pleased, too. Today he uses Atoms for practically all of his replacements, big or little.

"I save 'steen days by using Atoms," is the way he puts it. "I save money, I save shoe leather, I save time, I save my good disposition—and I save customers. Best of all, Mr. Van Drool will never drop his spoon in the soup again."

Drooly yours,

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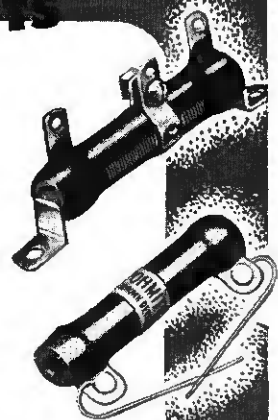
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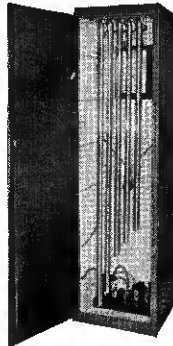
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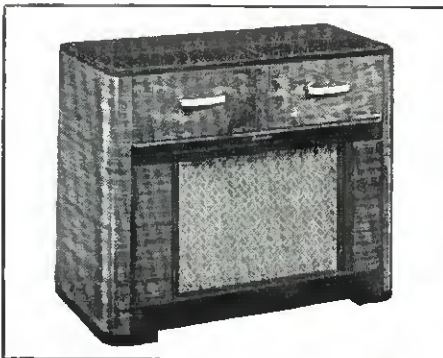


### ◀ *The Chippendale* (CK-111).

In every respect it is a true reflection of the 18th Century charm so distinctive of Chippendale design including door covered grille. Available in selected walnut or mahogany. 11-tube AC Superheterodyne. Three gang variable condenser. Dual “baton” Colortone controls. Seven push buttons. Bilt-In-Tenna. Deluxe Farnsworth Automatic Changer. Tuned radio frequency on all hands. Sapphire stylus—every Deluxe feature!

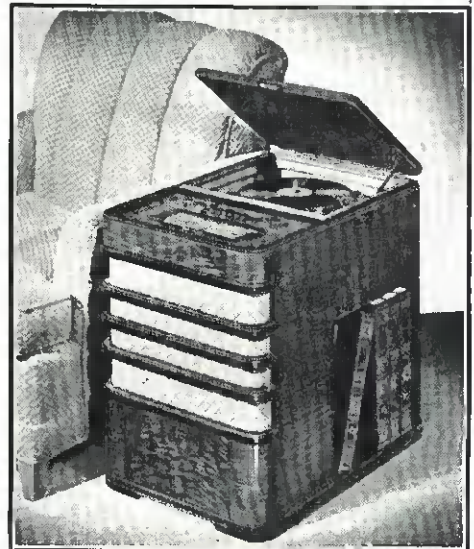
### *The Companion* (CK-73).

Offering the utmost in luxurious listening comfort, this charming version of a chairside combination is a beautiful example of Farnsworth modern styling available in Walnut or Golden Harvest finish. 7 tubes (including rectifier tube and 2 multiple purpose tubes), providing 9-tube performance. Farnsworth “Velvet Action” Record Changer. Permanent record-playing stylus.



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