

AUGUST • 1941

A McGRAW-HILL Publication Price 25c

RADIO *and* *Television* RETAILING

HOME

RADIO LISTENING

ACCELERATES

DEFENSE

Stimulates! Activates! Coordinates!



Just Out! **MYE**

THE NEW 4TH EDITION



New-Model Listings
Increased by more than 35%

The Answer to Every
Service Problem

A Real Time-Saver

**See Your
Distributor
NOW!**

Order your copy of this new, 4th edition MYE today! The supply is limited. And once the present printing is exhausted, *there won't be any more!*

So don't delay. Get your Mallory distributor on the phone—NOW—Order your copy today.

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



The Biggest News You've Ever Had On Volume Controls!

New mechanical and electrical precision. Rugged! Easily installed. An A-C switch that snaps on and stays on. Quiet operation. Start using them today!



This Is Mallory's Year On Replacement Condensers!

More have gone into service in 1941 than in any other year! Use Mallory Replacement Condensers for fast, efficient work and your customers' satisfaction!

P. R. MALLORY & CO., Inc., INDIANAPOLIS, INDIANA

**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



The Biggest NEW 1942

**An amazing new way
to play records that
will win you
NEW SALES!**

Here's an RCA Victrola line that speaks for itself! As one dealer put it a few days ago, "You don't have to talk up these new instruments. With the Magic Brain, the Magic Tone Cell, the Flexible Tone Bridge, the Jewel-Lite Scanner and all the other swell features you've given them, even a blind man could see they'll sell like hot cakes!"

There are seven models in the sensational new 1942 Victrola line. Built right, priced right and backed by a bang-up national advertising campaign, they'll make you sales aplenty! Get behind 'em now!

A Service of the Radio Corporation of America. In Canada, RCA Victor Co., Ltd., Montreal. Trademarks "Magic Brain," "RCA Victor," "Victrola" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc.



LOOK AT ALL THE RECORD PLAYING EASE, ENJOYMENT AND ECONOMY THE MAGIC BRAIN ENABLES YOU TO OFFER!

You Push a Button...MAGIC BRAIN does it all...

You just sit back and listen

**NO LID TO LIFT—
RECORDS LOAD AT
COMFORT LEVEL**

Convenience keynotes this exciting new development. No ornaments to move—no lid to lift! The Roll-Out Record Changer glides out automatically to receive your records at comfort level.

**SENSATIONAL TONE
PURITY...NO MORE
SURFACE NOISES**

The Jewel-Lite Scanner of the Magic Tone Cell recreates each record with a richness, brilliance and fidelity of tone never before dreamed possible. Lightweight, Flexible Tone Bridge ends objectionable surface noises!

**NO MORE NEEDLES
TO WORRY ABOUT**

The Jewel-Lite Scanner of the Magic Tone Cell, with its tiny sapphire point designed to give faithful reproduction for a countless number of playings, entirely eliminates the bother and annoyance of old-fashioned needles.

**RECORDS LAST
INDEFINITELY**

Due to scientific design and excellence, the pressure of the sensational new Magic Tone Cell the record has been reduced to an astounding minimum, thereby assuring extraordinarily long life to your records.

Sales News in Years!

RCA VICTROLA

with **MAGIC BRAIN!**



Set illustrated is Model V-215, available in either walnut or mahogany. It has Magic Brain which automatically starts, stops, changes 12 ten-inch or 10 twelve-inch records at the push of a button. Also Magic Tone Cell, Jewel-Lite Scanner, Flexible Tone Bridge, 12" Electrodynamic Speaker, 9 RCA Victor Preferred Type Tubes.

FEWER, but FINER!

RCA Victor is cooperating to the full with National Defense Priority Requirements. Because of them, shortages exist in certain raw materials needed for radios and phonograph-radios, and there will be a universal decrease in the number of instruments to be made. Hence RCA Victor products for the home will be *fewer*. But they will be *finer* than ever. For as a result of defense work, of which we, too, are doing our share, RCA Victor quality standards . . . always the highest . . . are now more exacting than ever.

**JUST PUSH A BUTTON—
THERE'S YOUR
RECORD PROGRAM**

**AMERICAN AND
FOREIGN RECEPTION**

At the push of a button, the Magic Brain plays—stops—changes records for you and even shuts the motor off when the program is over. Record enjoyment is uninterrupted, complete.

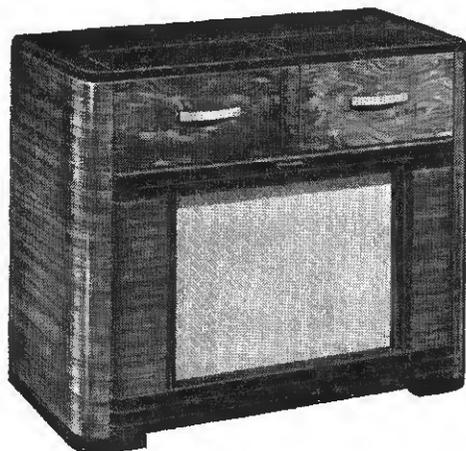
Included is newest RCA Victor Radio—a 9-tube Electric Tuning set with sensational new Teletube and new Audio System for finer amplification than ever before! Standard, Shortwave and Foreign Reception.



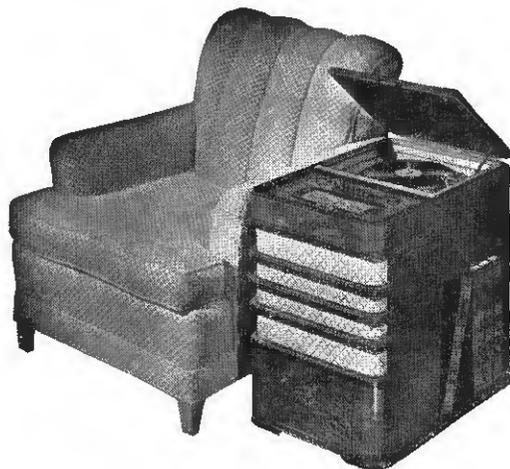
New FARNSWORTH Combinations

Strikingly different in eye appeal . . .

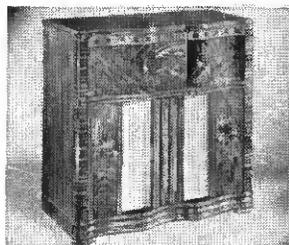
Impressive in performance



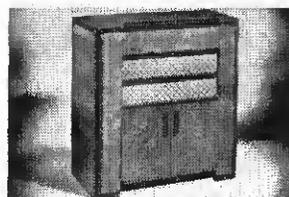
← **Model CK-75**
Meets the long-felt need for an attractively designed cabinet which can be placed anywhere—alcove, library, dining room or den. 7 tubes (including rectifier and 2 multiple purpose tubes), which provide 9 tube performance. Farnsworth "Velvet Action" Record Changer and record storage compartment.



Model CK-73 →
Offering the utmost in luxurious listening comfort, this charming version of a chairside combination is a beautiful example of Farnsworth modern styling. 7 tubes (including rectifier and 2 multiple purpose tubes), which provide 9 tube performance. Farnsworth "Velvet Action" Record Changer.



Model CK-93—Luxurious lines characterize this impressive combination. 11 tube performance. Farnsworth "De Luxe" Automatic Record Changer.



Model CK-91—A smart modern masterpiece—yet has many of the best features of period styling. 9 tubes. Farnsworth "De Luxe" Automatic Record Changer and record storage compartment.



Model CK-92—This Farnsworth draws its inspiration from Sheraton design. 11 tube performance. Farnsworth "De Luxe" Automatic Record Changer play control and record storage.

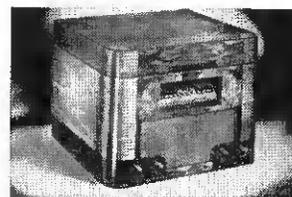
DESIGNED to stand out in appearance and in performance, these new combinations by Farnsworth represent real profit opportunities for dealers who want to offer their customers not just radios with phonographs attached, but skillfully blended units.

Beautiful as they are, ingenious as is their design, extensive as is their range of style and price, fundamentally they are musical instruments of distinguished quality. Each has, of course, the dependable trouble-free Farnsworth automatic record changer.

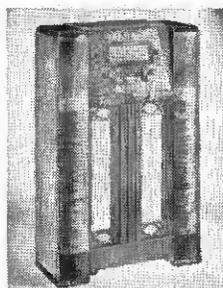
Of special interest are the new chairside combination (CK-73), and the compact, amazingly adaptable Washington Consolette (CK-75), featured on this page. They offer sensational sales opportunities. Call up your distributor today about them—or write, wire or telephone Farnsworth Television & Radio Corporation, Fort Wayne, Indiana.



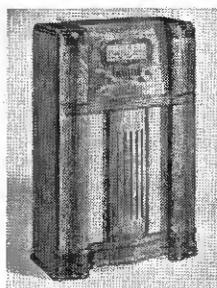
Model CK-111—This handsome Farnsworth combination is authentic Chippendale styling. 11 tubes. Farnsworth "De Luxe" automatic Record Changer, play control and record storage.



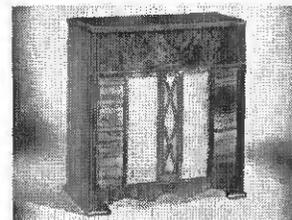
Model CK-66—A compact, moderately priced combination. 6 tubes. Farnsworth "Velvet Action" Record Changer. Beautiful two-section cabinet of walnut veneers.



← **Model CC-90**
11 tube performance. Wide range electric tuning. Connection for television or FM adaptor.



Model CC-70 →
9 tube performance. Wide range electric tuning. 10-inch dynamic speaker.



Model CK-74—A cabinet of dignity and simplicity. 9 tube performance. Farnsworth "Velvet Action" Record Changer and record storage compartment.

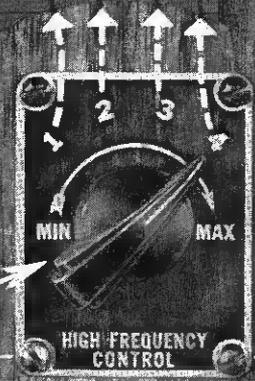
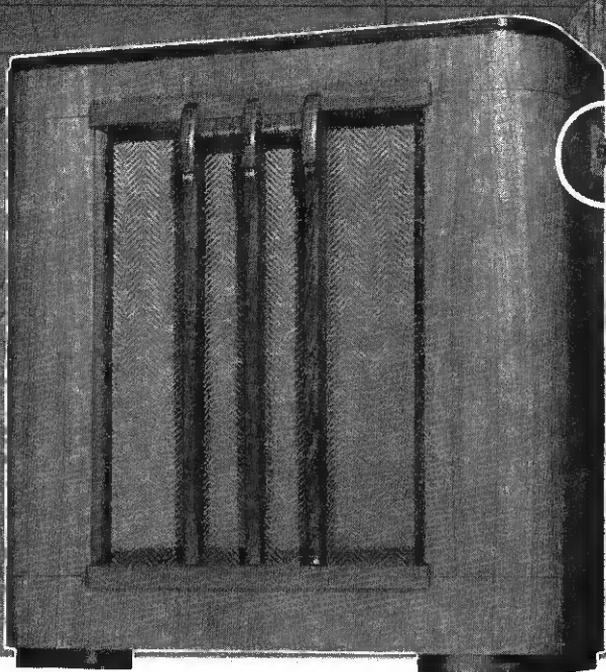
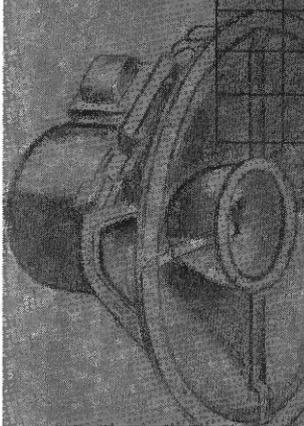
FARNSWORTH

MAKERS OF RADIO AND TELEVISION TRANSMITTERS AND RECEIVERS, THE CAPEHART, THE CAPEHART-PANAMUSE AND FARNSWORTH PHONOGRAPH-RADIO COMBINATIONS

Now You can Hear them ALL at their BEST!

...with a New Jensen Coaxial Speaker

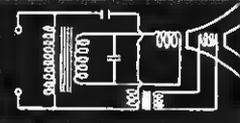
"FM," Television Sound
 Transcriptions, Quality "AM"
 "AM" Radio
 Phono Records, "SW" Broadcast



Jensen High Frequency Control gives you the kind of reproduction you want when you want it... all the way from two-way system high-fidelity to conventional single-speaker performance. Now you can adjust for best results on every program, every record, every type of service.

Jensen Bass Reflex

Acoustically correct Bass Reflex Cabinet gives exactly extended low register, better than an "infinite" baffle, efficiently uses back radiation too.



Separate coaxially-mounted speakers for low and high frequencies, with integral two-channel network. (Range control not shown. Some models have simplified bridging network.)

A New Series of Fine Reproducers

Designed to Meet Your Needs Now...and for Years to Come!

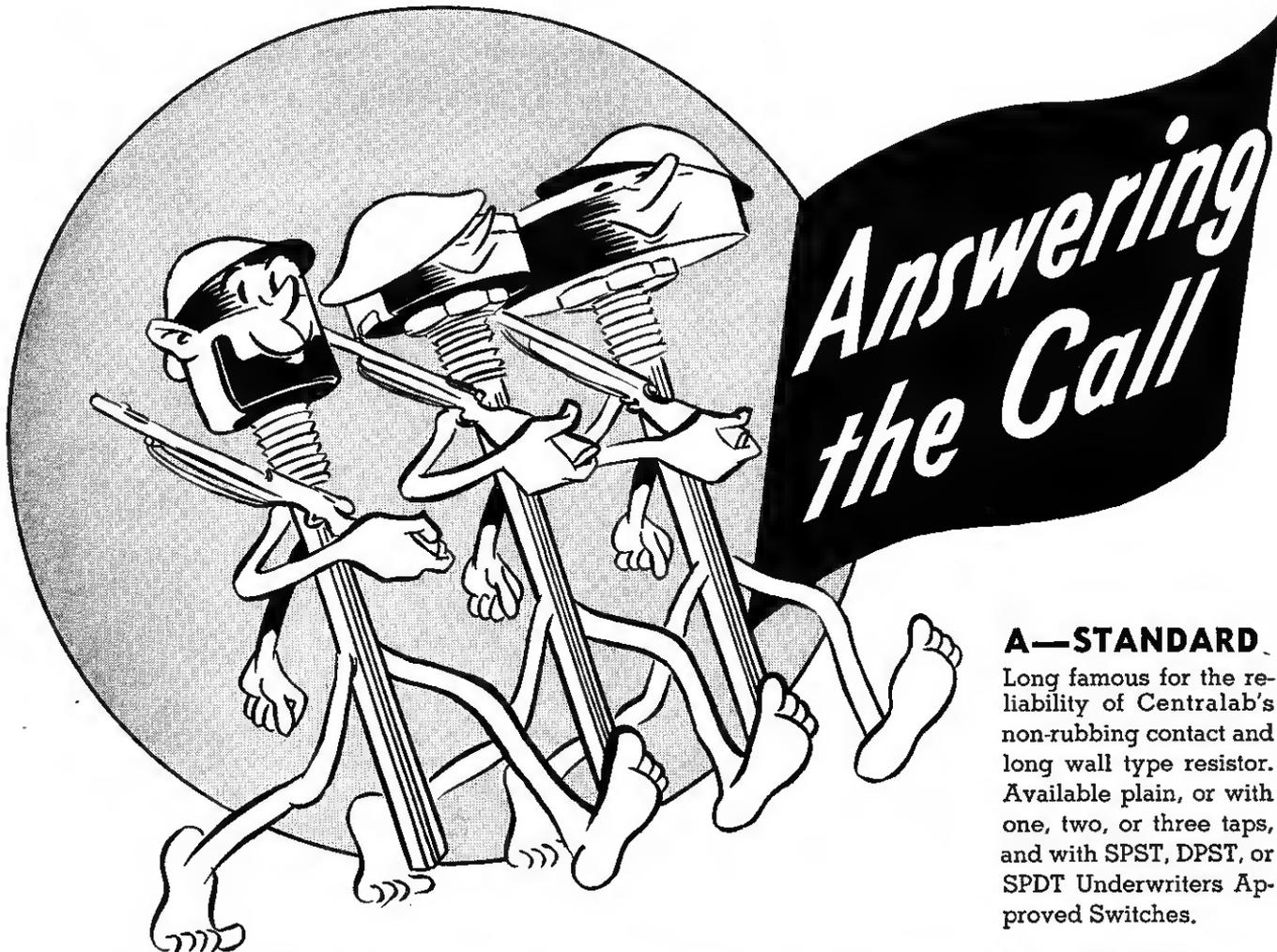
- ★ Two Speakers, Coaxially mounted.
- ★ Built-in Frequency-Dividing Network.
- ★ Jensen High Frequency Range Control for all-purpose flexibility.
- ★ Jensen "Bass Reflex" enclosure for full low register.
- ★ Beautifully styled walnut cabinets.

Never in the history of sound reproduction have you been able to buy so much performance...such complete versatility...at so low a cost! For now Jensen brings you the ultimate in general purpose reproducers, with top performance so fine, so nearly ideal acoustically that obsolescence is eliminated for years to come...yet you can instantly adjust response for most pleasing results with every type of input in use today. Ideal for professional and home use for FM-AM reception and monitoring, transcriptions, commercial phono records... for practically every moderate-level high-quality application. Write now for Data Sheet 120 for technical descriptions and prices.

Four complete reproducer types with 12" to 15" speaker sizes, priced at \$75.25 to \$118.75 list in striped walnut cabinets. Utility cabinet models down to \$64.25 list. Coaxial speakers only as low as \$29.50 list.

Jensen

6601 SOUTH LARAMIE AVENUE, CHICAGO, ILLINOIS
CABLE ADDRESS: JERAD, CHICAGO



Centralab controls are always in step with progress in civilian or defensive use. In peaceful pursuits or in punishing, gruelling manoeuvres Centralab controls continue to perform smoothly and efficiently. And when you are called . . . remember that Centralab controls are the ideal replacements on every job.

CENTRALAB: Division of Globe-Union Inc., Milwaukee, Wis.

Centralab RADIOHMS

A—STANDARD

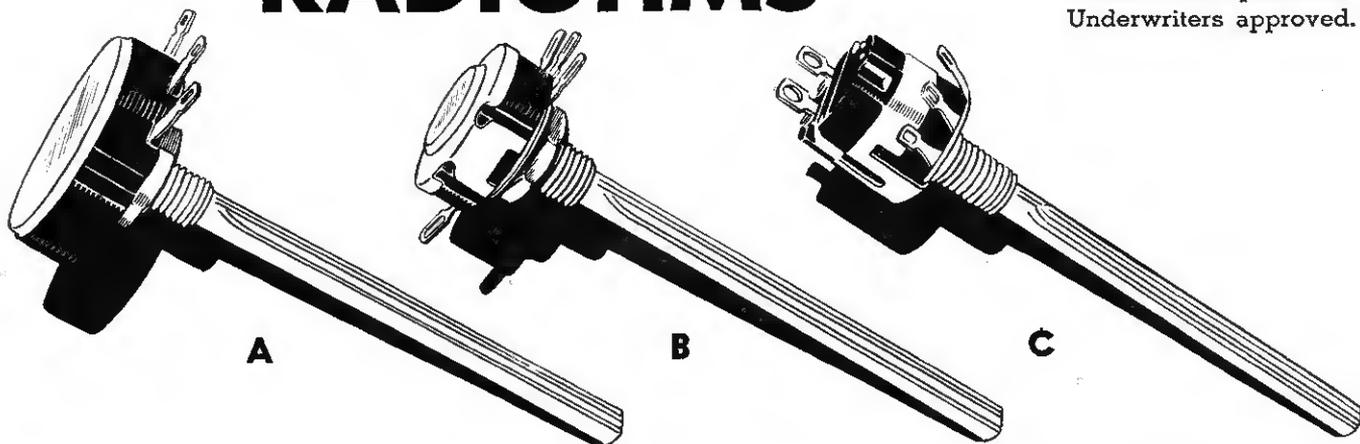
Long famous for the reliability of Centralab's non-rubbing contact and long wall type resistor. Available plain, or with one, two, or three taps, and with SPST, DPST, or SPDT Underwriters Approved Switches.

B—MIDGET

Small in size, but large control efficiency. Available single, dual, or triple, plain, or tapped, with SPST, SPDT, DPST.

C—ELF

Small . . . but it too, features the long, straight, resistor strip, with SPST Switch . . . with, or without dummy lug. Switch rated . . . 2 Amps. 125 V. Underwriters approved.



PHILCO Invention Keeps Your Profits UP!

Only Philco Gives You These New, Modern "Sell-Up" Features

Philco . . . and *only Philco* . . . gives you for 1942 the sales features you need to SELL UP for greater volume and bigger profits! The full power of Philco's big advertising campaign is featuring exclusive inventions that the public *demand*s . . . in price brackets that give you real dollar margin. See your Philco distributor NOW and cash-in with these new, modern achievements!



PHILCO 1012 RADIO-PHONOGRAPH

- Music on a Beam of Light
- Philco Automatic Record Changer
- Stroboscope Pitch and Tempo Control
- Improvements in Home Recording
- Brand New 1942 Tilt-Front Cabinet
- Exclusive Philco FM System

PHILCO ALL YEAR 'ROUND

**The Most Valuable Franchise
in the Appliance Field!**

Busy days are here...

FOR SERVICEMEN

Keep them profitable
with dependable
test equipment!



NOW AVAILABLE
FOR FM AND TELEVISION

WESTON Model 787 UHF Oscillator



Fundamental frequency coverage from 22 to 150 megacycles. No harmonics . . . no band switching. Used with portable antenna or standard output leads. Reads 40 kc per division at 40 mc. Self contained battery operation; compact and extremely portable.

Today, as never before, the American public wants radio and can afford to pay for radio. Proof is that the demand for new sets has virtually doubled. But with long deliveries prevalent in so many fields, more old sets probably will be retubed and repaired than ever before. » » » A period like this is made to order for the servicemen with WESTON Test Equipment. For WESTONS help produce greater profit on every job. Measurements are simpler, surer . . . trouble can be spotted quicker . . . when these basic, direct-reading instruments are used.

But the big profit from WESTONS is shortly to come; for FM and television are rapidly getting into stride. These same WESTON Test Instruments fully meet the new servicing problems involved. No new and expensive equipment will be needed for the job. Thus it pays . . . and continues to pay . . . to use dependable WESTONS for all servicing needs. Weston Electrical Instrument Corporation, 581 Frelinghuysen Avenue, Newark, N. J.

WESTON

Test Instruments

*Even in
Short Wave Diathermy
they use*

RAYTHEON tubes



Short wave Diathermy equipment, to be effective, requires uniform and peak performance from tubes. Anything less is not good enough for the medical profession.

For that reason leading makers of electro medical equipment, such as H. G. Fischer & Co., depend on RAYTHEONS for vital tube functions. It is another example of the respect with which electronic engineers hold RAYTHEON tubes.

These same RAYTHEON radio tubes will perform in the most critical circuits . . . yet they cost not one penny more . . . so it is little wonder that the serious Servicemen use RAYTHEONS for *all* replacements.

Make your next order RAYTHEON!

NEWTON, MASS.

NEW YORK

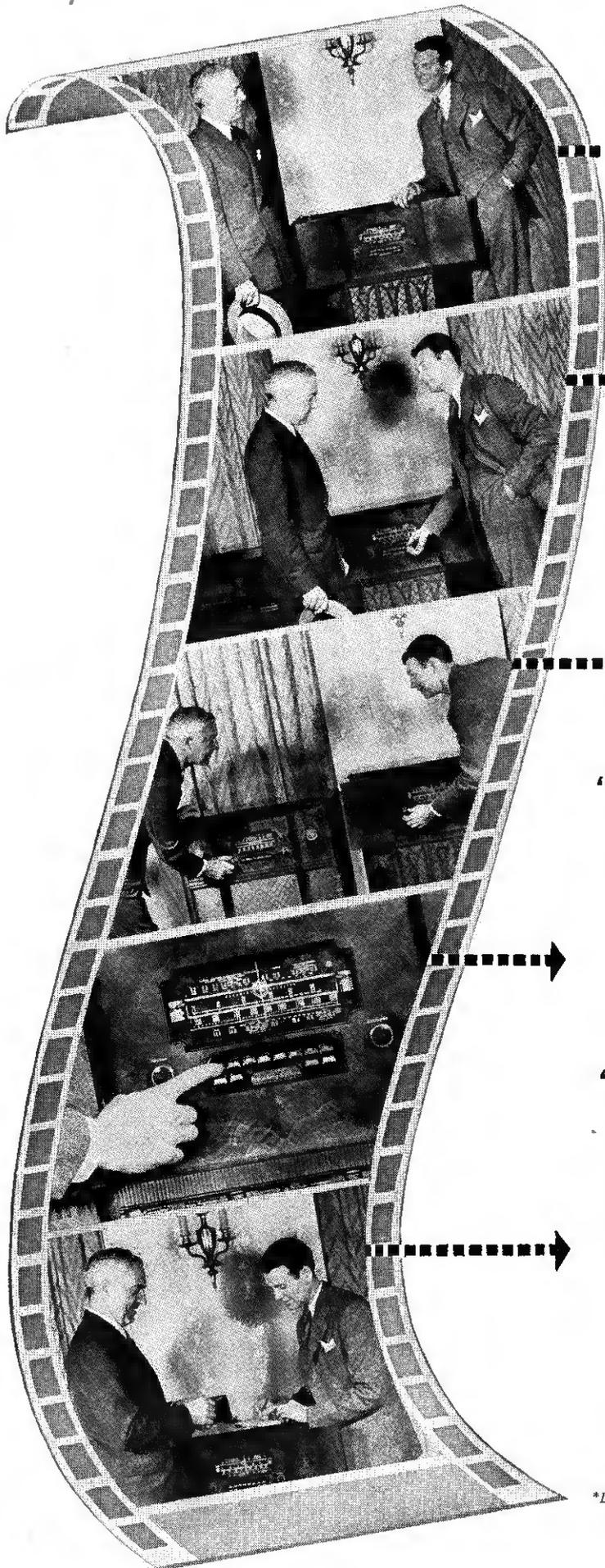
CHICAGO

SAN FRANCISCO

ATLANTA

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

HOW TO SELL AN **FM** RADIO



“Before you buy your new set you’ll want to hear FM.”

Tell your customer what you yourself know— that the trend is rocketing to FM—that long before his new radio is discarded Frequency Modulation will be *the* broadcasting.

“Have you ever been troubled by static?”

Remind your customer of AM radio’s big disadvantages—static, interference. **DO THIS BEFORE YOU TURN ON THE FM SET!**

“I want you to hear them side by side!”

Play an AM set to dramatize your story. Hook in an electric razor or vacuum cleaner in the same circuit to demonstrate interference. Then turn AM set off. *Now switch on your Stromberg-Carlson FM radio**, pre-tuned by button to an FM station giving “good signal.”

“Note this easy push button tuning for FM as well as standard!”

Inform him this is the radio he’s seen advertised in *Life*, *Time*, and *The New Yorker*. Explain how every feature — limiter circuit, push button tuning, tuning eye, automatic drift compensator — is built to give maximum reception of both FM and AM. Stress that this set employs FM as invented by Major Edwin H. Armstrong!

“Only a Stromberg-Carlson gives all of FM’s benefits!”

Your customer will want to know that his FM Stromberg-Carlson has the widest range of natural tone in radio — will bring him music lost by *ordinary* FM sets. Mention that for two years Stromberg-Carlson FM-AM sets have been used in more homes than all other FM makes combined! “*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

Radio's Place *in DEFENSE*

**Maintenance of Home Listening at Present
Peak Essential for Maximum Civilian Effort**

RADIO'S direct importance to the nation's armed forces is obvious.

Communication between land, sea and air forces is its chief military function. By-product uses include detection of potential raiders, automatic aiming of guns, transmission of military maps and photographs, remote control of weapons, prediction of possible "invasion weather."

But battles today hinge largely upon efficiency of action among civilians behind the lines. And here, too, radio plays a vital part.

LAATEST defense device for the home is the "Radio Alert," an ingenious mechanism which can be actuated by a distant transmitter to ring a bell, turn on a receiver in time to catch an important announcement and even turn the set off again at its conclusion.

First use of this electronic marvel may be to substitute, in the British Isles, for "Wailing Winnie" air-raid sirens at present emitting unnecessarily depressing tones which must give encouragement to an approaching enemy.

It is also apparent that the device can simultaneously raise the value of radio for defense to new heights by insuring an instant and almost universal audience whenever government wishes to inform or instruct a nation as a whole.

MAINTENANCE of home radio listening at its present peak or better is one of the best means of insuring acceleration of defense effort this nation has at its command.

News concerning distant struggles headlines the successes of machines rather than men and this must certainly stimulate workers with sons and other relatives in the army to greater production effort. It must also activate that portion of our population not yet sufficiently aware of the pressing nature of the present emergency toward all-out cooperation. And, last but not least, properly timed broadcasts coordinate civilian effort for maximum efficiency, as in the scrap aluminum collection campaign staged so successfully last month.

That's why civilian radio is *essential*. And that's why materials should be made available not only for repair of existing sets but also for the production of new ones without which the American audience is certain to eventually decline.

W Mac Donald

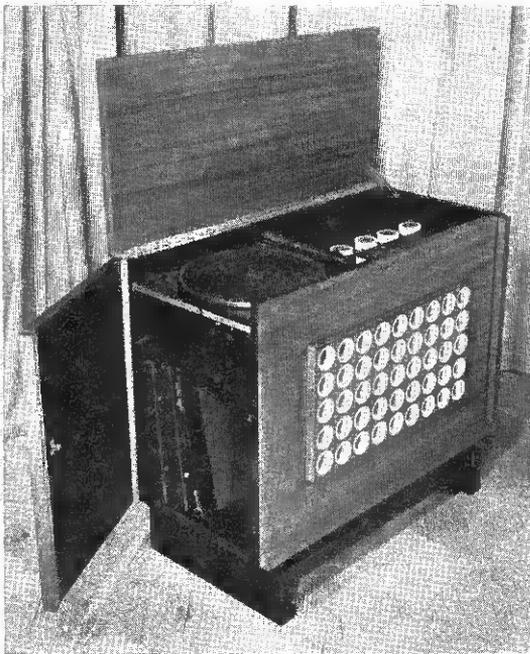
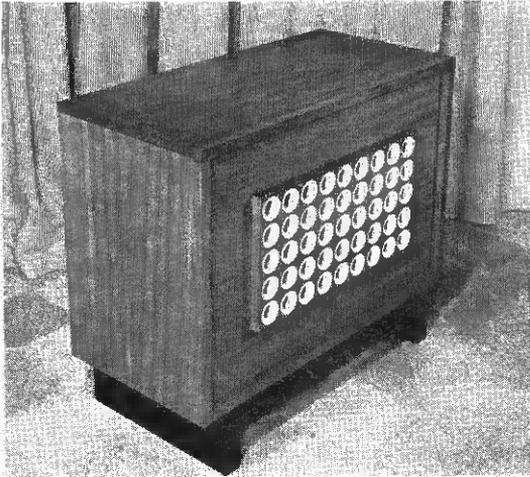
Editor

RADIO ALERT—
RCA's Sarnoff and
Mayor LaGuardia
demonstrate a new
homefront defense
device that "rings
the bell"



PHOTO *Shorts*

Pictures from the News
to help you SELL

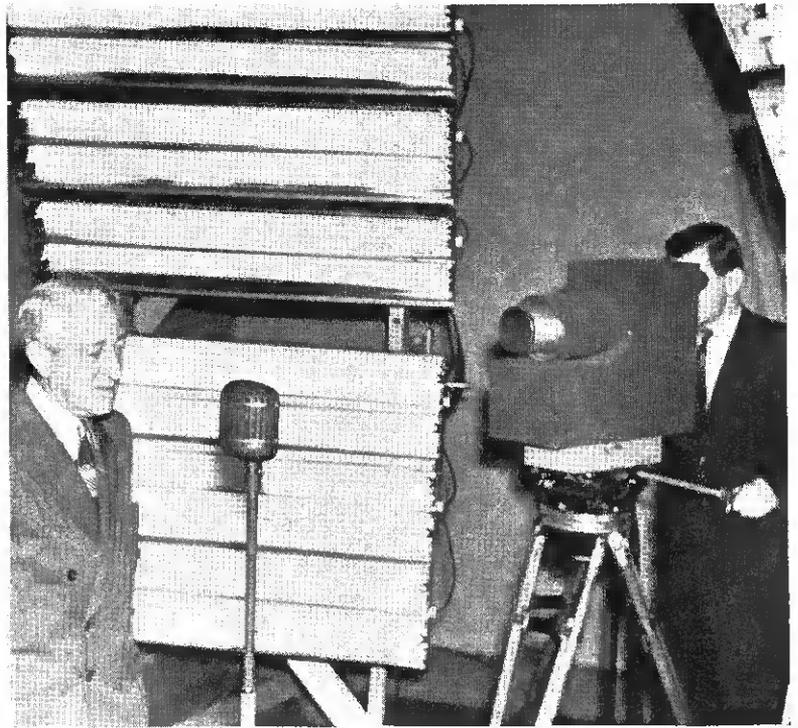


DESIGNER ROLLS HIS OWN

Novel phono-radio combination (*above*) built by Barnes & Reinecke's David Painter for his own Chicago apartment utilizes 45 bone-white catalin rings in swank speaker grille. Wood is natural Brazilian mahogany with chocolate-brown rubbed lacquer interior and base, control knobs catalin "doughnuts" with mahogany inlay. Left end of cabinet swings open to reveal record storage space

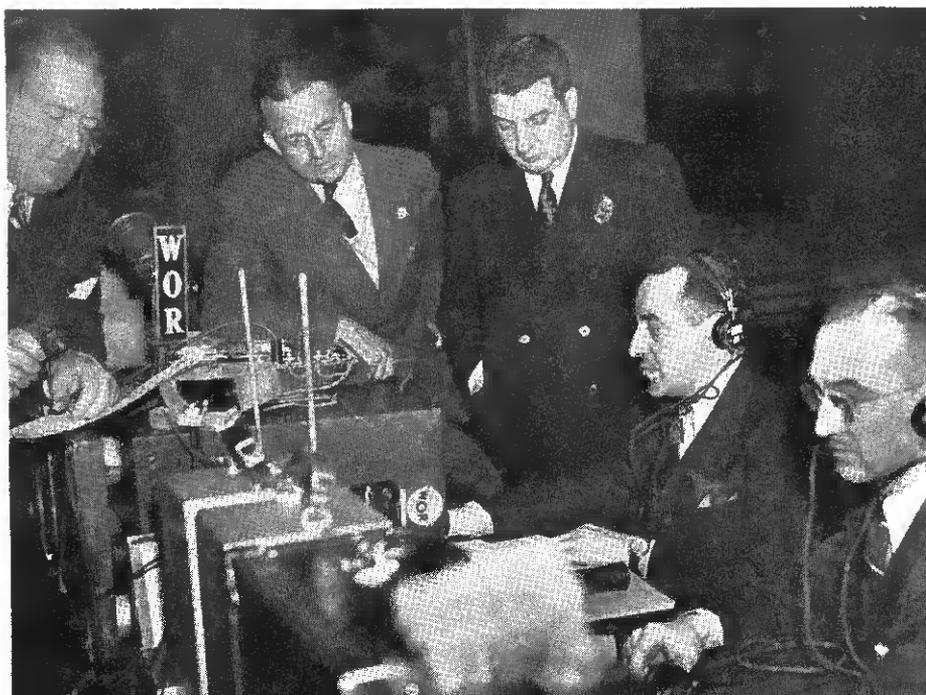
RADIO RUNS TEST BLACKOUT

The importance (*right*) of keeping radios in homes operating for defense was dramatically demonstrated before the FCC's Gerald Gross (third from left) when WOR broadcast the warning that sent listeners streaming to shelters and brought them out again when the "danger" was over during a recent rehearsal in Newark



PERFORMANCE WITHOUT PERSPIRATION

Du Mont's new television studio for W2XWV substitutes 24 fluorescent lamps drawing a mere 960 watts (operated on 3-phase current to cancel out objectionable flicker) for the usual bank of hot and glaring incandescents. For modeling or dramatic lighting effects "baby spots" continue to be used



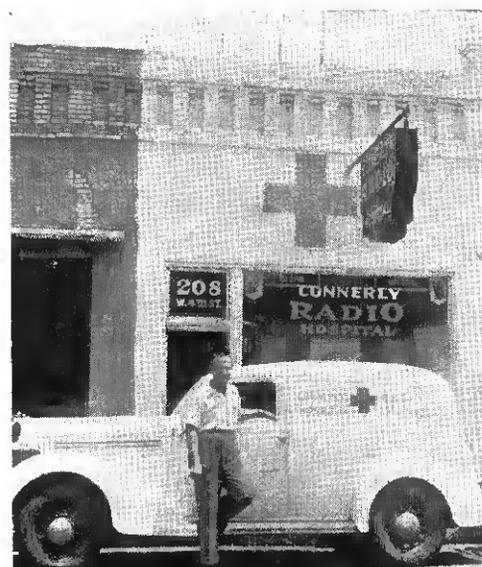


BOOTBLACK DELUXE

Spotted beneath the folding chair (handy if a cop comes) of this shoeshine boy's "pitch" on the busy sidewalks of New York was this portable radio, played to entice trade and pry loose those all-important nickel tips

BIG BLUE CROSS

Clever insignia (below) painted on the front of Connerly Radio's white building and service truck down in Little Rock is a big blue cross. Distinctive and different, it gets across the set "hospital" idea and at the same time the unusual color immediately identifies the shop



KITCHEN SPECIALISTS

When a housewife buys a new electric range for her kitchen from A. N. Friedman (left) of Nashville she rarely gets away without buying a kitchen radio too. He displays both types of merchandise in combination, says a kitchen is not modern if either one is missing



CHARTREUSE AND GREEN

New and lavishly decorated record department managed by Jackson Furniture's Irma Mayer out in Oakland, California, is the last word for both classical and popular disc buyers. In the center desk, which reminds us of the old broadcast station "U"-shaped control positions, is a clever index utilizing color as well as numbers for quick location of merchandise



ONE BORN

CONFIDENCE GAMES took the great American public for half a billion last year and many retailers were among the suckers

IN THE LANGUAGE of the racketeer, the businessman is a perfect "mooch." "Con men" claim that the retail merchant, particularly, is a sucker for phoney get-rich-quick schemes baited with easy money lures.

This claim appears to be born out by police statistics. Thousands of store owners are victimized each year by petty chisellers and radio dealers are no exception.

Typical tricks by which the trade is "taken" are outlined here, with the thought in mind that the glare of publicity will help readers recognize and avoid these and others like them.

BARGAIN BULB RACKET—

An incandescent lamp peddler recently stepped into a small dealer's



store up in New England and demonstrated that the 50 watt types (the "W" was indistinct) he handled delivered more light than 150's used in the shop fixtures. Price, 3 for \$1. Apparent advantage, saving

in current. The dealer bought a dozen.

They burned brightly . . . for just 10 minutes. And then burned out. What the purchaser didn't know was that these lamps were bootleg "floods" actually marked 50V, or 50 volts. Intended only for short duration lighting in connection with photography.

BROTHER MERCHANT GAG

—Out in Ohio it is reported that a man stepped into a store one day,



shook hands with the proprietor, informed him that they would soon be neighbors as he was opening a noncompetitive business in a vacant shop down the street, built up additional confidence by buying a few wiring supplies needed "for temporary lighting until fixtures were installed." He left the key to the shop, asked that the supplies be delivered while he went "to his bank."

Later, this sharpshooter telephoned, ostensibly from the bank, and said he wanted to buy a radio seen during his first visit. And

would it be too much trouble to deliver this set along with the wiring supplies? He'd come in and pay for it later in the day.

Obviously, the racketeer eventually absconded without paying for the set. The store key? He got that from a real estate agent with the pretext that he might rent but would have to take some measurements of the available space first!

PUNCH BOARD SWINDLE—

A Long Island dealer reports that a salesman walked into his store not so long ago and attempted to sell a punch board. Our correspondent says he exhibited little interest at first despite the fact that the board was offered at \$2.25, was understood to net \$100 with punches going for 25 cents per throw. But he *did* fall when the salesman offered to leave the board on approval for two weeks, without demanding immediate cash.

All went well for a couple of days and our friend actually took in more than the board price from regular customers. Then a stranger came



in, made a small purchase and exhibited interest in the board. He spent 50 cents on two losing numbers and then proceeded to knock over \$15 worth of prizes with uncanny accuracy.

You've guessed it. This "lucky" stranger was a confederate who knew the location of prize-winning punches. The dealer is still waiting for that salesman to come back for his \$2.25 . . . with a baseball bat.

DOLLAR TRADING TRICK

—From Chicago comes a story

Have YOU Been Victimized?

THE EDITORS will welcome details of other rackets practiced upon the trade, with the thought in mind that publicizing of these may forewarn and thus forearm readers who might otherwise prove gullible. Names will, of course, be held in confidence.

Every Minute...

By W. CARL DORF

about another racket that required two operators. One was a "bird dog," a man who laid the groundwork. He came in, bought a small item for 60 cents, tendering a \$10 note in payment and receiving change. Not long after, his confederate entered, also buying an item for less than \$1. And now for the trick.

On receiving change, the second man remarked in a voice tinged with assurance: "See here, I gave you a \$10 bill and you've just given me change out of a dollar." In the argument that followed the "customer" providentially remembered that he had just drawn several \$10 bills from the bank, asked the dealer



to see if one he had in his till didn't carry a serial number in sequence with three extracted from his wallet.

Naturally, when the dealer who describes this incident *did* look he found such a bill, for it had been previously "planted." He shelled out . . . but won't fall for this same stunt again.

RUSH ACT—A New York retailer recently fell for this one, classified as the "rush act:"

Number one "con man," wearing a flashy suit plus a loud hat and tie,



makes a substantial purchase with a \$20 bill and departs hurriedly. Barely 30 seconds later his confed-

erate rushes into the store, flashes a badge stamped "Official" and in an excited tone inquires: "Was a flashily dressed man (describes hat, suit and tie) just in here? Did he give you a \$20 bill? He did? Too bad, the bill is a 'phony.' Still puffing for breath, explains that he is a "G" man out to get that counter-

feit money passer with the goods. "Quick, hand over that bill. I'll be back in a minute when I collar that guy."

Sadder but wiser is this mulcted dealer. He says he has a "rush act" of his own all set for the next racketeer that tries to take him for a sucker.

"CON MAN'S" Dictionary*

ADVANCE FEE	Money spent to build initial confidence
BIRD DOG	Man who warms up suckers for eventual killing
BOILER ROOM	Headquarters of gyp operating by telephone
DYNAMITER	High pressure artist who closes sucker deals
HOT STUFF	Literature pertaining to phoney propositions
LILY	Highbrow synonym for the word sucker
MOOCH	A sucker who tumbles easily
SCENERY	Faked backing by prominent men
SPIELER	Silver tongued orator who lays the groundwork
SQUAWK	Complaint by victim to authorities
SUCKER LIST	Names of people considered pushovers
UP AND UP	An honest transaction

* From Better Business Bureau's "Facts About Rackets"

Sensible SELLING-UP

By JACK HAIZEN

Terminal Radio Corp., New York

OF THE UTMOST IMPORTANCE to the radio retailer today is the shaping of and the strict adherence to a selling-up policy. However, the carrying out of this policy should be left to the individual salesman with careful supervision from the manager or executive in charge. From past experience I feel qualified to say that stereotype methods are rarely successful.

A few years ago a large chain of radio stores by whom I was employed prepared a salestalk for their men to use in parrot-like fashion. Salesmen were required to use it and a shopping service was inaugurated to see that the story was carried out to the letter. Regimentation soon proved impractical. It stifled the individuality and natural selling ability of the men, resulting in the loss of a great many sales, and had to be abandoned.

What the Prospect Really Needs

One of our policies is to induce the customer to *buy* rather than be *sold*. This is done by carefully analyzing his wants and then, by suggestion, bringing him to the radio most suitable for his needs. The benefits derived by neither underselling nor overselling are incalculable. Of primary importance, we build the most valuable asset to any business—"a satisfied customer"—without which none can survive.

It is my experience that customers who are victims of high pressure tactics are usually extremely troublesome since they call for service at the least provocation, such as "static," "plug out of socket," etc. Such unwarranted calls within the guarantee period seriously eat into dealer profit. A truly satis-

fied customer, on the other hand is the start of a chain of satisfied customers who, because of their satisfaction, not only return to the store for more purchases, but indirectly become outside salesmen by recommending friends.

Of particular importance is the fact that repeat business of this kind is obtained at very little sales cost.

Deposits Can Be Dangerous

We avoid "bulldozing" prospective buyers into small deposits for something upon which they are not completely sold. Such deposits are just an effective release from high-pressure salesmen and many of them are eventually refunded, resulting in increased operating costs.

In some cases we even consider it good policy to refuse an offered deposit, revolutionary as this may sound. Let me cite a case: A prospect with whom I had spent considerable time could not make up his mind which of two radios to buy and, feeling obligated, offered me a five dollar deposit until he made a decision. The refusal of this deposit created an excellent impression and he shortly returned to buy the more expensive of the two.

Radios Just the Beginning

During this emergency period particularly the trade would do well to adopt a program designed to bring customers back for more purchases. The radio industry has slowly developed without some of us fully realizing that it has largely become a repeat business. Time was that a family bought a receiver which was their only purchase for an approximate period of five years. Look at that family today. It has a large radio or radio-phonograph, a small set in the bedroom, one for the children, a portable for outdoor use and one in its automobile.

Bend every effort to be certain that all such purchases are made from you. In addition, be sure that you get all the affiliated sales such as records, refrigerators, washing machines and small electrical appliances.

The original sale is not a oneshot proposition, but the beginning of a contact that should be carefully handled so that the dealer derives the benefits of future business.

This can be done only by following a policy of "satisfaction for the customer above all."

EVEN if you are not an exporter you'll find this latest analysis of the business methods used and the problems faced by our southern good neighbors interesting reading

IN DISCUSSING Latin America it must be remembered that this important part of the western hemisphere includes a variety of races, languages and customs, even within individual countries.

Fifteen million out of 47 million Brazilians are of mixed blood. There are only 40,000 Spanish-speaking whites among 3,000,000 Bolivians. Half the population of Argentina is of Italian descent.

In addition, the vast distances, lack of inter-connecting roads and transportation facilities plus towering mountains, keep great areas out of contact with each other.

Latin American countries nevertheless offer excellent fields for radio and appliance selling, despite low purchasing power, foreign exchange restrictions and import controls. Most of them have stringent laws against the admission of men in search of work, but they welcome and favor the entrance of individuals with business capital.

UP TO THE WAR, our chief European competitor for Latin American radio business was the Philips Company of Eindhoven, Holland. Today, this brand is made in the United States.

American radio manufacturers have long recognized, and met, the need for special designs and treatment of radio sets intended purely for the southern market. For countries with limited broadcasting facilities long-distance, shortwave reception is essential. Generally, export radio models are notable for

PRESSURE:

Handle With Care

RADIO is a repeat business. Costs exceed the bounds of profit unless the customer, and the customer's friends, come back

Retailing

in LATIN AMERICA

their sensitivity; spread-band short-wave tuning; moisture-proof cabinets and components, and modern, continental-type, cabinet designs. They are also distinguished for their compactness, in order to reduce shipping costs and duties.

Argentina

It is estimated that there are 1,050,000 receiving sets in use in Argentina. Of these, approximately 150,000 were sold in 1940, compared with 200,000 in 1939, indicating a 25 per cent decrease.

Practically all sets are manufactured or assembled locally as no import permits are granted for complete radio sets.

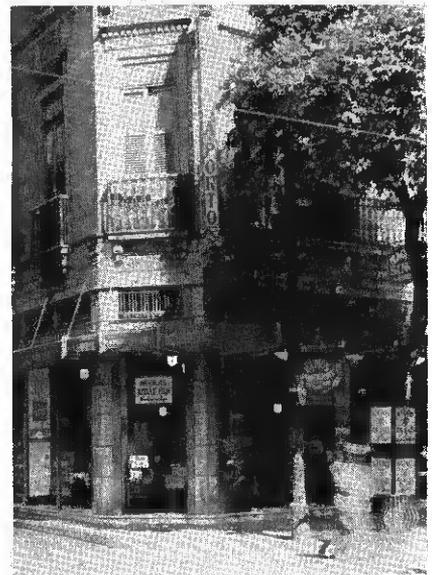
The "distributor" system in Argentina differs appreciably from that in the United States as the large manufacturer is also the distributor. Usually, the radio dealer handles all kinds of foreign and national brands with most manufacturers placing their sets on consignment. Many dealers also sell electrical devices, sheet music, pianos and other musical instruments.

RCA Victor, Philips, General



ECUADORIANS AT HOME — They listen in on an RCA-Victor, sip "cerveza"

Electric and *Philco* are both manufacturers and wholesalers, selling through dealers at 40% and 10%; or 40%, 10% and 5%; according to conditions. A second group consists of 15 to 20 local manufacturers

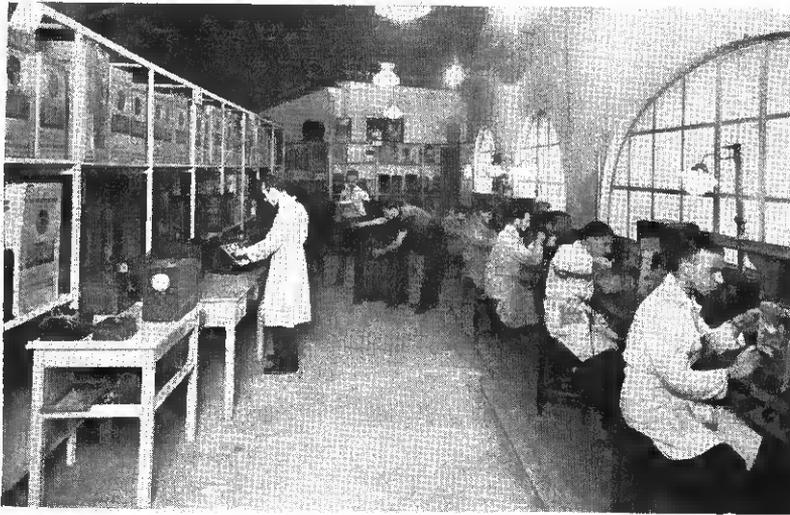


▼ STORE IN "RIO" — Yolanda Porto's compares favorably with those of his northern business-brothers ►



Estimated 1940 U. S. EXPORTS

	Sets	Parts
Argentina	\$108,740	\$824,560
Bolivia	106,730	24,580
Brazil	1,035,820	512,790
Chile	468,190	195,010
Colombia	450,070	55,680
Ecuador	79,435	6,900
Paraguay	15,870	1,870
Peru	168,980	20,100
Uruguay	52,200	81,500
Venezuela	429,200	72,550



SERVICE IN THE SOUTH—This fully equipped shop is maintained by a Brazilian distributor at Sao Paulo

who sell to dealers on a net price basis without regard to list prices.

In a third group are literally thousands of small assemblers who produce from 1 to 15 sets a month, sold direct to the public. Several such assemblers can be found in nearly every small town. In one of the larger cities outside of Buenos Aires there are almost 200 assemblers, or electricians, who produce sets for sale.

Price-cutting is predominant in Argentina; cash will generally obtain a discount of 10% to 25% on radios and combination sets. The bulk of the radio tube business is done through the radio parts trade, which supplies small assemblers.

Import permits are very difficult to obtain. Foreign exchange is acquired by bidding at auction on Tuesdays and Fridays of each week for the exchange needed. Once this is obtained the corresponding import permit is granted.

There are 13,000,000 people in Argentina, about three quarters of whom are urban, and almost one third of the total reside in Buenos Aires and suburbs.

There are 42 longwave and 5 shortwave broadcasting stations in Argentina. All shortwave stations and 19 of the longwave stations are located in and around Buenos Aires. There are two networks; one operating 10 stations outside of Buenos Aires from station "El Mundo" and the other, 8 stations from Radio "Belgrana."

Practically all household electrical service is 220 volts. The prin-

cipal sales centers, aside from Buenos Aires, are Rosario, Cordova, Santa Fe, Bahia Blanca, Mendoza and Parana.

Brazil

Local manufacture of either radio sets or component parts has, on the other hand, not made much progress in Brazil. There is, however, considerable assembly of sets, with *General Electric*, *Assumpcao*, *Maestre Blatge*, and *Metrotone* the principal assemblers. The combined sales of such sets are estimated to be approximately 15% of the total. In this connection, it is interesting to note that American sets of equal number of tubes and characteristics can be sold at lower prices than those locally manufactured.

The potential market in Brazil is very great; but lack of reliable figures makes it difficult to estimate. The population of 45,000,000 does not make a good index to possible sales in view of the low average purchasing power of the people. Best

Next Month—

THIS article, prepared from facts supplied by specialists in the countries involved, concludes in September with details about the radio business in Central America and the West Indies

estimates place annual sales at not more than 100,000. Approximately 57,000 receivers were imported from the United States during 1940. There were 522,000 sets registered; but it may be safely assumed that only half of the owners of sets bothered to register.

Practically every known American brand is imported, with many of the less-known sets brought in by small dealers who buy in small lots and sell through house-to-house salesmen. Store sales are few and cash sales amount to only about 5 per cent of the total. Even the smallest 4-tube sets must be demonstrated at the home of the prospect and 15 month terms are generally allowed in order to make the sale.

Distributors and dealers maintain their own service shops and there are few purely service companies. (As in most Latin American countries, good, experienced, servicemen, as well as good salesmen, are at a premium.)

Brazil has 68 broadcasting stations, all of relatively low power. There are, at present, no shortwave broadcasting stations worth mentioning; but, within a year, the government expects to have in operation a new 50 kw station.

Colombia

Radio distributors in Colombia are also retailers.

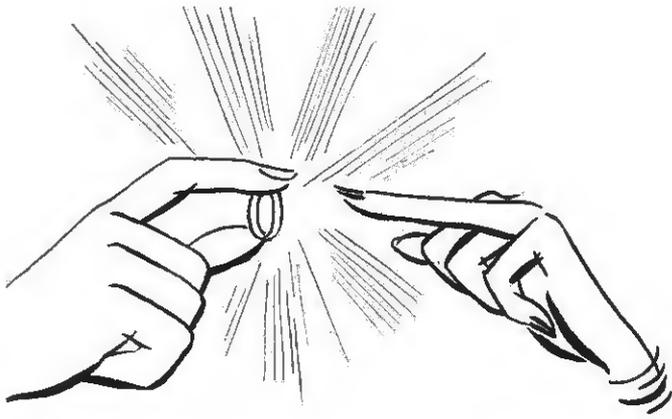
Due to the nature of the country and lack of transportation facilities, except by plane, sales territories are separate and distinct in each part of Colombia.

There are approximately 150,000 sets in use, with annual sales estimated at 25,000. Markets are limited outside of the principal cities and the sets most in demand are those having 5 to 8 tubes, including shortwave reception.

Distributor's terms to dealers range from cash to outright consignment. There is little price cutting except for 10 or 15 per cent on cash sales.

There are several broadcasting stations in each of the principal cities and programs consisting of modern native music and international news reports are the most popular.

Many radio distributors and dealers are now successfully established in Colombia and the economic outlook for the country indicates continuing improvement.

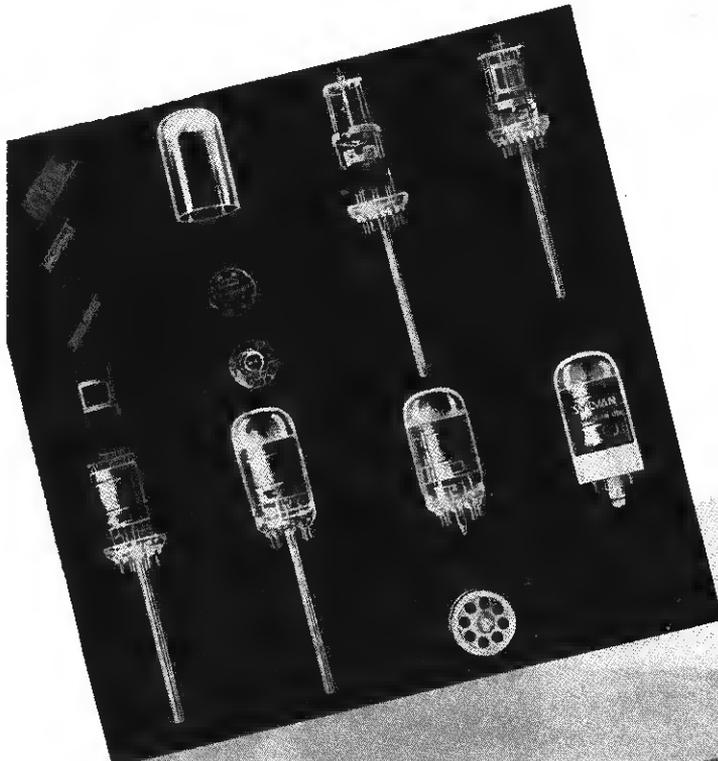


LITTLE THINGS THAT COUNT

GRIDS AND PLATES, dome pads and supports, spacers and insulators—some so tiny they must be handled with tweezers—are all fabricated with the painstaking accuracy that distinguishes Sylvania workmanship.

Each month more than 25,000,000 of these parts are manufactured in the Sylvania Parts Department . . . a "Factory within a Factory" that allows Sylvania a greater quality control over raw materials and processing than that enjoyed by any other manufacturer.

For we feel that by giving you an absolutely dependable product to sell we do more than merely benefit ourselves . . . we also help you build the kind of reputation that means a sound business and satisfied customers.



Sylvania Special Parts Department, Emporium, Pennsylvania

S

SYLVANIA

SET-TESTED RADIO TUBES



Sylvania Radio Tube Division

HYGRADE SYLVANIA CORPORATION, Emporium, Pa.

Salem, Mass., St. Marys, Pa., Ipswich, Mass., Towanda, Pa.

Also makers of Hygrade Lamp Bulbs, Hygrade Fluorescent Lamps and Miralume Fluorescent Light Fixtures

3 Paths



RECORD Self-Service

PICTURED from behind the record sales counter (visible in right foreground) are three disc racks built of plywood at a cost of \$140 for Justin G. Bradburn of the Lil' Pal Exclusive Radio & Records Store in Houston, Texas.

The two big racks, butted against each other to form one long display, have sixty "pockets" apiece, each pocket having a capacity of 25 records. Hit numbers are tagged by title on the divisions forming the pockets and all available recordings of such hits by different orchestras are grouped together. (A few pockets are devoted to particular name bands rather than to numbers.)

Built permanently into the top rear of each rack is a recessed shelf in which both popular and semi-classical albums are displayed at eye-level. (A large sectional bookcase not visible in the picture, facing outward toward the center of the store at the end of the sales counter, openly displays 12-inch albums.)

The third rack, devoted to hillbilly recordings, race-records, cowboy, old fiddler, polka, western and cajun discs may be seen at the right rear. It contains 50 pockets, does not have a shelf for albums. Like the larger two, it is movable and can be shifted to suit changing store requirements. All three, it will be noted, are fully visible from the sales counter, permitting customers to serve themselves and yet be completely under control by salespeople.

Similar sectional record cases are used to display classical albums in Music Lover's Rooms partitioned off at the rear of the store. These rooms, used for display and demonstration of combinations and recorders, are open to customers who wish to hear classical selections there. Booths containing less expensive instruments handle auditioning of popular records.

Behind the record sales counter and not seen in the photograph are wall-shelves for the filing of regular stock. A "one spot" color code control system is used in conjunction with classification by band, artist, instrument, theme song and subject.

THERE IS A STORY, well known among music dealers, concerning one of their number who, upon meeting a friend from another town, exclaimed: "Jim, I want to congratulate you. I hear you made fifty thousand dollars in your piano department."

"Well," said Jim, "I would like to modify that story a little. In the first place, the amount was ten thousand and not fifty. In the second place, it wasn't pianos but radio. And, in the third place, I didn't make the ten. I lost it."

There is much food for thought in this story, particularly this year. The point is that we dealers have too often in the past been volume minded at the expense of actual net return.

Men Teach Selves to Sell Up

We are concentrating on the business of raising our profit rather than our volume.

First move was to arrange regular sales meetings wherein we instructed our men in the fine art of selling higher quality merchandise. Much to our surprise, it was discovered during the first such meeting that some of them did not thoroughly understand the operation of record changers used in combinations, while others obviously knew little about records particularly suitable for emphasizing the tone quality of upper bracket equipment.

These and other such shortcomings were quickly rectified by having men who had become more or less expert on both counts give sample demonstrations during the meetings for their associates to watch and copy. A regular demonstration routine evolved. For instance, when a prospect for a combination immediately asks to have it play a specific record our men duck

to PROFIT

SALES EFFORT must be guided into new channels if business is to survive today's shadows and emerge with unimpaired vitality into tomorrow's sunlight

By PAUL H. CAGLE

*Gen'l. Mgr.,
San Antonio Music Co.*

the request and reserve the record until after they have put on two or three specially selected discs with which the features of the machine may most readily be dramatized. They also show how the controls are manipulated for best results and then and only then permit the prospect to play the record of his choice himself.

When the prospect, by that time fully familiar with the qualities of the machine, finally plays the disc which for him has particular appeal, he almost feels as if he owns the instrument and is easier to close. That this sales method is effective is illustrated by the fact that our average radio sale has recently increased from \$35 to \$65 with the average of consoles and combinations alone hitting \$140.

Repossession Losses Limited

Thorough demonstration of machines has been found to have another advantage.

When a sale is ultimately made the prospect has been so completely sold on his purchase beforehand that the probability of later repossession is greatly minimized. Credit losses have thus been substantially reduced. This, obviously, also helps increase our net.

To further effect credit savings our men are trained, during our regular meetings, to carefully estimate the price the prospect can afford to pay for an instrument and



not to exceed this amount when striving for a sale despite the temptation to sell up at any cost.

Salesmen are also urged to obtain cash rather than credit business wherever possible and during the month of December, when our radio sales exceeded \$12,000, 48 per cent of our business was done for cash.

Trade-In Ban Inaugurated

We have cut out trade-in allowances on all sets below \$34.95. This was done with the full knowledge that the rule would to some extent place us at a disadvantage by comparison with local competition. But it has proven worth while from the one standpoint with which we are at this moment concerned, the increasing of net profit rather than mere volume however slim the margin.

None of our salesmen are today

permitted to mention trade-ins. This subject must always be brought up by the prospect or it remains dead. Furthermore, no discussion of trade-ins is permitted even if the prospect does ask for an allowance until a thorough demonstration of the new machine under discussion is concluded.

Have we lost any business by following this policy? Sure, we've lost some. But we feel that we are better off without it, that we are now really building our business on a firm foundation in tune with the times, that it is better for our ultimate future to sell the value of modern entertainment rather than "deals," that concentration on net profit rather than mere volume is today's greatest need.

Selling-up but not up over the prospect's capacity to pay, selling the virtues of our new merchandise rather than that of the junk the prospect has to trade, selling thoroughly enough to make sure the prospect will stay sold and thus pay for the merchandise . . . these are our major objectives for 1941.

All these objectives, and this is a point I cannot stress too strongly, involve training of the sales staff to think in terms of profit for the store rather than just for themselves.

REALISTIC Thinking

VOLUME may decline, a little or a lot, depending upon future availability of materials for civilian production

MANAGEMENT that insures the maximum net on each individual transaction will obviously command a premium as emergency measures progress



STUDIO—Walls and ceiling at Carl Fischer's form trick acoustic angles. Lights are rheostat controlled from pink through white to blue to suit the artist's mood

RECORDING Last Word

ON May first the music firm of Carl Fischer, Inc., held "open house" at what it claims is the "last word" in recording studios.

Located on West 57 Street, the "hub" of New York City's music world, it naturally followed that preview ceremonies were attended by many top-name band leaders and vocalists.

The studio measures 25 wide by 35 feet long and can accommodate a 30 piece orchestra.

C. C. Potwin, sound specialist of Electrical Research Products, Inc., had complete supervision of acoustical design and construction. Referring to the studio

illustration, it will be noted that walls and ceiling were specially angled and faced with irregular shapes of acoustical material. Projections consist of "Transite" board, backed up with rock wool insulation. The wall itself is composed of "Gypsum" blocks. A four inch air-space separates acoustical construction and main building walls and ceiling. Linoleum flooring is cemented to a one-inch cork base.

Engineers call attention to the studio's controlled system of fluorescent lighting.

Each fixture (eight in all) is equipped with 3-40 watt lamps. Each bank of lamps comprises one pink shade and two blue-whites, all lamps being individually controlled from the cutting room. By mixing colors, engineers provide just the right shade of illumination to suit the individual artist or band or mood and thereby obtain best recording results.

Blue-white lighting is used for "swing bands," soft pink illumination seems to do things for singers and orchestras delivering classical numbers.

CONTROL—Featured here are latest Presto recorders, a Western Electric console amplifier



By

I. L. COCHRANE

BUILDING WINDOWS that create an urge to buy is a fine art in itself. Even if you can it does you little good unless you also know how to get busy people to stop and look at them in the first place.

Motion is the best initial traffic stopper. And it is not necessarily difficult or expensive. Take, for example, the following relatively simple ideas that you can carry out yourself with readily available materials:

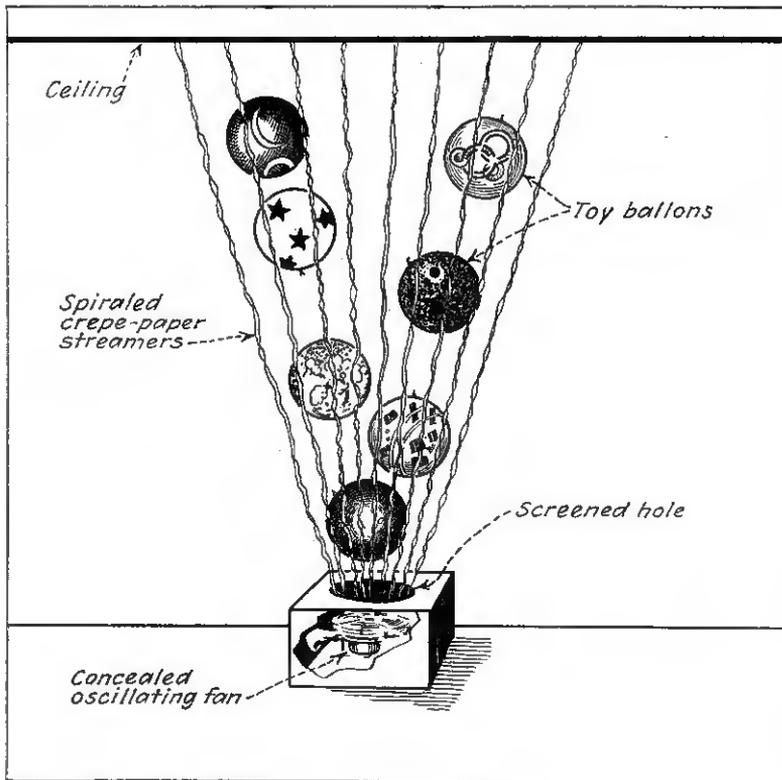
"Barrage" Balloons

Build a wooden box large enough to contain an ordinary oscillating electric fan, laid on its back in the bottom to force a varying current of air upward through a one-foot diameter hole covered with wire screening. (See drawing.)

All around the circumference of this screened hole tack the ends of vari-colored crepe-paper streamers. Tack the upper ends of these streamers in a four, five or six-foot circle on the ceiling, directly over the box, in such a manner as to form an inverted "cone" of streamers spaced just a little less up near the ceiling than the diameter of standard-size toy balloons.

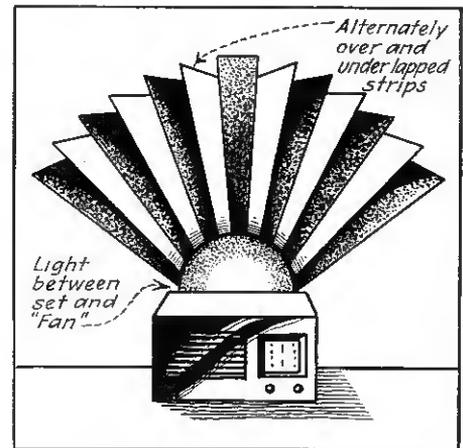
Within the "cage" formed by the streamers imprison toy balloons of various colors (the precise number for best effect depending upon the size of your cone) and turn on the fan. You'll find that the balloons float up and down in their cage in a very engaging manner as the oscillating fan turns and blows.

Twist the paper streamers for maximum effectiveness and, of course, cover the box in some way. The wire screening, obviously, keeps the balloons from falling right into the fan. And note, particularly, the fact that the apex of the paper cone, down close to the floor,



WINDOWS must have motion for best results. Here are four easy ways to get it at low cost

Barrage balloon details



The metallic paper fan

DISPLAYS

You Can Make Yourself

conserves window space and permits you to surround this display with merchandise.

Sales Flame-Fanner

Variation of light is an inexpensive way to get the effect of motion without mechanical gadgets.

Make a "fan" from strips of cardboard (as shown in the second illustration on this page), the strips alternately over and under-lapping each other and stapled at the bottom to a half-circle supporting disc.

Cover each strip with a different color metallic paper, or treat with different color glossy enamels.

Now, place this "fan" a few inches back behind any table-type radio receiver or similar small item but the whole well forward in the center of your window. Between the fan and the merchandise, concealed from the street by the latter, place a 40 to 60-watt lamp with a fast flasher in the socket.

The character of the fan, its covering and the flashing of the light provides an effective and unexpectedly varied tone color change. If the display is still not active enough to suit you swing the lamp from side to side slightly by means of any mechanical device you can devise and I guarantee it will knock your eye out.

For greater permanence, especially in summertime when heat warps cardboard, use plywood when constructing the fan.

Motion Without Mechanics

That metallic paper, by the way, is tricky stuff that can almost give you the illusion of motion without mechanics.

Simulate a traffic policeman's upheld hand by cutting one out of cardboard about 30 inches high. Cover the hand with a shade of metallic paper such as dark green (especially recommended). Letter

the word "Stop" in the palm in Persian orange or some bright shade of red. Place it about one foot back from the window pane and you will be surprised to see how it appears to move if you walk past the window, due to varying light angles on the paper.

Another stunt that requires no mechanics and yet seems to make a display move:

Take any good, small display piece supplied by a manufacturer and tuck it away at an angle in one front corner of your display window. Place a mirror (a pier mirror is a good type) in the opposite corner in such a way as to reflect the image of the display to people approaching from an angle at which the display itself would not normally be seen. The fact that the reflected image moves in and out of vision as you walk makes it appear to move and the idea is of double value in small, narrow windows.

Exclusive! SENSATIONAL
WITH Slide-A-Way
AND AUTOMATIC RECORD



PHONO-RADIO with Automatic Record Changer 69-M5—The lowest priced phono-radio with automatic record changer ever built. Plays twelve 10" or ten 12" records. Equipped with Admiral "Lifetime" Needle. Superhet radio has super time" control, "Sofglo" dial. New audio circuit produces tremendous power. Tunes standard broadcast band.

Record Cabinet Complete with 5 Albums

Ask your Admiral dealer to show you this beautiful record cabinet. You can save half the regular price when purchased with an Admiral table model phono-radio.



PHONOGRAPH with Automatic Record Changer 4210-XA3—Now . . . a phonograph with automatic record changer at half the usual price! Just the thing for the "jitterbug" as well as the lover of good music. Plays ten 12" or twelve 10" records. Multi-tube amplifier gives all the power you want.

74-M5—This new Admiral (see below) has everything! Open the doors . . . out slides the "Slide-A-Way" phonograph with automatic record changer. Plays twelve 10" or ten 12" records. No needles to change; record wear . . . has Admiral "Lifetime" needle. Big powerful superhet radio has special Audio Circuit. Record compartment provides space for 8 albums.



Exclusive with Admiral
WORLD'S LARGEST



Admiral Radios Are Equipped With RCA Preferred-Type Tubes

SEE YOUR ADMIRAL DEALER

Admiral radios are priced from \$12.95 and up. See these sensational values at your nearest Admiral dealer. Continental Radio & Television Corporation, 3800 Cortland St., Chicago, Ill. Originators of Slide-A-Way . . . Aeroscope . . . AC-DC-Battery Bank . . . Tilt-Tuning . . . Touch-O-Matic.

4206-C6—Here's another Admiral "Slide-A-Way" phonograph with automatic record changer. Plays ten 12" records. No slicing . . . No cracking of records. Has Admiral Needle. Powerful superhet radio broadcast plus Magna-Bar for short wave. Has super Aero dynamic speaker . . . airplane dial with Lucite

69-M5
\$44.95

4210-XA3
\$29.95

4207-A10
\$129.95

74-M5
\$79.95

OF THE PORTABLES AND PLASTICS TO

**TUBE RADIO
PHONOGRAPH
AND CHANGER**

Admiral
MANUFACTURERS OF
AUTOMATIC RECORD CHANGERS

Just look at all these features! Only Admiral...world's largest manufacturers of automatic record changers... offers so much in performance, convenience and styling...for so little in cost. See and hear this sensational value at your Admiral dealer today!

Model 4207-A10

• **"SLIDE-A-WAY" PHONOGRAPH**

Open the doors...out slides Admiral's exclusive "Slide-A-Way" phonograph. No more stooping or peering into a dark record compartment to change records.

• **AUTOMATIC RECORD CHANGER**

Plays ten 12" or twelve 10" records. Nothing to chip, crack or scratch valuable records. So simple a child can load and unload.

• **ADMIRAL "LIFETIME" NEEDLE**

No needles to change. No record wear.

• **RECORD ALBUM COMPARTMENT**

Complete with three 12" and two 10" Deluxe albums. Value \$10.00.

• **THREE WAVE BANDS**

Standard broadcast plus Magna-Band tuning on 25 and 31 meter short wave bands. (S-p-r-e-a-d-s stations for easier tuning and logging.) An Admiral exclusive!

• **FEATHER TOUCH ELECTRIC TUNING**

Electrical...not mechanical. Fool-proof, speedy.

• **TREBLE-BASS COMPENSATION**

5 individual controls give distinct tonal variations over entire musical spectrum.

• **TRIPLE-TUNED RF CONVERTER CIRCUIT**

Only Admiral has it! Gives higher sensitivity...eliminates tweets, whistles and other background noises.

• **ADJUSTABLE SUPER AEROSCOPE**

No aerial or ground required. Adjustable for maximum signal pick-up.

Also Auditorium electro dynamic speaker...push-pull audio system...airplane dial...luxury walnut console cabinet, etc.

with
"10"
No
"time"
land-
-A-D
elec-
sation
on. >



HERE'S OPENING GUN IN
Admiral's
**BIGGEST NATIONAL
ADVERTISING CAMPAIGN**

THIS SMASHING FULL-PAGE, 2 COLOR AD
IN THE SEPT. 20TH ISSUE OF COLLIER'S

OVER **36** MILLION
ADMIRAL MESSAGES
IN THESE THREE
LEADING MAGAZINES
THIS FALL!

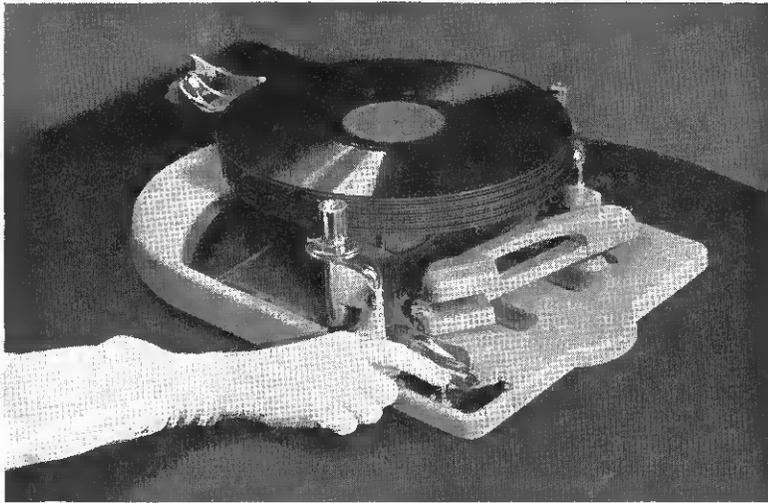


Yes, sir... this fall and winter you'll see the biggest national advertising campaign in Admiral history. Full page... half page... and full column ads... over 36 million messages in Collier's, the Post, and Esquire telling the world about Admiral's sensational values... values that have boosted Admiral sales to all-time highs. Some of them are shown in the adjoining full page ad. Note particularly the many Admiral "exclusives"... then get in touch with your Admiral distributor for further details. Get set with "America's Smart Set" to reap your biggest radio harvest in years!

CONTINENTAL RADIO & TELEVISION CORP.
3800 CORTLAND STREET • CHICAGO, ILLINOIS
EXPORT OFFICE: 116 BROAD STREET, NEW YORK
Originators of Tilt-Tuning, Touch-O-Matic, Aeroscope, Slide-A-Way, AC-DC-Battery Bantam

MUSIC SHOW

Highlights



TANDEM TONE ARM—Introduced by RCA, it plays both sides of records without flipping them over, is used in machines handling up to 15 discs automatically

OUTSTANDING newsnote about the 40th Annual Convention and Music Trade Show, held at the Hotel New Yorker, New York City, July 29–Aug. 1, is the unprecedented representation by radio receiver manufacturers, record makers and concerns producing accessories for this field.

Out of approximately 180 exhibitors there were 41 radio and record companies reserving large space to show their wares, a 100 percent step-up over the 1940 showing.

Glass Blanks For Defense

Admiral presented portables, compacts and combinations. Centered conventioneer's attention on quick changing automatic record mechanism and 1 oz. tone arm. *Amperite* displayed its full line of velocity and dynamic microphones, also a new "Kontak Mike" for use with musical instruments. Demonstrated latest PGH dynamic mike with a home recorder-radio combination. *Ansley* showed 18 models, comprising portables, table types and consoles. Emphasized the latter type, in period and modern design and available in a variety of different finishes. FM included in most models. Company's radio direction finder and "DynaTone" (combination

radio, phono, and piano) also received considerable attention. *Audio Devices* put display spotlight on new glass base blanks. Provided helpful folder for cutting Audiodiscs. Called attention to new packing container for safely shipping platters.

Bitter Construction devoted space to record racks, booths and its own patented "Record Bar." *Boetsch Bros.* displayed portable phono players, both hand-wound and electric, also record carrying cases. *Brunswick* showed its 1942 line of combos, stressing period cabinets. FM now available in a number of models. Large Duncan Phyfe drum table latest addition to line. This is a combination with automatic record changer.

Caphart sets on display ranged in price from \$159.50 to \$1195. Number of models 19, all combinations and majority to be had with FM. Top model used 31 tubes, 2 speakers and delivered 40 watts output. *Columbia* had two large rooms with a featured "Lily Pons" record merchandising display. Showed laminated construction of its new "Full Dimensional Tone Record". Claims 56 percent less surface noise and greatly improved quality.

Decca Distributing featured dis-

plays of popular record albums. Also record and phono accessories. *Duotone's* sapphire, steel and stellite needles were previewed by show visitors, as were new cactus sharpener and combination needle package.

AC-DC Period Consoles

Emerson demonstrated complete radio line from \$12.95 to \$199.95. Included portables, compacts and combinations. Two star performers were models 437 and 447, both table type automatic phono-radios. The former capable of intermixing both 10 and 12" records. *Espey* showed compacts, portables and combinations. Demonstrated new 14-tube AM/FM set designed for operation from either alternating or direct current.

Farnsworth exhibited 10 combinations, of which 6 could be had with the FM feature. Several consoles had slide-out automatic phono players. Showed original oil paintings to be seen in quality ads. High spot of record changer is new "play control." *Federal Recorder* presented new portable and professional recorders and a line of 13-tube period consoles. *Fibra Development* had all kinds of needles with special emphasis on a new cactus. *Freed-Eisemann* presented nine AM/FM sets in both period and modern styles. *Aristocrat* was stand-out model for dealer's attention. Uses latest Garrard changer.

General Electric showed its prod-

(Continued on page 47)

Big Radio Attendance

Forty leading Radio and Record equipment manufacturers display wares at New York exhibit. Show new radio lines, record changers and accessories.

FORMULA for Successful Broadcast Advertising



BABY-KISSING, MODERN STYLE—Surefire programming is the stunt used by Whitfield Furniture's Al Phillips. Via remote pickup from store to studio, he airs the goo-goos of Shreveport youngsters fed exclusively on milk kept in electric refrigerators, mentions babies and boxes by name

WHAT's a workable formula for dealer use of broadcast advertising?

Weeks and Dickinson, after twelve years of experimentation, have developed one which they feel is ideally suitable for music stores operating in cities such as (pop. 40,000) Binghamton, N. Y.

It revolves around three cardinal principles: (1) Proper program choice, (2) correct timing, and (3) effective merchandising tie-ins. Let's tear each component part down and see what makes it tick. . .

Programs Local Stuff

The store sponsors a six-time weekly, fifteen-minute offering at twelve noon. Five weekday programs opened with news about community events, including the dates of coming concerts, special sport attractions, lectures, club picnics . . . anything and everything of general local interest.

Listeners are invited to leave bulletins for broadcasting in the store, without charge or obligation.

Next, birthdays of youngsters under fifteen and oldsters over

seventy are heralded by the master of ceremonies. Listeners again contribute the necessary information, leaving it at the store rather than at the station.

Programs conclude with the answering of questions on science, politics, home economics, style of delivery resembling that of the bigtime "Information Please."

This type of program is believed to have a twofold attraction. First, it supplements rather than competes with programs delivered in Binghamton by the chains such as small town newspapers compete with larger sheets shipped in from out of town. Second, it involves audience participation, known to be tops in air entertainment today.

Clinches on Saturday

On the sixth day (Saturday) the store runs a fifteen-minute program entirely different in character. The "Weeks and Dickinson Kiddies Hour" is then heard over the air with youngsters of the area acting as stars. They play instruments, sing, or enact dramatic bits.

Auditions are required before any

By
EUGENE A. CONKLIN

child is placed on the air. Parents are invited to bring their children to such auditions, at the store, thus building traffic.

Carefully Studies Timing

Twelve noon was chosen as the regular program time to coincide with lunch hour. It was felt that at this time families were gathered together in homes and workers were apt to be listening at lunch counters and in restaurants equipped with receivers.

Next to the noon spot it is the firm's opinion that the period between 6 and 6:30 p. m., or the early morning hours between 7:30 and 8:45 would be most effective for retail advertising. Competition from bigtime chain programs is one reason why late evening program time has always been passed up by this Binghamton operator.

For housewives, where the product to be sold is of specific interest to them, it is believed that 11:15 or 11:30 a. m. would be reasonably effective if the noon schedule could not be obtained.

Announcer and Merchandising

The services of a well-known local announcer or commentator are preferred to those of an ordinary staff announcer despite additional cost. It has been found that the ready-made air following attracted by such a man is worth a great deal, particularly when the program is initially broadcast.

Weeks and Dickinson also regularly calls attention to its radio programs in newspaper advertising, reverses the process frequently and calls attention to its newspaper ads over the air. The combination of visual and aural promotion is considered especially effective.

A Favorite for Low Cost



HOME RECORDING

The New
HOWARD
DURO-BOARD DISCS

- Long Playback Life
- Clear, Quiet Reproduction
- Flame Proof Safety
- Listed by Underwriters'

Type 6F—6½" Retails 10¢
(Full Discounts Apply)

The new economy DURO-BOARD Recording Discs have the same superior quality Type "C" Coating as the famous HOWARD Metal Base Discs. This thick, special coating, an exclusive HOWARD development, enables the cutting needle to make clean, even grooves without tearing—a factor vital to quiet, long life reproduction. A special die-punched center prevents warping and provides extreme flexibility without injury to the disc. Order a supply today!

Famous **HOWARD** Metal Base Discs Now Packed in Albums

Outstanding and in constant demand since their introduction a year ago, HOWARD Metal Base Discs now come packed five each in attractive utility albums. You'll build the maximum in customer satisfaction and repeat business with HOWARD Discs. The handy counter dispenser kept filled with HOWARD Discs will make money for you.



HOWARD RADIO CO.

1731-35 Belmont Av., Chicago, Ill.-Cable Address: HOWARDCO, USA
America's Oldest Radio Manufacturer

**ALWAYS
IN LINE**



DEPENDABLE

KEN-RAD Radio Tubes

The Nationally Advertised
Phonograph Needle

Sell Fidelitone Floating Point Phonograph Needles for greater profit, faster turnover and complete customer satisfaction.

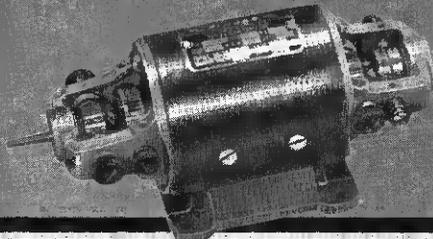
**PERMO PRODUCTS
CORP.**

6415 Ravenswood Ave.
Chicago, Ill.

Manufacturing
Metallurgists



VERSATILE!



**DOUBLE
INPUT
DOUBLE
OUTPUT**

PINCOR DYNAMOTORS

APPROVED POWER SUPPLY FOR AIRCRAFT

Pincor Dual Voltage... double input and double output... dynamotor is further proof of Pincor leadership in today's fast moving developments in aircraft and other vital radio equipment. One unit for both receiving and transmitting, saving cost as well as precious space and weight. Available in a multitude of voltage combinations and ratings. Consult our engineers. Send for free NEW Pincor Dynamotor Catalog.

PIONEER GEN-E-MOTOR
CHICAGO, ILLINOIS

Export Address: 25 Warren St., N.Y., N.Y. Cable: SIMONTRICE, New York

Pioneer Gen-E-Motor
Dept. No. R-1H, 5841 Dickens Ave., Chicago, Ill.
Please send me NEW PINCOR DYNAMOTOR
CATALOG at once!

**A
NEW
CATALOG
FOR YOU**

NAME _____
ADDRESS _____
CITY _____ STATE _____

CONVENIENT...ECONOMICAL!

RAILWAY EXPRESS is both easy and economical to use for swift transportation of shipments, large or small. There's no extra charge for convenient pick-up and delivery within our regular vehicle limits in all cities and principal towns. Insurance up to \$50 valuation per shipment included. For service, phone.

RAILWAY EXPRESS
AGENCY INC.

NATION-WIDE RAIL-AIR SERVICE

University

**SPECIALLY DESIGNED for
NATIONAL DEFENSE SOUND SYSTEMS**

Remember: Today all defense specifications requirements on loudspeakers include all the advantages of University Reflex Speakers. Defense specifications include: High Quality—High Efficiency—High Power handling capacity—High acoustic output—Speech intelligibility with high background noise—Long Life—Non Resonant. Play safe: Specify University for National Defense Work.

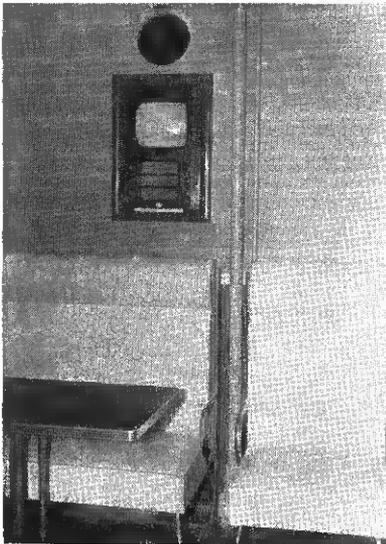
UNIVERSITY LABORATORIES
195 Chrystie St. New York City

TELEVISION

for

Taverns

By AUSTIN C. LESCARBOURA

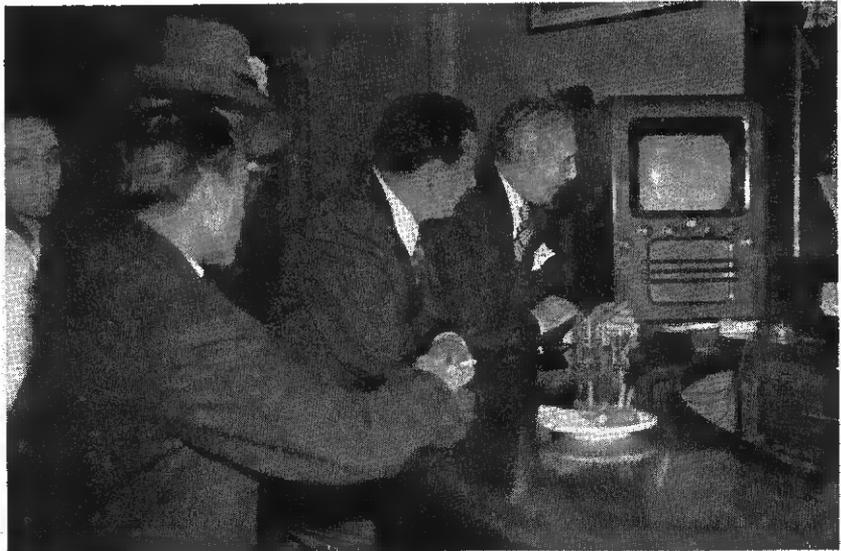


TELEVISION need cost nothing, so far as tavern or cafe, club or restaurant, is concerned. If they install a television receiver on the "pay-as-you-go" basis, nine times out of ten trade increase alone pays for it in short order.

As a magnet to attract crowds, television excels. It was once much the same with movies. Back in the dim past when this country was still young, saloons made early commercial use of them for entertainment of patrons. Four decades later we have the television receiver holding forth in much the same way and with equal success.

Now More Than Curiosity

Hundreds of Du Mont television receivers have been installed in public places throughout the New York metropolitan area. For a year or more following the inauguration of scheduled experimental programs, these receivers proved terrific attractions. Television signs appeared in many tavern windows, in newspaper advertisements. The public flocked



LOWBROW OR Highbrow—A corner bar (above) places an instrument where it keeps feet on rails longer while (left) a cocktail lounge builds its set into the wall

to such places, at first out of sheer curiosity to see what television was like, and later to witness selected sporting events or news happenings, announced in advance.

Then, about a year ago, came a lull in television broadcasting. The engineers once more took over, because of much discussion regarding the desirability of new television standards. For many months stations reverted back to a purely experimental basis, and receivers were virtually speechless and sightless. But on July 1st last, commercialized television broadcasting finally came into being. In the New York area alone three television stations have since gone on the air with scheduled programs and so television once more becomes a practical trade magnet for tavern or cafe, club or restaurant.

Sports Pictures Best

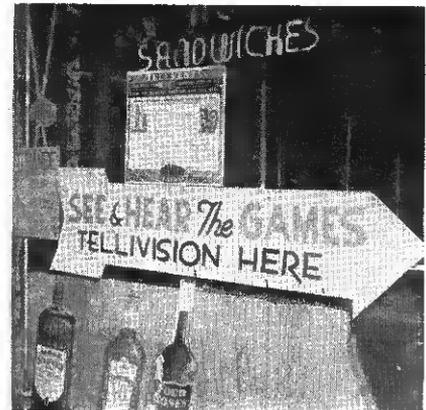
The television receiver is usually placed in some spot where its screen can be seen by a majority of patrons. It may be placed at one end of a bar, or on shelving back of the bar, or even atop of a 'phone booth. In the swankier places the cabinet is sometimes recessed into a niche in the wall, with only the panel showing flush.

It is the sports events that prove the best drawing cards with tavern audiences. Boxing bouts, wrestling contests, baseball, basketball and football games have so far proved most popular in this order. How-

ever, other program features are also well received. Some tavern and cafe owners even advise that fashion programs have brought in some ladies!

Rental-Sale Plan

One popular television contract for taverns involves installation for a month or two, at a stated monthly rental rate. After that, the receiver can be kept on the rental basis or, at the option of the rentor, rentals can be applied as installments towards the outright purchase of the machine. In nine cases out of ten the receiver is eventually purchased on the pay-as-you-go basis, and is paid for out of increased trade.



DOUBLE ATTRACTION—Pasted inside a cafe's window, above three bottles, this sign materially boosted trade

INSIDE Stuff

SERVICEMEN are mildly concerned about the series of articles currently running in a consumer magazine with several million circulation, accusing them of charging for work not done and parts not installed. In June this series gave auto repair shops "the works." In July radiomen were taken over the jumps and, we presume, the appliance people will be treated to a similar piece of sensational journalism shortly. While there is no denying that some servicemen do bill for fictitious parts when all they actually make are adjustments, this is done because the trade has learned from bitter experience that it is frequently the only way sharpshooting shoppers can be induced to pay legitimate inspection charges gracefully. The public, by and large, has little sympathy with the idea that it must pay for expert knowledge as well as for actual repairs. Charged a dollar or two for replacement of a loose wire or settling of a tube in a socket, it considers itself gyped when in reality it is paying, as it must, for professional advice. And paying little enough. A better way, we all admit, would be for the trade to uniformly adopt a substantial inspection charge and stick to it. *Radio Retailing* has repeatedly recommended this and thinks there will never be a better time to adopt such a policy than the present "seller's market." Meanwhile, we deny in behalf of our readers that most radio servicemen are gyps. They merely try, perhaps misguidedly, to sugar-coat the bitter but necessary inspection charge pill.

TO CONSUMERS from the National Better Business Bureau July 29 went a questionnaire asking: "If you were to buy an FM radio what reception qualities would you expect to obtain from Frequency Modulation broadcasting different from what you have been accustomed to from regular broadcasting?" We are affiliated with the radio business but we're a consumer too so, writing as a layman, reply in this open letter: We'd expect to obtain (1) virtually complete freedom from static of all kinds and (2) tone quality infinitely superior to that we now obtain with our AM set. Naturally, we'd expect to pick up as many FM stations as our neighbors and do it just as well. Maybe this is too much to expect. But that's what we do expect after reading the ads for over a year.

MANUFACTURERS may be squeezing through all the production they can while the going is still not too tough, anticipating more serious material shortages later in the year. At any rate, unofficial estimates place radio set production in the first half substantially ahead of 1940 and factory shipments in the first four months are known to have been 24 per cent ahead in units and 31 per

cent in dollars. Only straight consoles were produced in fewer number. All other classifications were stepped up, with radio-phonograph-recorders, phonoradio combinations, farm types, portables and car models registering the most substantial gains, in this order. Widespread production curtailment, as we predicted three months ago, is unlikely to occur before the last quarter and may not occur even then. We still think the industry is apt to wind up the year with a production total not too far from that achieved in 1940. If it does, manufacturers will deserve a palm for both their individual and their cooperative effort in the interest of the trade.

ESSENTIAL nature of radio receiving sets in homes and amateur communication equipment has, according to RMA, induced Washington to so classify replacement and maintenance parts. Such parts are soon to receive an official priority rating higher up the ladder than B-7, although just how high had not been decided at presstime. The aluminum situation, meanwhile, was eased to some extent in July when OPM and OPACS gave radio a special classification. 60,000 pounds of scrap went to makers of variable condensers, 40,000 pounds of new metal to manufacturers of electrolytic and paper condensers, 10,000 of scrap to PM speaker plants and over 150 of new metal to tube producers. This "museum-piece" metal is apparently to be distributed hereafter among parts makers on some equitable plan based upon 1940 sales percentages. Preference is stipulated for electrolytics and fixed papers needed in the repair business but manufacturers are to be permitted to use aluminum in units made for set manufacturers after 25 per cent of their normal replacement orders are taken care of.

CREDIT TERMS on consumed goods are certain to be shortened in order to ease the strain on manufacturers whose production has been or will be curtailed by defense demands. Thus finance firms are quietly recommending 12 months at the most for radio and would like to see the banks fall in line. Set factories are already tightening up to some extent in their dealings with distributors, and distributors, in turn, are watching dealer credits with an eagle eye. Dealers who finance their own paper would do well to follow suit, if they are not already ahead of the parade.

FIRST as dispenser of recreation in America is radio, according to NBC, quoting a survey by Elmo Roper. Says it now leads movies, games, reading and other outdoor and indoor diversions. Says, further, that radio as a source of news is now 26 per cent more popular than newspapers (representing a gain of 56 per cent since August 1939, the last time the question was asked) and also says that 98 per cent of all Americans now listens to news via the airwaves.



WEBSTER-CHICAGO'S NEW S.M.—"Win" Hartford, formerly with Thorndarson Electric, now sales manager for Webster-Chicago. Also holds vice-chairmanship in Western division of Sales Manager's Club

On The Television Front

Don Lee files application. NBC signs first commercial series

NEW YORK—The Albany-Schenectady-Troy area was brought a step nearer commercial television service when the FCC on July 16, granted a construction permit to the General Electric Co., for a tele station to operate on channel No. 3, (66 to 72 mc.) to cover 3320 square miles serving some 572,000 population. The applicant proposes to remodel its experimental station W2XB. Hopes to be ready commercially by September 1. Contemplates incidental experimentation with color television.

It is reported that NBC has signed the first regular television commercial series with the Adams Hat Company for six prize fights telecast from Ebbets Field, Brooklyn, N. Y. Station WNBT of NBC, during closing days of July, scheduled a wide variety of tele programs, embracing a major-league baseball game, boxing, basketball and swimming events, as well as feature and short films.

Latest to apply for a commercial television broadcast station is the Don Lee Broadcasting System, requesting a CP for Hollywood, California.

In addition to the WNBT tele entertainment, other programs emanating from New York stations, are Columbia Broadcasting System (WCBW) daily programs from 2 to 9:30 P.M., and W2XWV, operated by the Allen B. DuMont Laboratories, Inc., both offering a variety of entertainment and news.

RTG of Boston Holds Testimonial Dinner

BOSTON—Radio Technicians Guild of Boston recently held a testimonial dinner at the Hotel Manger in honor of its departing president, Emil J. Maginot, to wish him Godspeed in his new venture as technical sales engineer of the National Union Radio Corp. of Newark, N. J.

On the Newsfront



BEN MILLER—Just appointed sales manager of Meissner Manufacturing Company's jobbing division. Formerly purchasing agent of Radio Wire and Television

FM News

FCC approves several non-commercial stations. Amateurs assigned FM bands for experimental research

NEW YORK—The progress of frequency modulation transmission continues. The FCC gave its approval for a non-commercial FM station, to be operated by the San Diego Unified School District, California, on 42.3 megacycles with 1000 watts power. The new station will service 55 schools. The cities of Cleveland and San Francisco are now on air with FM transmission. Major Edwin H. Armstrong, FM inventor, made his patents available to educational groups for a nominal royalty of one dollar.

W47A, the first commercial FM station, having no alliance with any existing broadcast interest went on the air for the first time on July 17, with 36 sponsored programs weekly. This new station, serving Albany and Schenectady, N. Y., is operated by the Capitol Broadcasting Company, an independent concern devoted solely to FM. It will be heard 16½ hours daily, and 18½ hours on Saturdays.

Two new FM stations for the Pacific coast were authorized by the FCC on July 16. The Columbia Broadcasting System, Los Angeles, Cal., received permission for an FM station on 43.1 mc., and Metro-Goldwyn-Mayer Studios, Los Angeles, to operate on 46.1 mc. with a coverage of 7000 square miles.

Station WJIM, of Lansing, Michigan, won its FM permit and was assigned the 47.7 mc. channel.

The prospect of further independent research in the development of FM was seen in the announcement that licensed radio amateurs will be permitted to make use of a portion of the 10 meter band (29,250 to 30,000 kilocycles) for experimentation with FM transmission. Amateurs are also permitted the use of FM in the 5, 2½ meter and higher frequency portions of the spectrum.

Government Figures

Director of Census reports 32 per cent business increase for radio dealers

WASHINGTON—According to a summary just released by J. C. Capt, director of the Census, radio and musical appliance stores enjoyed an increase of 32 percent in business for May, 1941, over the corresponding month of 1940.

In all, 121 outlets made reports to the

Bureau of Census. Five months sales for this group were 19 percent over 1940, and May sales this year 17 percent over April of this year.

OPACS Report

Calls off radio industry conference. Assures RMA of preference allocations for radio repair supplies

WASHINGTON—A conference planned for the entire radio industry, similar to the automobile, refrigerator and other industry conferences, by the Office of Price Administration and Civilian Supply (OPACS) is regarded as unnecessary, and will not be called, according to official advices to the RMA Priorities Committee. OPACS officials also have assured RMA that radio is regarded as "essential" and that there will be preference allocations for maintaining supplies of radio repair and maintenance parts to keep in operation receiving sets now in the hands of the public. Allocations of materials for new radio production are still under consideration.

Further conferences with OPAC have been arranged by chairman Paul V. Galvin of the RMA Priorities Committee, and additional radio industry data will be submitted by the RMA Material Bureau under the direction of Dr. W. R. G. Baker, of the Association's Engineering Department.



AT ANNUAL SALES CONFERENCE—For Meissner sales representatives and factory men, held during recent Chicago Trade Show. Left to right (around table): Jack West, Bert Heuvelmann, Merton Dobbin, Charles Pointon, Jim Millar, J. Earl Smith, Bill Carduner, John Olsen, J. J. O'Callaghan, B. J. Fitzner, G. V. Rockey, E. M. Braun, J. E. McKinley, Jack Clawson, R. W. Müscher, Harry Lasure, Bill Purdy, Ernest Scott, Jim Kay, Jim Rachels, Bill Atkins and Jerry Pointon

Defense Taxes

House Committee fixes 10 per cent rate to return \$56,000,000

WASHINGTON—The House Ways and Means Committee in its new revenue bill has set radio, music, and electrical appliance industries down for \$56,500,000 in excise taxes.

Under the program proposed by the Committee, excise levies will yield an additional \$876,000,000 annually for defense.

As the measure now stands the excise taxes on radio sets and parts will be 10 percent and will yield \$9,400,000 a year. Taxes on mechanical refrigerators will jump from 5½ to 10 percent under the proposed new law to yield around \$21,000,000.



RAYTHEON POW-WOW—At annual Chicago sales meeting presided over by E. S. Riedel, general sales mgr., and Earl Dietrich, mgr. jobber sales, plans were outlined for balance of '41 and new displays were exhibited. Pictured here, inspecting new poster, left to right: A. E. Akeroyed, sales promotion manager; Riedel, Dietrich and D. F. Reed, credit manager

Muzak Proposes New Broadcast Service

WASHINGTON—A new type of subscriber broadcast service is proposed by the Muzak Corporation, New York City, in connection with a construction permit for a developmental FM broadcast station today authorized by the Federal Communications Commission on an experimental basis only. This corporation, which is now in the business of furnishing wired musical program without advertising to hotels, restaurants and home subscribers on a contract basis, contemplates experimenting with a like service by means of radio.

According to the applicant:

"The purpose of the experiment is to determine whether the public or a sufficiently large portion of the public would prefer to obtain radio programs by direct payment for the service. The experiment will be conducted by offering a service to the general public in New York City and furnishing this service to those of the general public who pay for the service. There will be no advertising in connection with the service and the success or failure of the experiment will depend upon the willingness of the public to pay an amount which will warrant the furnishing of such a service as an established business."

New transmitter will be located at 11 W. 42nd Street, New York City. It will use power of 1000 watts and will operate on the frequency 117.650 kilocycles on an experimental basis only.

Dry Electrolytic Patents Upheld

INDIANAPOLIS—In an exhaustive opinion dated June 19, 1941, Judge Barnes of the United States District Court for the Northern District of Illinois, Eastern Division, upheld the validity of Ruben patent Nos. 1,710,073 and 1,714,191, covering dry electrolytic condensers, and found that defendant had infringed. This news

comes from P. R. Mallory & Co., Inc., exclusive licensee under the patents with the right to grant sublicenses.

The Court said in part—"The evidence shows that all commercially practical dry electrolytic condensers on the market today stem directly from and embody the Ruben inventions of the patents in suit. So far as the art knows today, there is no way of making a commercially practical dry electrolytic condenser except by following the fundamental teachings of the Ruben patents."

Musicraft Advances King

NEW YORK—Musicraft Records, Inc., of this city, just named Michael King as its midwestern sales manager. King has just returned from a nation wide survey, collecting and analyzing promotional activities in all the key cities.



BIG BUSINESS—Proud personnel of Saelens Radio Service Co., Portland, Oregon, lined up to have its picture taken. Did a \$30,000 service business in past 12 months. Big user of Mallory vibrators, controls and condensers

Crosley Ups Holmes

CINCINNATI—The appointment of Howard A. Holmes of Detroit as manager, defense products division, to act as representative of The Crosley Corporation in its dealings with governmental agencies on national defense projects was announced middle part of July by R. C. Cosgrove, vice-president and general manager of The Crosley Corporation.

Holmes, until recently, had been in charge of the Detroit office of The Crosley Corporation, previous to which he had been with the sales department of the National Steel Company and the Inland Steel Company.

Emerson Plans

Aluminum Curtailment

NEW YORK—A contemplated reduction of over 90 percent in the amount of aluminum normally used in the fabrication of its radio receivers has just been announced by B. Abrams, president of the Emerson Radio and Phonograph Corporation, New York City. Completion of an intensive study by its engineers, calculated to conserve the use of aluminum and thereby divert it into defense channels, disclosed numerous parts that could be made of substitute materials without sacrificing performance or efficiency.

Hamilton Buys

"Olympic" Trade Mark

NEW YORK—Hamilton Radio Corp., announces that they have purchased the "Olympic" trade mark from American Bosch Radio Corporation. Name was registered by the latter company about 10 years ago and was used on a line of sets featured by them.

Presto Reports On Aluminum Saving

NEW YORK—Presto Recording Corp., reports, that, instead of attempting to obtain more new aluminum under the terms of its priority rating, they are recoating discs, in some cases 20 or 30 times, thus making more efficient use of the supply of aluminum now owned by the recording industry. In so doing, they actually release more aluminum to the defense industries than would be made available if the used discs were turned in as scrap.

They scotch a rumor that the Government considers it unpatriotic to have aluminum recording blanks recoated by quoting "the Office of Civilian Defense, stating specifically only aluminum no longer of any use to the consumer should be asked for." State stations and studios have a definite and legitimate use for their used aluminum recording blanks.

Whitney Joins Kelvinator

DETROIT—The appointment of George Whitney, for the past two years advertising manager of the Norge Division of the Borg-Warner Corp., as advertising copy chief of the Kelvinator division, Nash-Kelvinator Corp., was announced by C. J. Coward, director of advertising and sales promotion for Kelvinator.

New Book Treats

School P. A. Systems

WASHINGTON—The Federal Radio Education Committee has just announced the publication of a new 58-page book entitled "The School Radio-Sound System" by R. R. Lowdermilk.

It is written primarily in terms of the educational uses to which such equipment may be put, and it treats of technical matters in relation to such uses and in a

fashion sufficiently simple for the average teacher or administrator to understand. Copies are obtainable at 25 cents each through the Federal Radio Education Committee, U. S. Office of Education, Washington, D. C.

Jaffe Joins Howard

CHICAGO—Howard Radio Company's general sales manager, Joseph M. Muniz, announces the appointment of Raymond Jaffe as advertising manager. Jaffe is well known in the radio advertising field, having been associated for past five years with leading mail order and radio manufacturing companies.



PRECISION MEN—M. Mentzer (left) and S. M. Weingast (right) of Precision Apparatus Co., take time out at recent Trade Show for chat with G. Richter of American Lava Corp.

the DEATH-KNELL for FEEDBACK



New TURNER CARDIOID

Out-Performs Many Mikes Selling at TWICE the PRICE!

Here's the unit sound men have been praying for! Two-element generator combines the best features of the velocity and dynamic in a mike that's extremely sensitive in front, and completely dead in rear. Use it with confidence—where no other mike will perform! The most efficient microphone yet produced by modern precision engineering—at a price everyone can afford.

101A Standard Cardioid, List. \$55
101B De Luxe Cardioid, 3-way switch...List \$65
101C Broadcast Cardioid, with range extended to 10,000 cycles, List \$70

WRITE FOR COMPLETE FREE INFORMATION

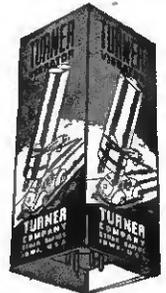


TWO UP FOR SIRAGUSA—Ross Siragusa, (left) president of Continental Radio and Television, with Mrs. Siragusa and guide Shelby Cleveland, tarpon fishing at Punta Gorda, on Peace River, west coast of Florida. Prize catch measured seven feet long and weighed 109 pounds.

COMPARE Ordinary Vibrators with TURNER Push-Pull VIBRATORS

in Front of a Stroboscope—for the FACTS

A Stroboscopic light lets the human eye see the fastest action as though in a slow moving picture. Before a Stroboscope you can SEE the wider swing of the reed, in a Turner Push-Pull Vibrator. SEE the emphasized wiping action of the contact points, the steady, chatter-free operation. You'll know why Turner Vibrators, with increased contact pressure and decreased contact resistance offer longer, more trouble-free life.



TIME TO TURN TO



FREE 16 page Manual for Radio Service Engineers. Contains a wealth of technical information. Send for yours.

THE TURNER COMPANY
915 17th St. NE., Cedar Rapids, Iowa



SYLVANIA'S W. R. JONES—As Director of Commercial Engineering he is constantly traveling to all parts of the country conducting Sylvania service school classes. Averages nearly 50,000 miles per year

New RMS Program

PHILADELPHIA—In celebration of its eighth birthday, Radio Manufacturers Service, is considerably extending the scope of its activities.

Since its organization under sponsorship of Philco in 1934, this group has grown from 8,000 to more than 30,000 members throughout the United States and foreign countries. Philco is now instituting an All Year 'Round Service program which is expected to provide greater benefits to consumers and yield greater profits for RMS members.

As the first part of the program a new type of membership certificate will be presented to the RMS members. To be lithographed in three colors and it will identify the members with the servicing of all Philco products.

Emerson's Export Markets

NEW YORK—Addressing a group of export accounts, Max Abrams, Vice President, in charge of foreign sales of the Emerson Radio and Phonograph Corporation, New York, New York, stated that his company's export business had not decreased since the outbreak of hostilities despite loss of many markets in the war zone.

"A comparison of the first six-months period for 1939, 1940 and 1941," revealed Abrams, "shows that while the war has precluded sales to many formerly good markets, we have offset that decrease by intensive concentration on remaining markets with the result that new volume markets have been developed. Specially designed radio receivers, particularly for use in foreign lands have helped accomplish this objective.

Ohmite Expands

CHICAGO—The Ohmite Manufacturing Co., recently completed an addition to its factory on West Flournoy Street, Chicago. New addition will expand the company's facilities and double the production space.

Priority News

Sales Managers Club appoints priorities committee.

CHICAGO—The Sales Managers Club, Western Group, has appointed a Priorities Committee to make an effort on behalf of the manufacturers of radio parts to secure a better rating for (a) the parts industry in general, (b) parts to be used to maintain existing receivers, and (c) parts which find their way, either directly or indirectly, into Defense Supplies. They say, eventually it will be necessary for everyone in the industry to keep accurate records relating to the sale of their merchandise.

In order to facilitate its work the Sales Managers Club urges all purchasers of radio parts and accessories to adopt the following procedure: 1. Find out from your customer what use will be made of the merchandise; 2. If it is sold to a government agency or is destined to find its way into Defense Supplies then get: (a) the contract number, or (b) a preference rating, or (c) if there is no number or rating, then get the customer's affidavit that the merchandise is being used for Defense Supplies; 3. When you place an order with a manufacturer for components parts to replace merchandise sold 'off-your-shelves' or being used by you in the completion of a defense contract, be sure to attach to the order, the contract number, the preference rating or the customer's affidavits.

RTA Reelect Officers

LONG BEACH—Radio Technician's Association of this city report the following officers have been retained for the balance of the year: Harry E. Ward, Jr., president; Walt Rundquist, vice-president and treasurer and Bob Hayden, secretary.

President Ward advises the membership had the pleasure of hearing interesting lectures by Irwin Steinberger of RCA on record changers and how to repair these instruments. An address by Charles Hansen of the Jensen Speaker Company on speaker equipment and Paul O'Connor of the Miller Coil Company on coil construction.

Kopetsky Joins Oxford-Tartak

CHICAGO—Karl A. Kopetsky, formerly managing editor of *Radio News Magazine*, has joined Oxford-Tartak Radio Corp., as a member of its executive staff. Kopetsky's immediate duties will include the coordination of the company's expanding activities to provide for National Defense requirements in addition to the firm's regular business.

Erickson Moves

HENDERSONVILLE—Herb Erickson Co., manufacturer's representative, formerly of Asheville, North Carolina, is now located at Flanders Avenue, Hendersonville, N. C.

Distribution News

ADMIRAL—The following companies were recently appointed Admiral distributors by Continental Radio and Television Corporation. *York Supply Co.*, 517 W. 3rd St., Cincinnati, Ohio., *Thompson & Holmes Ltd.*, 2701-16th St., San Francisco, Cal., *York Supply Co.*, 531 East 3rd St., Dayton, Ohio., *Ferguson Co.*, 10th & Broadway, Paducah, Kentucky, *Lyle-Crenshaw Co., Inc.*, 448 North Watkins, Memphis, Tenn., *L & K Electric Co.*, 72 State St., Binghamton, N. Y., *Wholesale Appliance Co.*, 201 Rock St., Little Rock Ark., and entire Peaslee-Gaulbert Corp., located in the following cities: Atlanta, Ga., Louisville, Kentucky; Tampa, Jacksonville, and Miami, Florida.

TURNER—*Irvin I. Aaron & Associates*, 4028 North 16th St., Milwaukee, Wis., is the new sales representative for The Turner Company's (Cedar Rapids, Ia.) products in Minnesota, Wisconsin and parts of North Dakota and Illinois.

COLUMBIA RECORD—Sales manager Paul Southard of Columbia Recording Corp., announces the following new distributors: *Westinghouse Merchandise Distributors*, 196 Franklin St., Buffalo, N. Y., the *Artophone Corp.*, 814 Walnut St., St. Louis, Mo., *Omaha Appliance Co.*, 18th and St. Mary's Streets, Omaha, Nebraska., and the *Southern Equipment Co.*, 419 S. St. Mary's Street., San Antonio, Texas.

Dealer Helps

CONTROL MANUAL—*International Resistance Company*, of Philadelphia, has just brought out a new IRC Volume Control Replacement Manual. Contains 136 pages with considerable detailed control information for the serviceman. Copies may be obtained through jobbers or direct from company.

STATION LIST—*National Broadcasting Co., Inc.*, has a handy, time-saving reference folder on the broadcasting stations of the United States and Canada. Brought up-to-date, as of May 1, 1941, with new allocations.

INSTRUCTION MANUAL—*Meissner Manufacturing Co.*, Mt. Carmel, Illinois, announces a 1941 manual containing building instructions for all Meissner Kits. Complete with circuit and pictorial diagrams. Price 50 cents.

CATALOG F-41—*Atlas Sound Corp.*, 1439 39th St., Brooklyn, N. Y., offers an 11-page booklet listing all its latest speakers and other sound equipment.

ANTENNA CATALOG—*Premax Products* of Niagara Falls, N. Y., has just released a 12-page catalog on vertical and horizontal radiators, and numerous antenna mountings and insulators.

TUBE BOOKLET—Ken-Rad has just released a new booklet giving essential radio receiving tube characteristics, with 128 types added since the last edition. Free to dealers on request. Write direct to factory at Owensboro, Kentucky.

SUPPLEMENT #34—Issued by the *Leotone Radio Co.*, 63 Dey St., New York City, is a replacement list of speaker cones for all the well-known receiver manufacturers. Free to jobbers.

ANTENNA CATALOG—*The Insuline Corp. of America* announce an 8-page catalog on auto, FM, television and home antennas.

OTHER CATALOGS—*Harvey Radio Co.*, 103 W. 43rd Street, N. Y. City, announces its No. 41 catalog on radio parts and equipment. Contains 329 pages with thousands of illustrations.

DEFENSE POSTER—In support of the United States Treasury's campaign to sell Defense Bonds and Stamps, the *Philco Corp.* offers its radio dealers, a new (8½ by 11 inch) poster featuring the Statue of Liberty sending forth a "Beam of Light" for America. At the bottom of the poster is the *Philco* signature themed with the message "Music on a Beam of Light." New posters free for the asking.

SOUND CATALOG—*Mark Simpson Mfg. Co., Inc.*, announces a new "Masco" 15-page catalog. Contains specifications and numerous illustrations on portable P. A. equipment, inter-communicating systems, microphone stands and other accessories.

FOLDERS, DISPLAYS, ET. AL—*Ausley* has just released a new sales manual, a folder on the Essex and Chelsea models and individual mailing pieces on the Century Ensemble and Oxford Dynaphone. Latest display material include an effective display-board showing 13 wood finishes used in Dynaphone manufacture. Also layout of advertising mats for dealer use.



FLOOR OR WINDOW DISPLAY—For new *RCA Radiola* table type receivers. Jinx Falkenburg, America's well known model, graces display in a life-size figure. Made of heavy cardboard and easily assembled.

CHECK LIST—*RCA Manufacturing Company, Inc.*, new "Pocket Check List" shows at a glance all the chief features of its 1942 console and table models. Measures 3½ by 8½ inches. Available through distributors.

RECORDING MERCHANDISER—*RCA Victor* announces new recording promotional piece, in the form of a baby album, to attract doting mothers and boasting fathers. Contains envelope pockets for six 6-inch "Phonogram" discs. Album is illustrated and indexed.

NEEDLE DISPLAY—*Recoton* presents an attractive three-color "silent salesman" display card for use in window or on counter. Carries newly designed packages of steel cutting and "Stellite" needles and transcription points for home recording.

COMBINATION DISPLAY—*Admiral* offers this "Record Girl" combination hanger or easel display, in full color. Other 1942 aids include new satin



banner; three-unit compact counter display and an electric window sign. Also salesman's pocket manual and full line folder.

TWO DISPLAY GUIDES—Printed by *Sherman Paper Products*, of Newton Upper Falls, Mass. Contains 70 illustrative sketches of window, interior backgrounds and floor displays. Write for Free copy and mention *Radio Retailing*.

SIX NEW AIDS—*Westinghouse* new promotional helps includes 5-color postcard on "Caryette" WR62K3 receiver, a small 2-color folder on portables, a full line folder, a 2-color chart for wall, window or store display, a blue and gold display banner and a 4-color silk screen merchandiser for counter or window.

"PERSONAL" DISPLAY—*Emerson Radio and Phonograph Corp.* introduces a new 4-colored display highlighting its "Power-Mite" pocket radio. This promotion piece is centered around a patriotic theme.

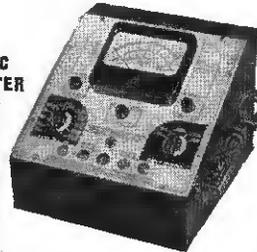
RELAY CATALOG—New 4-page catalog by *Standard Electrical Products Co.*, listing Staco relays. Contains specifications and prices.

Money Making Dealers ALL FEATURE RCP TEST EQUIPMENT!

Year after year the steady money-makers among test equipment dealers are those who feature dependable RCP instruments. No other line packs such quality—measured in features and performance—at such low price! Typical of RCP advanced engineering . . . typical, too, of RCP value are these instruments—two from a complete, money-making line.

RCP-661 ELECTRONIC MULTITESTER

It's four complete instruments in one! There's a vacuum tube AC and DC voltmeter, Ohmmeter and Capacity meter—all direct reading. RCP Electronic Multitester Model 661 is the only instrument of its kind—covering 26 vacuum tube operated ranges. Has input impedance as high as 160 megohms . . . input capacity of only .00005 mfd. Feature this great test instrument, and great value—*increase your profits!* Dealer Net Price—only



\$34.95

RCP-310C-4 TUBE TESTER

Famous dynotimum test circuit, tests every type tube, including miniature and ban-tam jr. Spare sockets for future base arrangements. Tests separate sections of multi-purpose tubes. Newest and finest mechanically operated ROLIN-DEX tube test charts, with free tube setting and information. The "tester that has everything" is a money-maker for you. Feature Model 310C-4. Dealer Net Price



\$25.95

NEW CATALOG FREE! Latest, greatest catalog of dependable RCP Test Equipment. Send for your copy at once. It's FREE!

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.

Prices subject to change without prior notice.

RCP dependable TEST instruments

RADIO CITY

PRODUCTS COMPANY, INC.

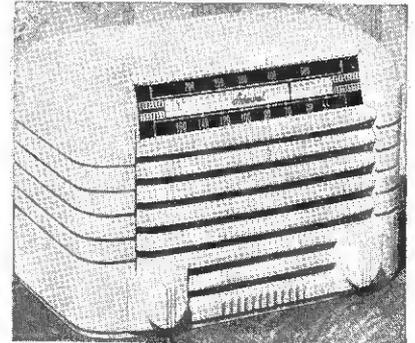
88 PARK PLACE • NEW YORK, N. Y.

FM Receivers and Tuners

New

Model	Type	Phono	Bands	Tubes	Spkr. (In.)	Built-In FM Ant.	FM Tuning ²	List Price ¹
Anslay Radio Corp., 21-10 49 Ave., Long Island City, N. Y.								
FM-4	chassis*		FM	7		no	man.	60.00
Continental Radio & Tele. Corp., 3800 Cortland St., Chicago, Ill. (Admiral)								
4207-B10	console	auto.	FM-BC-SW	10	10	yes	man.	144.95
4208-B10	console		FM-BC-SW	10	10	yes	man.	99.95
Crosley Corp., 3401 Colerain Ave., Cincinnati, Ohio								
22CA	console		FM-BC-SW	12	14	yes	man.	149.95
22CB	console		FM-BC-SW	12	14	yes	man.	149.95
22CP	console	auto.	FM-BC-SW	12	14	yes	man.	149.95
Espey Mfg. Co., Inc., 305 E. 63 St., New York City								
2112	table		FM-BC	11	8	no	man.	75.00
1423	console	auto.	FM-BC-SW	14	12	no	man.	195.00
1453	console	auto.	FM-BC-SW	14	12	no	man.	195.00
1445	console	auto.	FM-BC-SW	14	12	no	man.	265.00
22XR	console	auto.	FM-BC-SW	14	12	no	man.	200.00
Fada Radio & Elec. Co., 3020 Thomson Ave., Long Island City, N. Y.								
	console	auto.	FM-BC-SW	15	12		man.	189.95
Farnsworth Tele. & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.								
CC-1110	console		FM-BC-SW	11	12	yes	man.	149.95
CK-1111	console	auto.	FM-BC-SW	11	12	yes	man.	149.95
CK-1112	console	auto.	FM-BC-SW	11	14	yes	man.	149.95
Freed Radio Corp., 39 W. 19 St., New York City								
51X1	table		FM-BC-SW	14	8	no	man.	149.95
61X1	console		FM-BC-SW	14	12	no	man.	149.95
42X	console	auto.	FM-BC-SW	18	12, 5	no	man.	149.95
43X	console	auto.	FM-BC-SW	18	12, 5	no	man.	149.95
45	console	auto.	FM-BC-SW	20	12, 5	yes	man.	149.95
55	console	auto.	FM-BC-SW	21	12, 5	yes	man.	149.95
57	console	auto.	FM-BC-SW	15	12, 5	yes	man.	149.95
Galvin Mfg. Co., 4545 Augusta Blvd., Chicago, Ill. (Motorola)								
	console		FM-BC-SW	18	12	yes	man.	149.95
General Electric Co., 1285 Boston Ave., Bridgeport, Conn. (G-E, Musaphonic)								
JFM-90	table*		FM	9		no	P.B.	49.95
JFM-165	console		FM-BC-SW	16	12	yes	P.B.	175.00
12 (Musa-)	table*		FM	9		no	P.B.	69.95
80 phonic)	console	auto.	FM-BC-SW	22	10, 10	yes	P.B.	645.00
Hallcrafters, Inc., 2611 S. Indiana Ave., Chicago, Ill.								
S31	table*		FM-BC	9		no	man.	69.50#
S27	table*		FM-UHF	15		no	man.	175.00#
Howard Radio Co., 1735 Belmont Ave., Chicago, Ill.								
718FM-apc	console	auto.	FM-BC-SW	14	12	no	P.B.	169.95
718FM	chassis		FM-BC-SW	14	12	no	P.B.	97.50
Magnavox Co., Inc., Ft. Wayne, Ind.								
11	chassis*		FM	11		no	man.	65.00
8	chassis*		FM	8		no	man.	45.00
Meissner Mfg. Co., Mt. Carmel, Ill.								
9-1053	table		FM-BC-SW	17	8	no	man.	108.00
9-1054	chassis		FM-BC-SW	17	8 or 12	no	man.	95.00
9-1047	table*		FM	8		no	man.	39.95
National Co., 61 Sherman St., Malden, Mass.								
FMR	table		FM	12		no	man.	149.95
Philco Radio & Tele. Co., Philadelphia, Pa.								
1016	console	auto.	FM-BC-SW	16	12	yes	man.	500.00
1015	console	auto.	FM-BC-SW	12	12	yes	man.	300.00
1013	console	auto.	FM-BC-SW	10	12	yes	man.	225.00
1012	console	auto.	FM-BC-SW	10	12	yes	man.	189.95
400X	console		FM-BC-SW	11	14	yes	man.	135.00
395X	console		FM-BC-SW	9	14	yes	man.	100.00
390X	console		FM-BC-SW	8	12	yes	man.	89.95
355T	table		FM-BC-SW	8	6	yes	man.	65.00
350T	table		FM-BC-SW	7	6	yes	man.	49.95
Philharmonic Radio Co., 21 W. 45 St., New York City								
K1-FM	console	auto.	FM-BC	21	6, 12	yes	P.B.	†
S6-FM	console	auto.	FM-BC	24	5, 15	yes	P.B.	†
Pilot Radio Corp., 3706 36 St., Long Island City, N. Y.								
P201	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	295.00
P202	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	310.00
P203	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	310.00
P204	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	325.00
P205	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	350.00
P206	console	auto.	FM-BC-SW	18	12, 5	no	P.B.	350.00
Scott, E. H., Radio Labs., Inc., 4450 Ravenswood Ave., Chicago, Ill.								
	chassis		FM-BC-SW	33	15	no	man.	488.50
	chassis		FM-BC-SW	28	12	no	man.	329.50
	chassis		FM-BC-SW	18	12	no	man.	249.50
Sentinel Radio Corp., 2020 Ridge Blvd., Evanston, Ill.								
270-FM	table*		FM	8		no	man.	49.95
Stromberg-Carlson Tel. Mfg. Co., 100 Carlson Road, Chicago, Ill.								
505-H	table		FM	9	5	no	man.	69.95
515-M	console		FM-BC-SW	17	10 1/2	no	man.	169.50
535-M	console	auto.	FM-BC-SW	15	10 1/2	yes	P.B.	225.00
585-M	console		FM-BC-SW	19	co-ax	no	man.	415.00
925-H	table		FM-BC-SW	14	8 1/2	yes	P.B.	139.50
925-L	console		FM-BC-SW	14	12	yes	P.B.	165.00
935-PL	console	auto.	FM-BC-SW	16	10 1/2	yes	P.B.	360.00
925PF	console	auto.	FM-BC-SW	20	co-ax	yes	P.B.	695.00
925PM	console	auto.	FM-BC-SW	14	12	yes	P.B.	265.00
925PS	console	auto.	FM-BC-SW	16	10 1/2	yes	P.B.	275.00
935PR	console	auto.	FM-BC-SW	14	12	yes	P.B.	290.00
925PSY	console	auto.	FM-BC-SW	16	10 1/2	yes	P.B.	410.00
935PX	console	auto.	FM-BC-SW	14	12	yes	P.B.	300.00
Wilcox-Gay Corp., Charlotte, Mich.								
	table*		FM	8		no	man.	39.95
Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.								
12H670	console		FM-BC-SW	12	14	yes	P.B.	119.95
12H689	console	auto.	FM-BC-SW	12	14	yes	P.B.	199.95
12H695	console	auto.	FM-BC-SW	12	14	yes	P.B.	250.00
22H698	console	auto.	FM-BC-SW	22	12, 12, T	yes	P.B.	600.00
22H699	console	auto.	FM-BC-SW	22	12, 12, T	yes	P.B.	600.00
12H650	chair		FM-BC-SW	12	12	yes	P.B.	119.95
12H696	console	auto.	FM-BC-SW	12	14	yes	P.B.	250.00

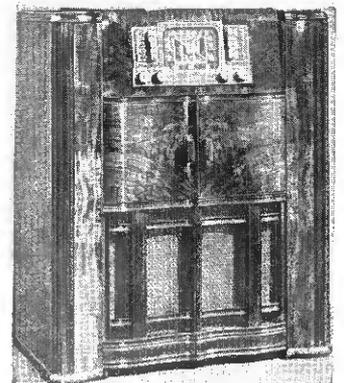
* Tuner † May be installed in standard console models of company's line ‡ K1-FM Futura from \$459.50 to \$563.50 and S6-FM Electra from \$555.50 to \$659.50 depending on cabinet style § Customer net, only sold direct from factory, fob Chicago † Eastern list prices are shown except as noted ‡ Pushbutton models also provide manual operation.



ADMIRAL COMPACT, model 4202-86, a 6-tube ac-dc superhet receives the standard American broadcast band. Ivory plastic cabinet measures 11 1/2 wide 7 3/4 high, and 6 1/2 inches deep. List price \$19.95.



ADMIRAL AUTOMATIC RECORD CHANGER with 3-tube amplifier has self-starting 110 v., 60 cycle ac motor. Model 4209-A3 (illustrated) plays twelve 10-inch and ten 12-inch records. Walnut cabinet measures 16 1/4 wide, 10 3/4 high, 15 1/2 inches deep. Equipped with Admiral lifetime needle. List price \$37.95.



ADMIRAL CONSOLE COMBINATION, model 4207-A10, equipped with "Slide-A-Way" automatic record changer, plays twelve 10-inch and ten 12-inch records. 10 tube ac superhet, receives standard, shortwave and police bands, has 5 station pushbuttons, new triple tuned R.F., converter circuit. Walnut cabinet provides space for record albums. List price \$129.95. Model 4207-B10, 10 tubes, AM-FM, is also available for \$144.95. Continental Radio & Tele. Corp., 3800 Cortland St., Chicago, Ill.

Products . . .



EMERSON BAKELITE TABLE TYPE receiver, model 421, features a large easy to read slide-rule dial. A 5-tube superhet in a streamlined walnut plastic cabinet has 4 control knobs, a 6-inch oval speaker, and 2 watts of beampower output.

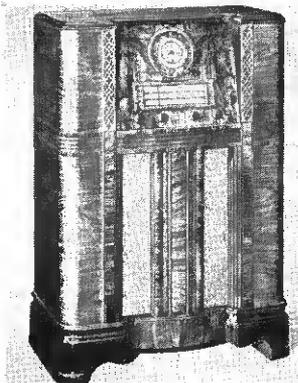


EMERSON TABLE TYPE PHONORADIO, model 447, with automatic record changer is a 7-tube superhet, receiving the standard broadcast band. Phonograph plays twelve 10-inch or ten 12-inch records. $3\frac{1}{2}$ watts of output on radio, 4 watts on phonograph. Attractive butt walnut cabinet measures 13 high, $18\frac{1}{2}$ wide, and $16\frac{1}{4}$ inches deep. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.

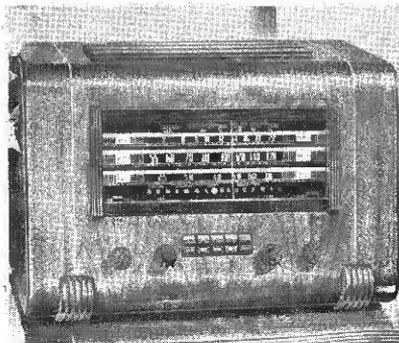


MOTOROLA CONSOLE COMBINATION radio and automatic phonograph, model 81F21, has the new pull out "Roll-A-Way" drawer for the phonograph mechanism. The drawer pulls in and out of the console chassis at the merest touch due to its "Feather Touch" ball bearing gliders. Features 2 bands, standard and foreign, and is equipped with 5 pushbuttons.

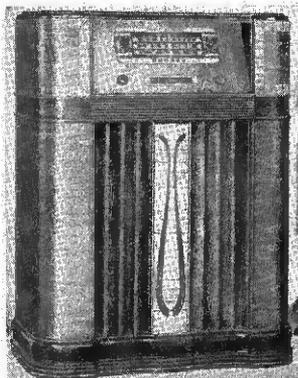
MOTOROLA SELF-TUNING CLOCK MODEL console, 101C31, contains a patented electric clock mechanism which pre-selects your programs at 15 minute intervals and tunes them in all day long with no further attention. Has three bands, standard, international short-wave, and police. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.



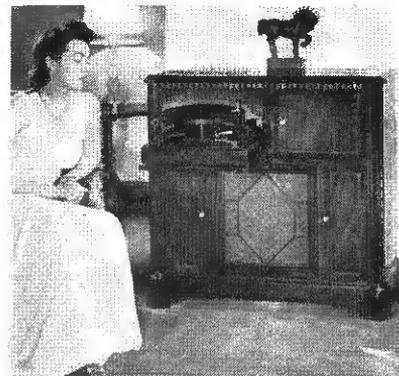
G-E TABLE TYPE radio, model L-740, a 7-tube superhet in a walnut cabinet has its speaker grille on top and incorporates a specially-designed console-type dial. Has $6\frac{1}{2}$ -inch speaker, two beamscope, three bands, and 5 electric push-buttons. Measures $11\frac{1}{2}$ inches high and 17 inches wide.



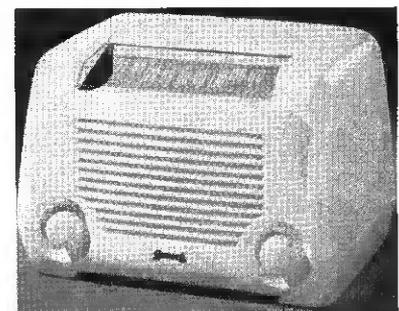
G-E CONSOLE, model L-915, a 9-tube receiver stands 40 inches high, has slanting control panel, receives standard, police, and shortwave bands. Features two built-in beamscope antennas for long and short wave reception, 14-inch speaker, 6 electric pushbuttons, and 9 watts maximum power output. General Electric Co., Bridgeport, Conn.



RCA CONSOLE COMBINATION, model V-210, is an 8-tube superhet, receiving American and foreign reception. Incorporates new automatic record changer which plays twelve 10-inch and ten 12-inch records. Cabinet of matched veneers is available in mahogany and walnut.

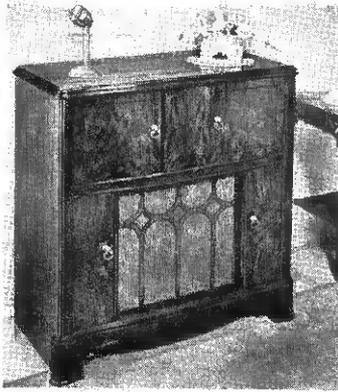


RCA CONSOLE COMBINATION, model V-225, has automatic record changer with Tandem Tone Arm. Plays both sides of double-faced records without turning them over. Nine-tube superhet receives American and foreign reception on 3 bands. Two built-in antennas. Chippendale style cabinet with record storage department. RCA Mfg. Co., Camden, N. J.

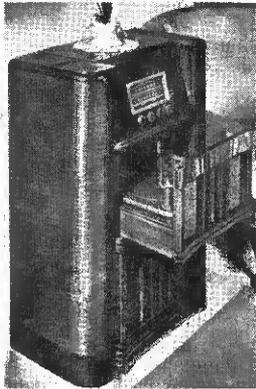


SONORA PLASTIC COMPACT RADIO, "Stratoliner" model, available in ivory, walnut or pastel-green measures $10\frac{1}{2}$ long, $6\frac{1}{4}$ deep, and 7 inches high. A 5-tube ac-dc receiver, tunes the standard broadcast band. Sonora Radio & Tele. Corp., 2626 West Washington Blvd., Chicago, Ill.

OLYMPIC 3-WAY PORTABLE, model PT-51, operates on ac-dc or batteries. Housed in British-fan simulated leather with contrasting pastel fan inside panel, a closed-front cabinet with slide-in door, lock and key. Has 5 tubes, 5-inch speaker, and receives standard broadcast band. Measures $13\frac{1}{4}$ wide, $8\frac{1}{2}$ high and $5\frac{1}{2}$ inches deep. List price \$29.95. Hamilton Radio Corp., 142-144 West 26 St., New York, N. Y.



WESTINGHOUSE COMBINATION radio, phonograph and recorder, model WR-42X6, is an ac superhet, totaling 10 tubes. Includes 12-inch speaker and receives standard and foreign bands. Features avc with 5½ watts push-pull output, 6 electric push-buttons, automatic record changer which plays twelve 10-inch or ten 12-inch records. Contains record and microphone compartments. 18th Century lowboy in walnut measures 36 wide, 36¼ high, and 17¼ inches deep. List price \$179.95.

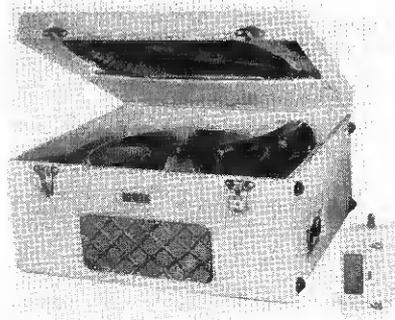


WESTINGHOUSE COMBINATION CONSOLE, model WR-42X7, with automatic record changer plays twelve 10-inch or ten 12-inch records. Six-tube superhet with 12-inch speaker receives standard and foreign bands. Has automatic volume control with 5 watts output. Cabinet measures 28¼ wide, 39 high, and 16 inches deep. List price, \$89.95. Westinghouse Radio Headquarters, 150 Varick St., New York, N. Y.



GENERAL TELEVISION PORTABLE RADIO, model 539, operates on ac-dc or battery, tunes standard American broadcast, has 5 tubes. Equipped with battery saver and battery life indicator having three buttons on the face of the portable marked "1st, 2nd, and 3rd stages." No switch is necessary to change from battery to electric, simply plug in line cord to socket. The pilot light illuminates when using house current. List price \$29.95.

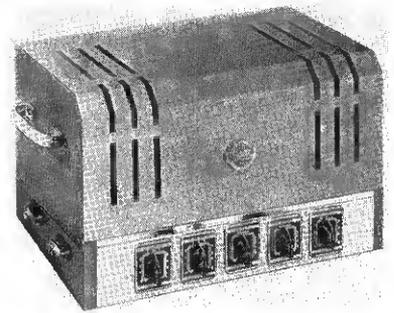
GENERAL TELEVISION PORTABLE ELECTRIC PHONOGRAPH with 3-tube ac amplifier features the "Magic Electric Arm" which automatically starts the motor when arm is placed on record and automatically stops the motor when record is finished. Can carry approximately 12 records in lid of carrying case. Measures 8 high, 15 wide, and 13½ deep. List price \$22.95. General Television Radio Corp., 1240 North Homan Ave., Chicago, Ill.



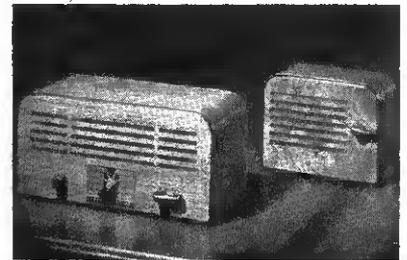
ASTATIC MOBILE PICKUP, model, AB-8M, is designed especially for use on sound trucks, aeroplanes, automobiles, trains and other mobile equipment. The pickup is counterbalanced so as to track on recordings even in a vertical position without jumping the groove. Hinged head may be tilted upward for quick and easy changing of needles. The Astatic Corp., Youngstown, Ohio.



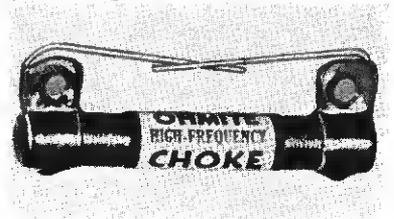
ERWOOD SOUND SYSTEM utilizes a 7-tube 30 watt amplifier that has provision for two microphones. Incorporates an automatic record changer and a 9-tube radio set. Monitor speakers are provided for monitoring the program. The entire assembly is contained in an attractive tweed covered portable carrying case. Erwood Sound Equipment Co., 221 West Erie St., Chicago, Ill.



WEBSTER-RAULAND PHONO AMPLIFIER is designed to give better reproduction from phonograph records. Unit has vertical front panel within specified dimensions to permit rack mounting if so desired. Features automatic volume expander up to 10 db., dual fader-phonograph unit, (permitting mixing and fading of two phonos); two separate tone controls, each increases or decreases treble and bass respectively; and master volume control with ac switch. Webster-Chicago Sound Div. of the Rauland Corp., 3825 Armitage Ave., Chicago, Ill.

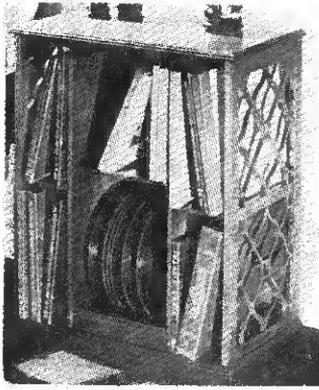


TALK-A-PHONE INTERCOM SYSTEM, the deluxe line, is available for three types of intercommunication, Master Selective, Super-Selective and Combination Selective. Privacy headphone attachment is available. The "Silent" feature shuts out at the Master location, noises originating at the Substations. Streamlined, compact cabinets are built of walnut and are finished uniformly in front and back. Talk-A-Phone Co., 1217 W. Van Buren St., Chicago, Ill.

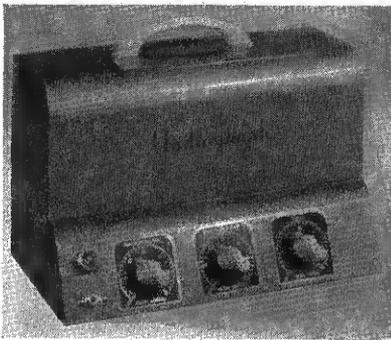


OHMITE RF PLATE CHOKE, Z-O, for 2½ meter frequency plate chokes. It is single layer wound on a low power factor steatite tube, and the winding is covered with a moisture resisting insulating material which protects the wire. Measures 1¾ inches long and ¼ inch tube diameter. Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago, Ill.

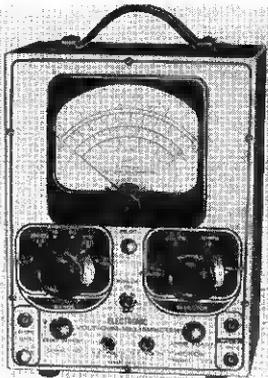
THORDARSON FILAMENT TRANSFORMER, T-19F75, is a new addition to the '19' series and is especially recommended for use with the new 816 rectifier tube. This is an open frame type with a 115 volt 50-60 cycle primary. Its secondary rating is 2½ volts at 5 amps. ct. The test voltage is 7500 volts rms. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.



ALBUM CABINET 18TH CENTURY English wall commode known as the Duo-Use album cabinet, it serves as an occasional table as well as album rack. Model RA-14-1, illustrated, a mahogany and gumwood cabinet measures 24 x 15 x 30 inches high. Net price, \$11.95 f.o.b. Holland. Georgian Cabinet Shops, Holland, Michigan.

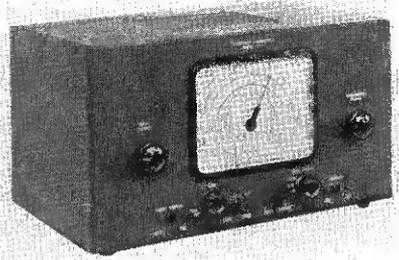
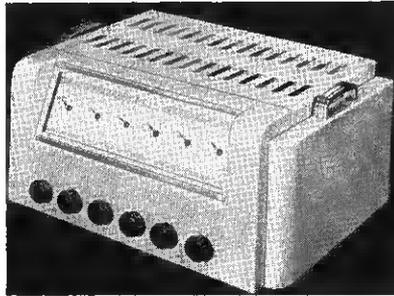


JOHN MECK 10 WATT AMPLIFIER, for use in call systems, offers microphone and phonograph input channels each with separate volume control. 4 and 8 ohm outputs provided for use with single or dual speaker systems, or the unit may be arranged for use with many speakers. This amplifier is available with a dual speaker carrying case or mounted in a portable case with single speaker. List price \$25.00. John Meck Industries, 1313 W. Randolph St., Chicago, Ill.



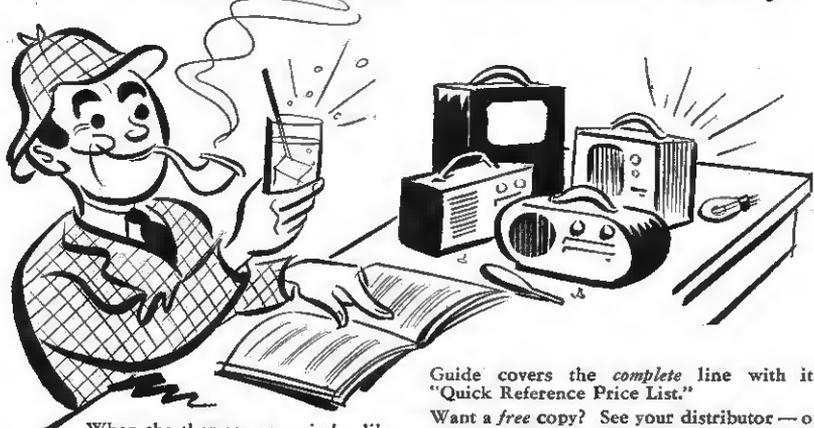
HICKOK VOLT-OHM-MILLIAMMETER, model 202, permits more measurements while the set is in operation without danger of damaging the test instrument through overload. AC voltage in 5 ranges to 1000 v. with input impedance of approx. 2.5 megohms; dc voltmeter in 5 ranges to 1000 v. with input impedance of 14 megohms; 5 ohmmeter ranges to 1000 megohms; 5 milliamperes ranges to 1000 milliamperes. Hickok Electrical Instrument Co., 10345 Dupont Ave., Cleveland, Ohio.

BELL 48 WATT AMPLIFIER has microphone channels 132 db., phono 85 db., frequency response 35 to 12,000 cycles—1 1/2 db.; 5 tubes; output impedance 1.25, 2.5, 4, 8, 15, 250 and 500 ohms; 3 microphone controls, one phono, one bass tone, and one treble boost tone control. Requires 150 watts power, 110-120 volts ac. 50-60 cycles. Measures 12 deep, 8 1/2 high, 16 1/2 inches long. Bell Sound Systems, 1183 Essax Ave., Columbus, Ohio.



ECHOPHONE COMMUNICATION RECEIVER, model EC-2, operates from either ac or dc lines and utilizes 8 tubes to cover the range from .55 to 30 mc. Housed in gray-crackle metal cabinet. Has 5-inch speaker. List price \$29.95. Echophone Radio Co., 201 East 26 St., Chicago, Ill.

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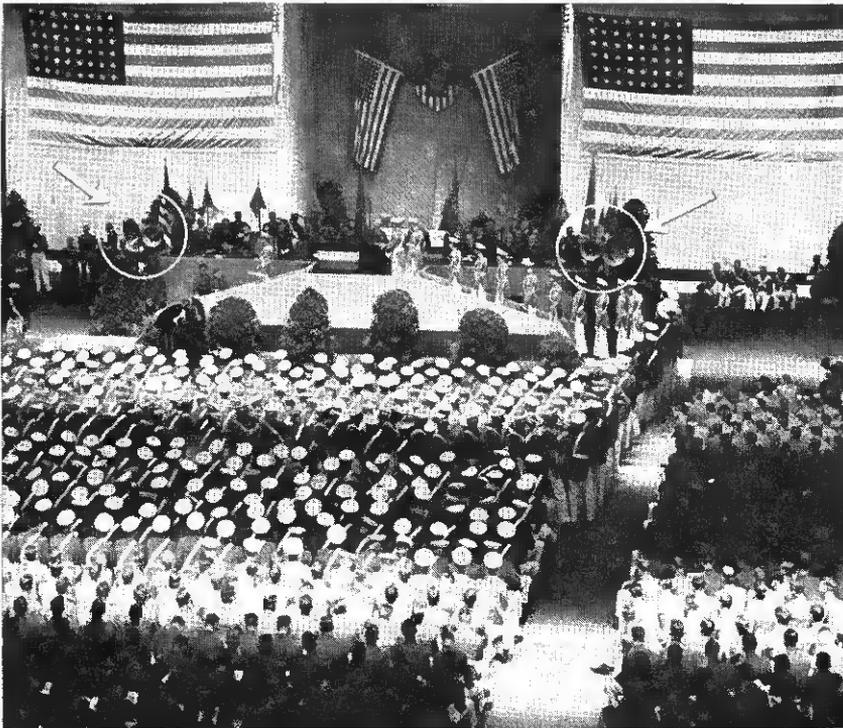
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SHEEPSKINS, THEN SERVICE—West Point graduates of 1941 pass before Secretary of War Stimson to receive their commissions. Announcements were made over semi-portable 100 watt amplifier working into six Atlas "dynamic reflex" projectors and P.M. driver units

SOUND in Defense

PLAYING A PART of considerable importance in the nation's defense program on the production as well as the strictly military side, is sound equipment.

Particularly valuable to soundmen are contracts from factories doing emergency work, carrying with them priorities which may be passed from dealer to distributor to manufacturer and so release needed materials.

Typical installation of this kind is one recently made by Louisville's Jesse Tillett of Universal Radio, copping a job at the \$69,000,000 government powder plant under construction at Charlestown, Indiana.

Nucleus of the system is a combination phonograph and mobile public address amplifier capable of operating from an automobile storage battery or from 110, 60 cycle. Output, 75 watts. This amplifier feeds five 20-watt "Atlas Sound" p.m. driver units coupled to a similar number of dynamic reflex projectors.

Microphone and amplifier are located in the guard captain's headquarters. Speakers are placed on the outside of the building and directed to cover a considerable adjacent area.

Over the system go orders and instructions to some 7,000 employees as they check in and out through timeclock-turnstiles each morning and evening. In addition, special orders are broadcast to workers at intervals throughout the day.

Further additions of sound equipment are anticipated as construction of the plant progresses.

New

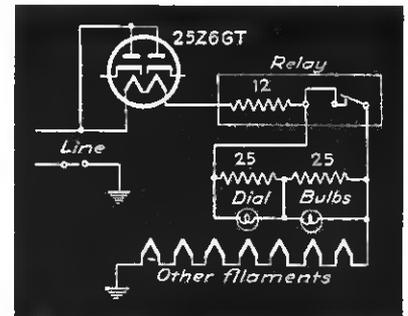
Saves Dial Bulbs

When the filaments or heaters of vacuum tubes are cold the resistance is very low and consequently a heavy flow of current passes through any series resistance in the same circuit.

The initial brightness of dial lamps, gradually diminishing as the filaments heat, is the symptom of this often noticed in ac-dc receivers and in many cases the heavy current flow causes premature burn-out of the bulbs.

This condition is eliminated by a thermal relay in the circuit shown and will be found in several of the latest RCA models. The bulbs are connected across 25 ohm resistors and form a portion of the filament line. However when the set is off, the relay contacts are closed. This shorts out the two lamps.

When the set is turned on, the heater current flows through the relay ele-



ment. This heats up and causes the relay contacts to open, permitting the heater current to flow through the two dial lamps and light them. In normal operation, the lamps light about a half-minute after the set is turned on.

6 to 250 Volt Receiver

A versatile power supply that may be operated on widely varying sources of power is shown in the large diagram.

A battery-to-ac changeover switch is mounted on the chassis and connects the parallel connected tube heaters to be supplied from either a six volt storage battery or a winding on the power transformer. Since a gas type rectifier tube is employed no provisions are necessary for changing the rectifier filament supply.

When the switch is set for ac operation the Belmont 7H31 receiver may be supplied with 105 to 125 volts of 40 to 60 cycle current. The voltage

Circuits for 1942

adapter plug is then inserted to permit the jumper wire in the plug to complete the primary circuit to the tap on the power transformer. A red dot on the adapter plug should then point to a "110 volt" marking on the chassis.

If the plug is pulled out and re-inserted to place the dot near the "230 volt" marking then the jumper connects the input voltage to the upper end of the primary and the set is ready for operation on 200 to 250 volt 40 to 60 cycle lines.

The rectified output of the OZ4 tube feeds into a resistance-capacity filter network that at first glance appears to have a condenser input. It has, but the capacity of the condenser is quite small and the circuit is virtually resistance input. The effect of the condenser to build up the voltage at this point is negligible while its main duty is to bypass the transient r-f peaks or "hash" developed by the rectifier. The 6SC7 output stage is operated under zero bias conditions and because of the varying current requirements of this stage the regulation of the power supply can be fairly high with the resistance input.

The much more constant current drain of the rest of the tubes in the receiver is supplied through the 1500 ohm resistor. A 6L5G tube is employed as the driver for the output stage and has the tone control in its grid circuit.

It will be noticed that the i-f stage is operated at fixed gain, the a-v-c voltage being only supplied to the r-f and mixer stages. Screen voltage to this i-f stage is cut off by the switch when phonograph operation is desired.

Pushbutton Tone Control

Variable tone controls are most easily provided by inserting a small bypass condenser in a circuit carrying an audio signal and then allowing its bypassing action to be varied by a variable resistor connected in series with it.

An alternative method that is often employed is to use several condensers of different capacities selecting the desired one with a tap switch. A pushbutton switching arrangement may also be used to do this job and will provide an additional advantage of allowing many more possible combinations of control.

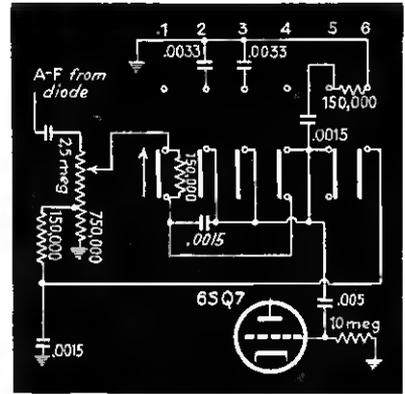
Shown in the diagram is the circuit of the tone control system of Crosley. Six pushbuttons on the left of the dial

provide more than sixty different tonal variations by using different combinations of the buttons. The first three buttons are marked "treble" on the cabinet and the other buttons "bass". With all of the pushbuttons out maximum high and bass note reproduction over the complete range of the receiver is obtained.

To cut out the highest notes reproduced the first button is pressed. This connects a 150M ohm resistor in series with the audio line from the volume control to the grid of the triode portion of the 6SQ7 tube. Additional highs are attenuated by depressing buttons two and three. These connect the small bypass condensers shown to effectively bypass the high frequencies.

Bass note reproduction is accomplished by use of buttons four, five and six. The lowest notes reproduced are eliminated by depressing button four. This connects a .0015 mfd condenser in series with the audio line ahead of the normal coupling condenser. The additional condenser then allows less of the lows to reach the grid of the tube.

Additional bass notes are removed by depressing button five, connecting a 150M ohm resistor across the audio line. Button six removes the bass compensation at the volume control by



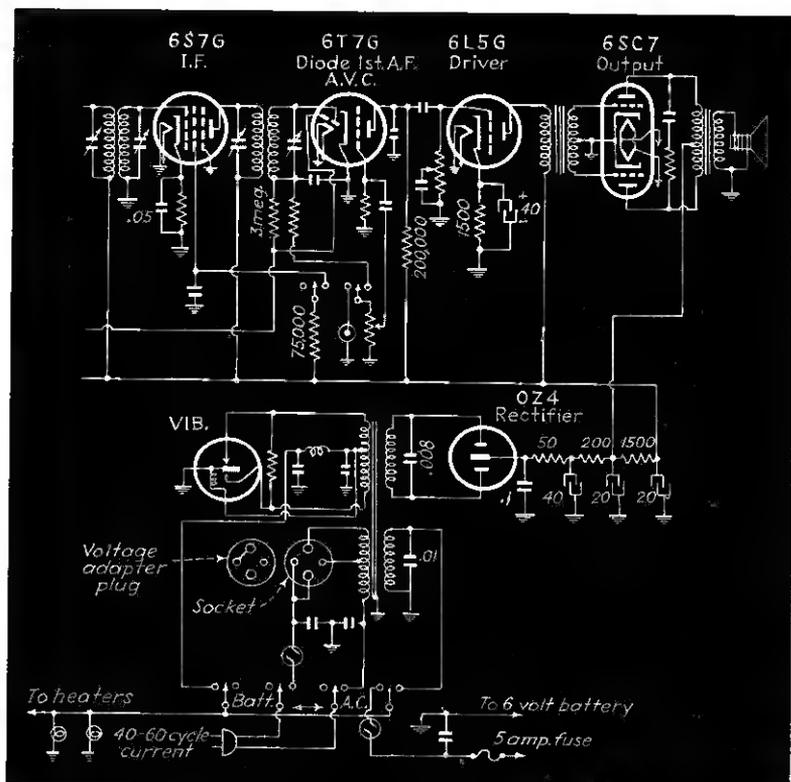
grounding the condenser normally employed in that circuit. Pushing a button once depresses it and it is released by pushing it again.

Fluorescent Filter

Interference set up by fluorescent lighting fixtures may be picked up by a radio receiver directly from the tubing itself or from the common power line. The former is not usually encountered at distances greater than ten feet from the fixture and even this noise field may be lessened by proper grounding of the metal reflector and fixture.

The interference that appears in the power line however may be noticed in receivers located several hundred feet away from the fixture. Filter chokes and bypass condensers can eliminate this type of interference.

The circuit reproduced is from the Miller catalog and employs a con-



BUT WHAT OF Tomorrow?

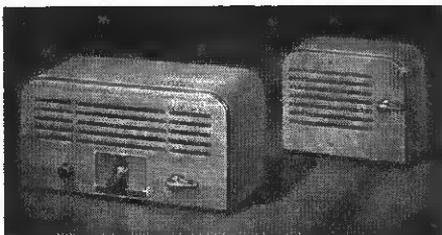
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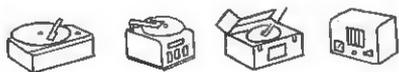
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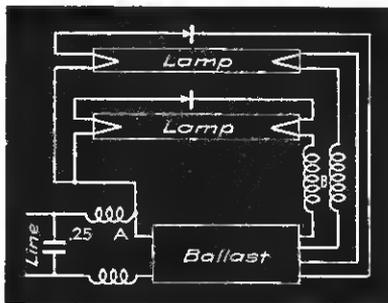
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Talk-A-Phone Mfg. Co.
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denser across the line and r-f chokes marked "A" in series with the line. In most cases these are the only ones necessary. In cases of extreme interference the chokes marked "B" may be necessary. Chokes made by the company for this use may be installed in the lighting fixture and are assembled in small shield cans with flexible wire leads. Since it is necessary to use a choke of the proper wattage rating, equal to the total of all the lamps in the fixture, they are made in several sizes from 20 to 160 watts.

Short Waves for Cars

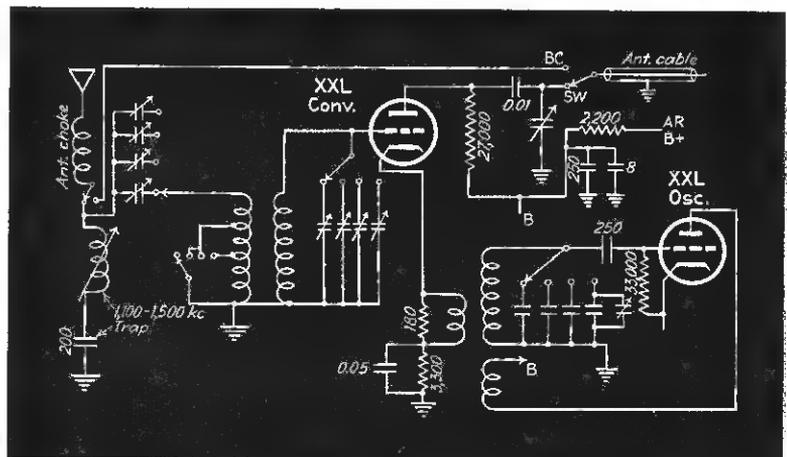
A two tube converter for receiving the 6, 9, 11 and 15 megacycle bands from an auto radio is shown in the large diagram.

Tuning on short wave reception is not accomplished in the converter unit however. Instead the short wave sta-

silver mica condenser necessary to tune the oscillator circuit to a frequency different from that of the mixer stage by about 1400 kilocycles. The energy from the oscillator is coupled to the mixer cathode by a separate winding of the oscillator coil.

Output of the mixer is fed to the auto radio with which the converter is used through a shielded cable that plugs into the socket that previously held the antenna lead-in plug. This lead now plugs into the converter where it may be left permanently. Changeover of the antenna for each type of service is accomplished in the bandswitch, one position feeding it directly to the auto receiver for regular broadcast reception. On the short wave positions the antenna circuit contains a wavetrapp composed of a variable inductance and a fixed condenser of 200 mmf. This is tuned at the time of installation to minimum response on a strong signal from a local broadcast station operating between 1100 and 1500 kilocycles on the dial.

Power for the filaments and plates of the tubes is obtained from the car set through a cable and plug. A resistance-capacity filter for the plate voltage is included in the unit and it will be noticed that a small r-f bypass is included in this circuit to prevent r-f from feeding to the receiver through the common plate supply lead. The filament circuit, not shown in the



tions are tuned in by means of the knob on the auto radio dial and stations in the bands mentioned above are found between 1150 and 1600 kilocycles.

This is accomplished by incorporating a band switch in the converter unit and by means of fixed tuning of the circuits in the converter. The switch selects the proper trimmer condenser and tap on the antenna coil for each band. At the same time it selects another trimmer to tune the grid circuit of the XXL mixer stage in the Philco model SW-1 tuner.

The switch also selects the proper

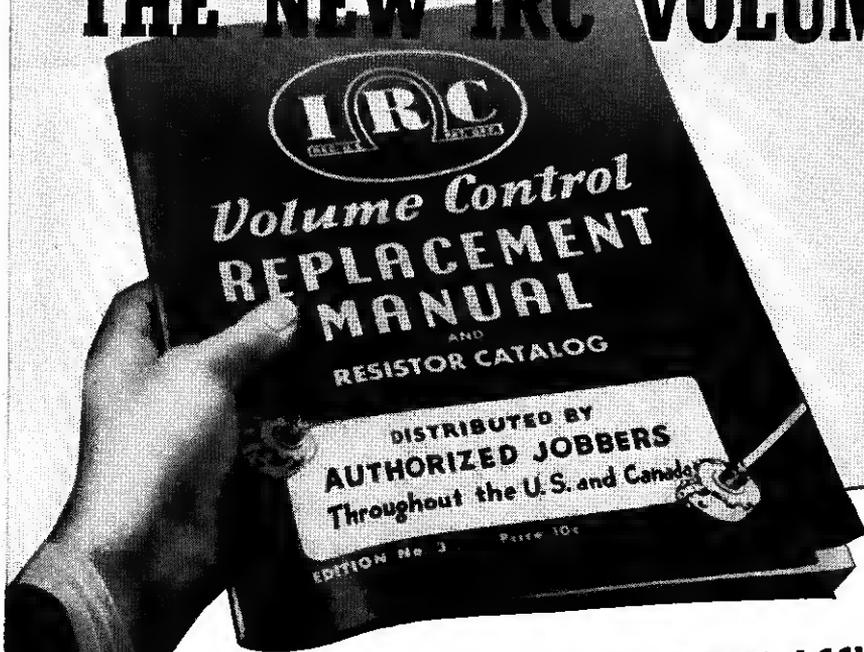
simplified diagram, also contains r-f chokes and bypass condensers.

The converter is mounted adjacent to the car radio and a flexible cable connects the shaft of the bandswitch to a small head that mounts under the edge of the dashboard. The knob of this control head then selects the band desired. The regular tuning knob of the receiver may be considered as changing the i-f frequency of the double superheterodyne circuit formed by the combination of the tuner and receiver. The coverage obtained on each short wave band is about 200 kilocycles with this method.

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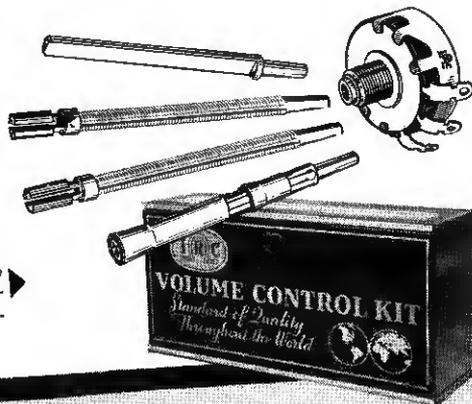
- ★ The finest, most complete manual of its kind ever published. Unexcelled in its helpfulness to every serviceman who makes control replacements.
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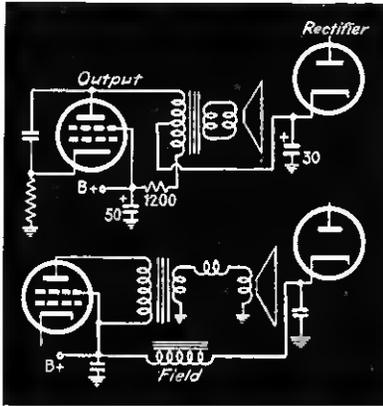
INTERNATIONAL RESISTANCE CO.

401 N. Broad Street • Philadelphia, Pa.

Hum Reduction

In many ac-dc receivers that use a PM speaker effective hum bucking is obtained through the use of an output transformer with tapped primary. The tap is established at a point where the "ampere turns" of ripple in the direction of the output plate balances the "ampere turns" of ripple in the direction of the screen and other plate circuits.

High residual hum (at zero volume setting) may be due to incorrect balance and RCA suggest that the condition may be due to several causes. For instance the output tube may have off standard characteristics, the filter capacitor too low a capacity, or too



high internal resistance. The "B" filter resistor may not be the correct value. Measure resistance and change if necessary. The cathode bias resistor of the output tube may also be incorrect.

If hum persists change the output tube plate bypass to rectifier cathode instead of to output tube cathode. If none of the preceding steps reduces the hum to a satisfactory level, replace the output transformer.

A circuit of this type is employed in the RCA 1X, 12X and 14X series. First production of these employed a PM speaker but later production changed to an electro-magnetic speaker. The new circuit made necessary by the change is shown in the lower portion of the illustration. The field coil is employed as the choke and the resistance filter is eliminated. The hum buck winding in the voice coil circuit is wound adjacent to the field coil in the usual manner.

Power Factor for Servicemen

By Willard Moody

It is surprising how many servicemen do not have a clear conception of

power factor yet the term is widely used as a criterion of condenser merit and in discussions involving fluorescent lighting.

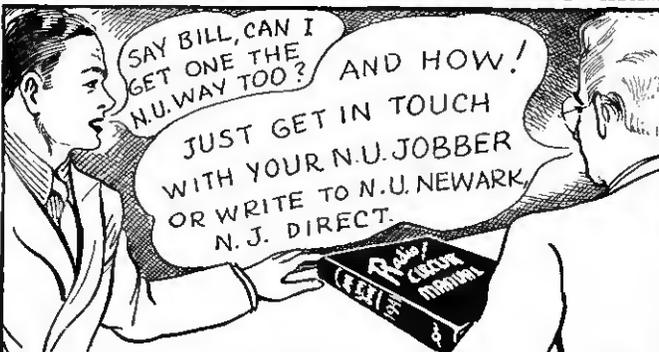
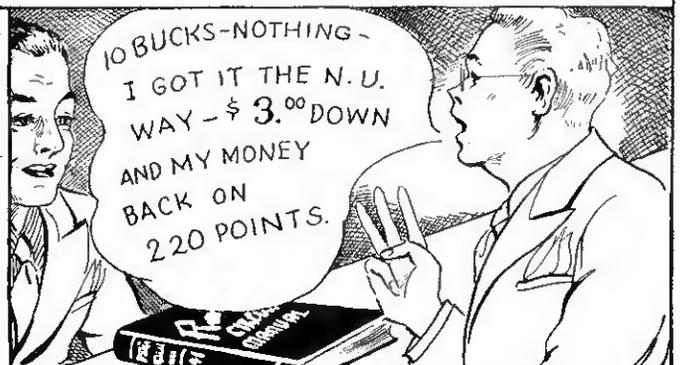
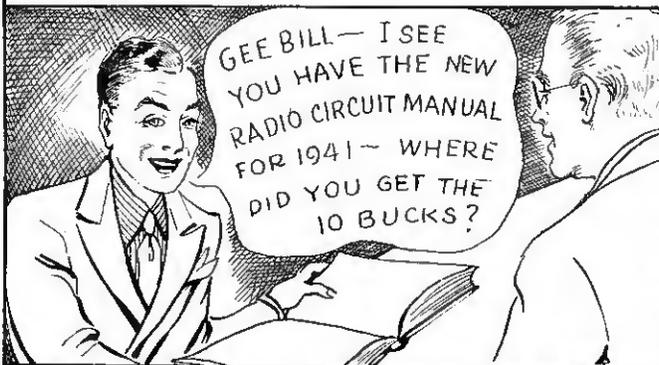
Many text books on the subject seem to complicate matters by referring to "true power" and "apparent power." When a serviceman connects an ammeter and a voltmeter to alternating current apparatus and takes the readings he believes that what he has measured is the power if E is multiplied by I. What he really did was to measure the *volt-amperes* of the circuit. The watts taken from the line will be EI but the power put into the electrical device will be EI cos θ. The cos θ business is read cosine of the phase angle.

A purely resistive element such as a toaster or lamp bulb will have no reactance and no phase angle displacement. Power is never consumed in a reactance. If power is lost in a coil it is the *resistance* of the coil that burns up energy. This resistive loss is called the "true power."

If the power factor is unity or 100% the circuit is entirely resistive and the "apparent power" is the "true power." From this it is evident that a condenser of good quality and condition would have a low power factor and that a coil of low resistance would be of low power factor.

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ANTENNAS for FM

HOW TO CHOOSE the proper sky-wire when installing FM receivers

By VIN ZELUFF

IN THE CITIES that are at present served by FM stations it has been found by many dealers that only a short piece of wire laid on the floor or hung on the wall will bring in the local stations with satisfactory results.

Since these stores are practically in the shadow of the station antennas and enjoy a high signal strength the reception would normally be very good. Although exact figures are not easy to come by at the present time it appears that this condition exists up to about five miles airline distance from the average station.

Receivers that are installed at a greater distance from the transmitter than this usually require an external antenna of some sort and it is with these that we are mostly concerned.

Perhaps the simplest procedure for servicemen to follow would be to try the existing long wire broadcast antenna that still exists in many homes. This may be matched to the input circuit of the receiver by use of a small coil as shown in figure 1. The tap connections will need some cut-and-try experimenting to obtain the best possible impedance match. The coil should have a fairly high Q and may be similar in construction to the type employed in low power amateur transmitters.

Long Wires Directional

This type of antenna is quite directional if its length is greater than two wavelengths, about forty-four feet. The directional effect increases with

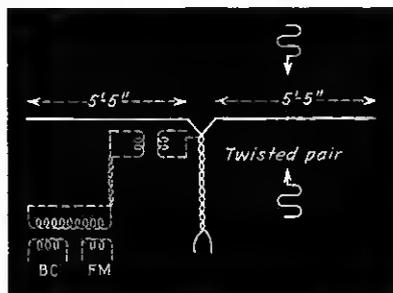


FIG. 2—A half wave dipole receives signals from two directions

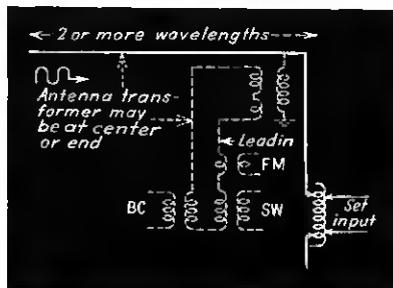


FIG. 1—The long wire antenna needs to be matched to the input coil of the receiver

the length but this need not be greater than four or five wavelengths. Longer wires than this are not usually warranted by the increased mechanical difficulties. Reception is best from stations in the direction of the open end, opposite the lead-in. For reception on the standard bands a change-over switch may be installed at the receiver.

Several antenna kits are now on the market that incorporate this type of antenna. The changeover switch is eliminated in these by the use of an impedance matching transformer at the antenna and separate transformers at the set end of the lead-in for broadcast, short wave and FM reception. In some cases it may not be possible to install the lead-in at the end of the antenna and the antenna transformer may then be installed at the center.

For best reception at the FM frequencies the antenna should be erected as high as practicable. This helps in two ways, to allow a greater signal pickup from the transmitter and to insure location of the antenna as far as possible from the noise source, usually found near ground level.

Half Wave Dipole

For reception from several directions the half wave dipole or doublet is probably the most popular type in use at this time. Illustrated in figure 2 it may be composed of suspended wire or rigid metal tubing. The latter re-

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quires but one mast and may be easily rotated to find the best position.

The length of each section is a quarter wave for the center of the FM band if optimum performance is desired over the whole band. The two sections connect to a twisted pair transmission line whose impedance is practically the same as that appearing at the center of the antenna. The input circuit of most receivers have a rather low impedance and will readily match the line. If the length of the line is greater than 70 feet it may be necessary to use a special low loss transmission line to prevent attenuation of the signal.

The dipole may also be used for



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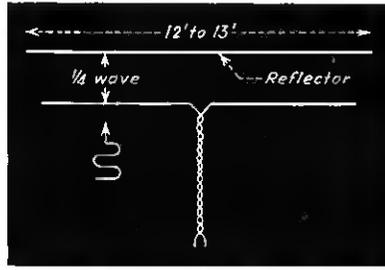


FIG. 3—Reflector behind a dipole increases the signal in one direction

standard broadcast reception if desired. If the bottom leads of the line are connected together the horizontal portion operates as a "T" antenna with considerable pickup added by the vertical leadin. In noise-free locations this will be satisfactory but in places where man-made static abounds only the horizontal portion should operate as the antenna. Transformers are available that may be connected to the antenna and the receiver and allow the line to operate as a noise reducing coupling line.

On FM signals the dipole receives best from stations broadside to the antenna and has a minimum pickup of signals received along its length. By rotating the antenna at the time of installation a compromise position can usually be found favoring the weaker signal if several stations have different intensities.

Although the waves from most stations are horizontally polarized a few are vertically polarized. Reports from the field indicate that both types of transmissions are quite well received if the antenna is tilted at a 45 degree angle.

Reflectors

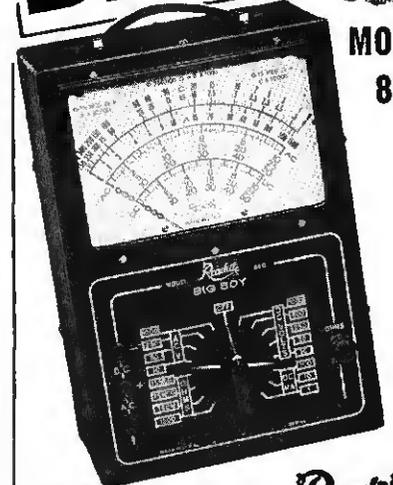
The dipole may be made to operate in one direction if a reflector is added parallel with its length and spaced a quarter wave from the dipole. Its length should be about ten percent greater than the dipole. Signals approaching the reflector side of the dipole will then be blocked to a considerable degree. At the same time signals intercepted by the dipole at its free side will be reinforced by reflection from the additional element.

Since the reflector and dipole combination receives signals in but one direction it is necessary to provide some means of rotation if stations located at widely separated points are to be received. If the receiving location is at a considerable distance from a number of closely grouped stations the uni-direction feature will permit pickup of the several stations without rotation of the array and at the same time prevent stations in the opposite direction from being received.

Double dipoles with reflectors may also be used for FM reception. These and other more complicated arrays have so far been seldom found necessary.

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860



Performance . . . Eye Appeal . . . Value . . . Sensationally Priced at \$19.65. Dealer Net Price.

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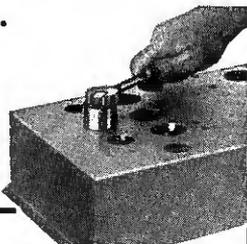
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Excessive noise on the "D" band . . . apply a few drops of carbon tetrachloride on tuning condenser shaft and the vernier drive.

RCA Q30

Distortion . . . grid resistor of the 6F6G output tube grounds to chassis through a tiny lug in socket. Solder end of resistor firmly to chassis.

RCA IX2

Distorts . . . check 470 M ohm grid resistor of the 6F6G output tube for open or increase in resistance.

RCA HF1

Oscillator dead . . . replace 33M ohm grid resistor of oscillator section of 6A8 with 100M ohm resistor.

ZENITH 6S-341

Pushbutton reception very weak . . . scrape oxide film from all contact points.

MUSIC HIGHLIGHTS

(Continued from page 26)

ucts on two floors with separate rooms for displaying portables and compacts, combinations and consoles, sales promotion material and G-E's Musaphonic line of receivers. Its television model HM226 came in for a great deal of attention. *General Records* presented entertainment, educational and special folk song albums. *Georgian* record cabinets stressed furniture for all its models.

Hamilton Radio previewed full line of portables and combination table models. Literature showed list prices from \$24.95 to \$69.95. *Linguaphone Institute* had foreign and English language courses and also showed its "Classophone", convenient indexed record cabinet.

Magnavox, in suite of four rooms, showed entire line of receivers. Advised that its 8-tube FM chassis could be installed in all console models. Prices ranged from \$29.95 to \$500. *Musicraft Records* featured "Masterpiece Classical" discs. *Motorola* showed popular numbers

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in '42 line. With the aid of mirrors, visitors were able to see the operating mechanism of new record changer.

Albums and Needles

Peerless featured albums, also record racks and stock envelopes. Has new envelope type album. *Permo* displayed Fidelitone "Floating Point" needle, also Micro Match needle points for home recording. *Pfanstiehl* "4000 and More" play needle was attractively set forth in several small displays and one large center piece. Promotion high lighted

its use by big set makers. *Philco* had suite of three rooms in addition to a display in ballroom foyer. Complete line from portables to FM/AM combinations, in prices from \$9.95 to \$525. Stressed four new developments: photo-electric tone arm; stroboscope pitch and tempo control; record changer and home recording unit. *Pilot* presented 20 models, announced that AM/FM models (six in all) are equipped with two tuned r.f. stages. *Port-O-Matic* demonstrated portables and combination period receivers. Specialists in phono-radio portables. Had an x-ray model of new Garrard changer, employed in large sets. *Presto* had recorders, all types, accessories and discs on view for guests. Promotion centered on type 300A re-recording equipment, model K recorder and new glass base discs.

Top and Bottom Pickup

RCA used over 2000 sq. feet for its exhibit, with one room devoted to Victrolas and radios; one to promotional material; two rooms to records, and the main wing to the display of big sets and a demonstration of "Tandem Tone Arm." (*Radio Retailing*, in its July Number, forecast the introduction of such a dual-pick-up.) *Recordaid* had promotional material on its record catalog and a new artist index system. *Regal Amplifier* showed amplifiers, portable phonos and a recorder.

Schloss Bros. showed record cabinets and racks. *H. Royer Smith* had carrying cases, needles and albums for visitor's preview. *Stromberg-Carlson* had eight large rooms to present entire radio line, ranging in price from \$24.95 to \$695. Spotlight focused on "Autographed" 935PL model.

Tonk presented a new line of record and sheet music cabinets in large variety of styles and finishes.

United Pressed Products showed "Carr-O-Tone" discs and samples of private brands, also springwound and electric phono players.

Waters Conley showed over a dozen different "Phonola" portable phonograph players. Latest is No. 250K an electric portable phono unit. *Wilcox-Gay* previewed seven "Recordio" combinations. Centered demonstration on "Instamatic" record changer taking only 2 seconds to change discs.

Widder Brothers showed new visible indexed record album in both 10 and 12" sizes.

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Although Radio & Television Retailing takes every precaution to insure accuracy, we cannot assume responsibility for an occasional change or omission in the above index.

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SUPREME

GREENWOOD, MISSISSIPPI, U. S. A.

RCA's sudden success with its experiments for transmitting radiophotos from Moscow surprised the chief photo agencies. Believing radio transmission impossible, they had been rushing elaborate plans for getting pictures by plane.

—Newsweek, July 21



RADIOPHOTOS HURLED ACROSS THE WORLD!

BUT it would have taken a plane traveling 21,300 miles an hour to match radio's speed of delivery! It takes only 13 minutes for a complete picture to flash across the 4,615-mile curve that has made an invisible picture chute of the Great Circle Route between Russia and New York. It bends over the spinning world across Finland, Sweden, Norway, Iceland, Labrador and on to the United States.

As a result, American newspaper readers have been looking at war photographs soon after they were snapped on the eastern battle fronts. The newspaper credit lines have read, "RCA test transmission radiophoto." The pictures dated July 8 were the first America ever saw from Moscow by radio.

During the first World War there were weeks of delay before Americans saw pictures from the Russian sector. The radiophoto was but a dream of scientists. But they became master of the dream and in 1911, when Russia was ready to put pictures in the air, American apparatus developed by RCA Laboratories was ready on this side of the sea to receive them.

The Russian pictures enter the United States at the antennas of R.C.A. Communications, Inc., at "Radio Central," River-

head, Long Island. Automatically the impulses are relayed to the radiophoto machines at R.C.A. Communications' headquarters, 66 Broad Street, New York. That is the terminal of the 4,615-mile chute through space.

How is it done? In Russia the picture is wrapped on a cylinder, which as it revolves enables a pinpoint of light to release the lights and shadows of the picture to actuate a short-wave radio transmitter. The radio impulses, therefore, correspond to the shadings of the picture. In New York a similar cylinder is turning, and around it is wrapped a sensitized paper or "negative." It revolves in step with the Russian cylinder and as it does another needle of light, controlled by the incoming picture-carrying impulses, acts as a pen. It reconstructs or "paints" the picture line by line.

New York is the world-center of radiophoto reception, with the picture circuits now extending to London, Berlin, Tokyo, Buenos Aires and Moscow. It is RCA Laboratories apparatus at the headquarters of R.C.A. Communications, Inc., on the tip of Manhattan Island, that puts the pictures back on paper after they are etched electrically in space between the hemispheres.



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