

**RADIO**  
*and Television*  
**TODAY**  
© Cl B 50,400

*America Alert!*



HOW RADIO IS AIDING IN NATIONAL DEFENSE  
• STIMULATING MORALE • INCREASING PRODUCTION

**JUNE**



YOU COULDN'T BEND IT WITH A HAMMER!

LOOK AT THAT SWITCH!

WOW! IT WILL CUT INVENTORY IN HALF!

MY KID COULD WORK THOSE NEW PLUG-IN SHAFTS!

BOY! IS THAT SMOOTH!

**Completely NEW!**  
P. R. MALLORY & CO. Inc.  
**and ALL MALLORY**

Next Month...  
 at your Mallory Distributor's

The Greatest Advance  
 Ever Made in Replacement  
 Volume Controls  
 Watch for Complete Announcement!



Also On The Way!

**A COMPLETELY NEW Edition of MYE**  
 (Mallory-Yaxley Radio Service Encyclopedia)

Completely new—more information than ever—indispensable to the service engineer! *Keep on the watch for it.*



P. R. MALLORY & CO., Inc., INDIANAPOLIS, INDIANA • Cable Address—PELMALLO

*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

# WHY YOU'LL FIND Westinghouse Radios So Salable

When you have a radio prospect hard to sell—one who demands sound reasons before he'll give up his money—it's possible to make your sales job easier by showing him a Westinghouse. There are good reasons why. Take for example the radio-phonograph combination shown at left.

This radio (Model WR-42X1) has a superheterodyne chassis, self-starting motor, crystal pick-up, built-in loop antenna, improved dynamic speaker. It will play either 10" or 12" records with the lid closed. It has 5 tubes, 2 being dual purpose, giving the effect of 7-tube performance. It offers beam power output with double power on the phonograph, automatic volume control, two position tone control and other features to help make your sales task easier.

*Yet, it is one of the lowest priced combinations on the market!*

Your customer depends on you to advise him about radio values. Tell him the facts about the Westinghouse and he will make the sale for you.

Write or phone your Westinghouse distributor today.



**WESTINGHOUSE WR-12X10.** Continental type in walnut grain plastic. 6-tube superheterodyne, AC-DC. Tone control. Automatic volume control. Dustproof dynamic speaker. Inclosed loop antenna.

**WESTINGHOUSE WR-12X14.** 6-tube superheterodyne, AC-DC. 5 push buttons. Tone control. Automatic volume control. Dustproof dynamic speaker. Inclosed loop antenna.



**WESTINGHOUSE WR-12X8.** Plastic continental type, walnut grain finish. 5-tube superheterodyne, AC-DC. Standard and Foreign bands. Electro dynamic speaker. Automatic volume control. Inclosed loop antenna.

**WESTINGHOUSE WR-12X15.** 6-tube superheterodyne, AC-DC. Standard and Foreign bands. 5 electrical push buttons. Automatic volume control, beam power. Dustproof dynamic speaker. Inclosed loop antenna.



# Westinghouse Precision RADIO

# WHEN PERFORMANCE COUNTS

## New Signal Generator by



**Model 1632**



### Geared for Today's Requirements

Provides continuous coverage of standard broadcast ranges; as well as the new high frequencies for frequency modulated and television receivers. Top-quality engineering and construction throughout makes this a sensation at the price of \$87.80, Dealer Net.

**\$87.80** ★

DEALER NET

Continuous Coverage 100 Kc to 120 Mc (10 bands) . . . All frequencies fundamentals . . . Metered Output to multiplier and attenuator . . . Heterodyne Detector is incorporated. Permits checking the oscillator or beating with another oscillator, without a receiver . . . Output Available at End of Coaxial Cable, Minimizes losses and disturbance to circuit under test . . . Provision for External Modulation at audio or radio frequencies . . . Voltage Regulator Tube regulates voltage for the oscillator and improves stability . . . Permeability Adjustment and Tubular Air-Trimmer Capacitors are used throughout for increased accuracy and stability of calibration . . . Low Resistance Copper Shielding and low loss construction . . . Positive Vernier Dial Tuning control, no backlash . . . Accuracy and Stability beyond anything before demanded in the test field. Furnished in streamlined metal case with attractive rolled-edge design. Size, 15" x 9" x 6 1/4" . . . Dealer Net Price . . . \$87.80

**It's Got to Be Right to Be Triplet**

See Triplet's 1941-42 Line of Test Equipment  
Booths 720-722 — Chicago Radio Parts Show

**THE TRIPLET ELECTRICAL INSTRUMENT COMPANY**  
Bluffton, Ohio

**MODEL 1232-A**  
DEALER NET  
**\$32.84**

Shielded Signal Generator — AC Operated — Improved Attenuation — Large Dial Opening — Six Bands covering frequencies from 115 Kc to 30.5 Mc. All frequencies fundamentals.



**MODEL 625-T**  
VOLT-OHM-AMMETER  
DEALER NET **\$22.00**

DC V. — 0-2.5-10-50-250-1000-5000 at 10,000 ohms per volt. AC V. — 0-2.5-10-50-250-1000-5000 at 1,000 ohms per volt. Direct Current 0-100 Microamperes; 0-10-100 Milliamperes; Resistance 0-400 Ohms (shunt type circuit); 0-400,000 Ohms and 0-4 Megohms (series type circuit).



**MODEL 1213**  
DEALER NET  
**\$24.20**

Dynamic Tube Tester . . . Exclusive Hinged Post-card Reference Tube Chart—Filament Voltages from 1.1 to 107 — RED • DOT Lifetime Guaranteed Instrument — Neon Shorts Test.



**MODEL 1620**  
DEALER NET  
**\$41.64**

Counter Type, Lever Switch Operated Tube Tester. Four "quick change" non-obsolete features — Speed Roll Chart—New socket Panel and Switching Section which can all be replaced in case of unanticipated changes.



WORLD'S  
LARGEST HOTEL USES

**RAYTHEON**  
TUBES



*Newton, Mass.  
San Francisco*

*New York  
Chicago  
Atlanta*



AT THE hub of America—the great, friendly Stevens Hotel casts a warm shadow of welcome. Overlooking Lake Michigan, on Chicago's famed Michigan Boulevard, The Stevens commands both scenic beauty and economical luxury at its best... America's Grand Hotel indeed—where comfort and utility are accepted tradition.

Stevens' tactful service is known the world over—it is an exacting service that calls for absolute dependability and top quality performance.

RAYTHEON RADIO TUBES WERE CHOSEN AS STANDARD EQUIPMENT THROUGHOUT THE STEVENS because tube efficiency and dependability is an important part of the service.

RAYTHEONS always deliver efficient service no matter what type of task they are required to perform. Back of them are the years of expert engineering experience... the constant pioneering in tube design and construction to anticipate future requirements in the radio circuit field.

Remember RAYTHEONS with all their extra advantages **COST NO MORE!** Insist on RAYTHEONS for your next tube order.



*The New Modernistic Skyway suites with built-in RAYTHEON equipped radios.*

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

# IN SERVICE

OVER 50,000,000 ★ ★ ★ ★



## KEN-RAD

DEPENDABLE *Radio Tubes*

Here we are again—we replacements for the many manufacturers that used Ken-Rad better tubes for initial equipment last year. Stock us for quick turnover and added profits. For we assure you completely satis-

fied customers. As one writes: "I know that your tubes will give me full satisfaction as I have been using them in my sets for some time and do not believe that there are better tubes on the market."

KEN-RAD TUBE & LAMP CORPORATION, INC. • OWENSBORO, KY.

Makers of Ken-Rad Radio Tubes and Ken-Rad Electric Lamp Bulbs

# Month after Month ALL SALES RECORDS BROKEN BY Admiral



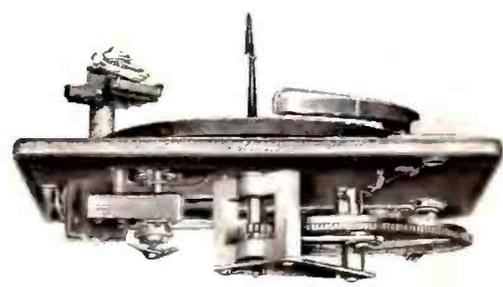
HERE ARE A FEW OF MANY SENSATIONAL VALUES THAT HAVE BOOSTED ADMIRAL SALES TO ALL TIME HIGHS

## TABLE MODEL PHONO-RADIO COMBINATIONS WITH AUTOMATIC RECORD CHANGER



MODEL 69-M5—The lowest priced phono-radio with A.R.C. on the market! 5 multi-purpose tubes; superheterodyne radio has super Aeroscope; beam power output; full size heavy duty P.M. dynamic speaker; automatic volume control; "Sofglo" dial. *New audio circuit developed by Admiral produces tremendous power.* Covers standard broadcast band (540 to 1630 KC). Automatic record changer, designed and built by Admiral, plays twelve 10" or ten 12" records. Especially designed to use the Admiral "Lifetime" Needle. Attractive walnut cabinet. **\$39<sup>95</sup>**

## ADMIRAL - BUILT RECORD CHANGER HAS MANY EXCLUSIVE FEATURES

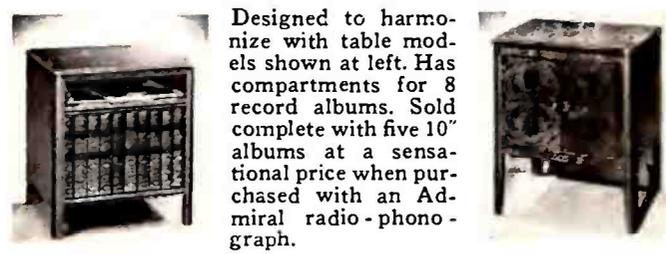


Today . . . Admiral is the largest manufacturer of automatic record changers in the world. Here are a few features that explain why: Only 210 parts (half the number found in others); changing time cut to 6½ seconds; pick-up pressure reduced to 1 oz.; speed variation due to loading of turntable reduced to ¼ RPM (2¾ RPM on others). Actual tests show Admiral "Lifetime" Needle maintains uniform groove-fitting radius required for perfect pick-up after 10,000 continuous playings.

MODEL 70-N6—The finest table model phono-radio in performance plus appearance on the market! AC superhet; tubes 545 to 1630 KC. Has 6 multi-purpose tubes; variable tone control; bass compensation; 6" P.M. dynamic speaker; automatic volume control; super Aeroscope; high power output; smartly styled walnut cabinet. Admiral-built automatic record changer plays twelve 10" or ten 12" records. Especially designed to use Admiral "Lifetime" Needle. List price only **\$49<sup>95</sup>**



## Admiral Record Cabinets in Special "Deal"



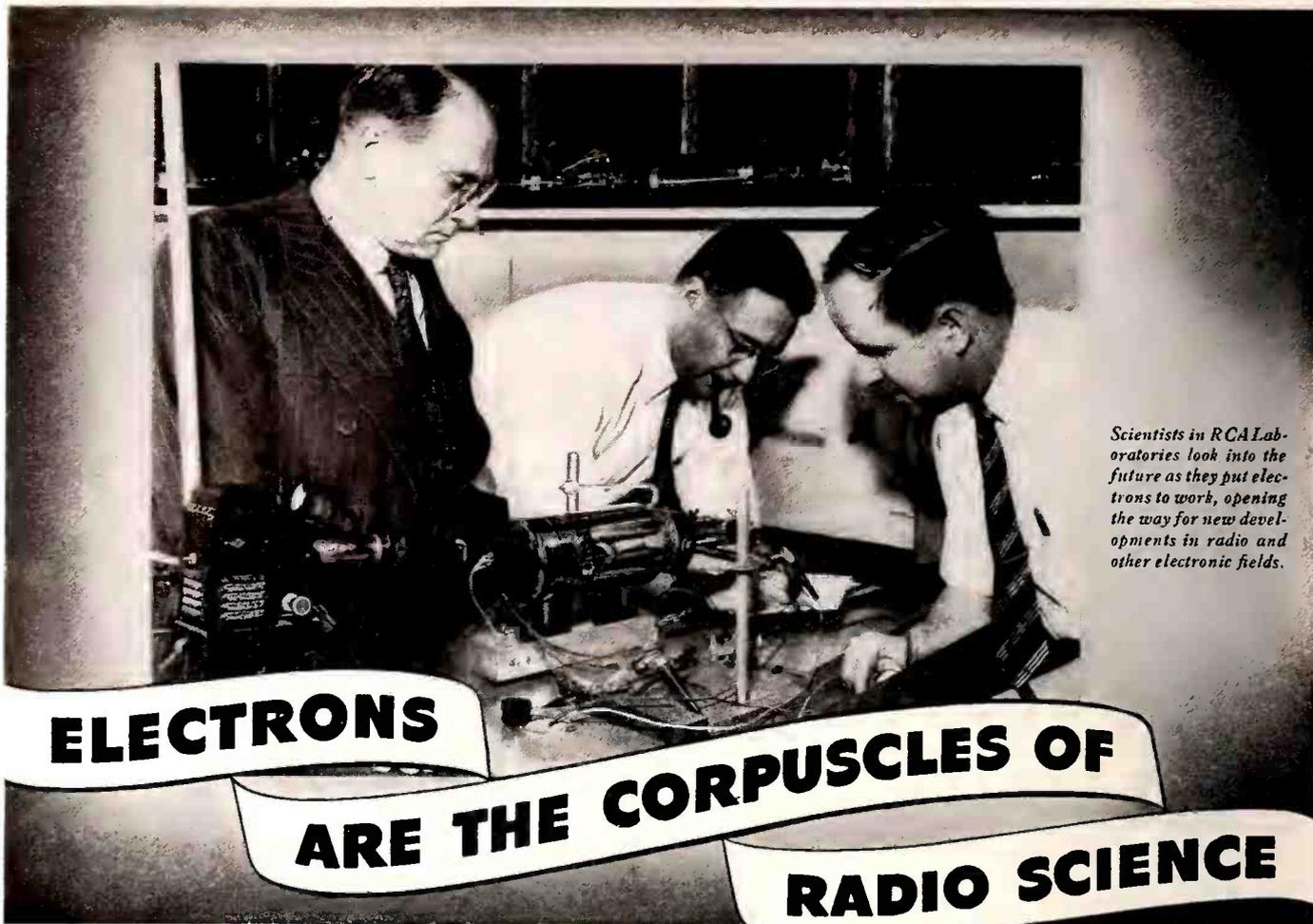
Designed to harmonize with table models shown at left. Has compartments for 8 record albums. Sold complete with five 10" albums at a sensational price when purchased with an Admiral radio-phonograph.

## THE PICK OF THE PORTABLES — THESE 3-WAY (AC-DC OR BATTERY) RADIOS BY ADMIRAL



5-PS—5-tube AC-DC plastic dome set and portable, \$19.95    77-PS—5-tube AC-DC tweed portable, \$22.95    78-P6—6-tube AC-DC portable . . . . . \$27.95    79-P6—6-tube AC-DC deluxe portable, \$29.95    29-G5—AC-DC Battery "Bantam" \$19.95

All prices slightly higher in Far West and South, subject to change without notice. Admiral Radios are equipped with RCA preferred type tubes. Originators of Tilt-Tuning, Touch-O-Matic, Aeroscope, Slide-A-Way, AC-DC-Battery Bantam.



Scientists in RCA Laboratories look into the future as they put electrons to work, opening the way for new developments in radio and other electronic fields.

# ELECTRONS ARE THE CORPUSCLES OF RADIO SCIENCE

*Electrons are the corpuscles of radio. The vacuum tube is the heart that pumps them through the copper veins and arteries. Electricity is electrons in motion—it is the lifeblood of communications by wire and radio.*

**E**LECTRONICS is a science born of radio. Both are members of one family. The modern radio research laboratories are electronic laboratories—the two are inseparable. Radio tube and electron tube are synonymous. Both pump the billions of electrons which flow in the electrical blood stream of communications and industry.

Putting electrons to work in a vacuum tube opened the Radio Age. It gave a voice to wireless, enabling it to talk and sing. Today, while millions of tubes glow in broadcast receivers, millions of others pulse with commercial dots and dashes, radiophotos, facsimile and television.

At the advent of broadcasting in 1920 there were a few thousand radio tubes at most, largely in the hands of experimenters. Today, there are hundreds of millions, in more than 50,000,000 American radios.

Revolutionary developments in radio

since the first World War can be traced to the vacuum tube. It has been a key to progress. It has enlightened the world through broadcasting. It makes short waves, ultra-short waves and television what they are today.

Now, the wonders that the radio or electron tube has worked in communications are spreading into other electrical and industrial fields. As the research experts have developed and improved the tube, they have multiplied its uses.

As a result, today industry is being *electronized*. The Electronic Age is opening. The electron

tube, once believed to be limited to radio, is recognized as an extremely sensitive and precise tool for manufacturing and processing control. The uses of electronics in industry appear limitless. Superhuman in its response to light, sound, touch and color, the electron tube is acclaimed as a new brain of industry.

From electronics came the electron microscope, which uses 52 radio tubes to perform as an ultra-eye that sees far into the sub-microscopic world.

In 1940, more than 106,000,000 electron tubes were produced for radio and industry, so that man might find life more pleasant and his tasks speeded and simplified, yet with accuracy and efficiency.

The electronic corpuscles of radio carry promise of new wonders as they flow silently and unseen through electricity's endless stream.



## RCA LABORATORIES

A Service of Radio Corporation of America

Other RCA Services:

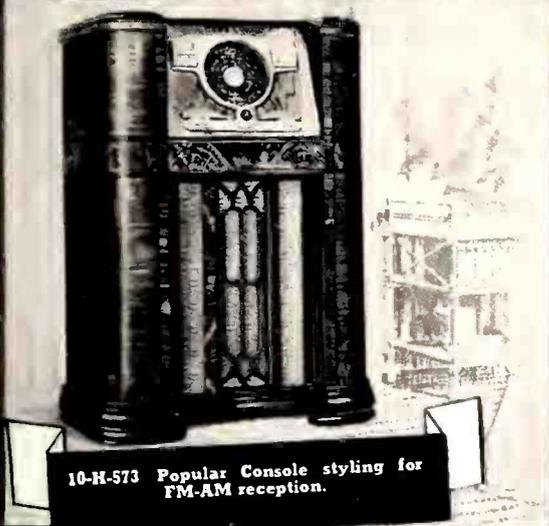
RCA Manufacturing Co., Inc. R. C. A. Communications, Inc.  
Radiomarine Corporation of America National Broadcasting Co., Inc. RCA Institutes, Inc.

# ONLY ZENITH HAS THIS!

*Microstatic*  
**FREQUENCY MODULATION**  
**PLUS**  
**EXCLUSIVE Radiorgan-**  
**TONE COLOR CONTROL**



12-H-679 Radio-phonograph combination with full FM-AM facilities. Available in mahogany or walnut.



10-H-573 Popular Console styling for FM-AM reception.



10-H-551 Striking Chairside styling — FM-AM chassis, of course.

**M**ODERN radio listening demands receivers designed for FM-AM reception. New FM stations are going on the air all over the country . . . many more are planned. Public interest and, more important, public buying are growing with amazing rapidity. Zenith is ready now with a wide selection of FM-AM receivers incorporating fourteen points of definite superiority, permitting sharply improved performance on both FM and AM bands. You need these Zenith FM-AM receivers on your sales floor—otherwise, you are not selling modern radio.

## ZENITH SUPERIORITY BASED ON F. M. BROADCAST AND RECEIVER RESEARCH

Zenith has pioneered FM Broadcasting in the Chicago area. For well over a year the Zenith FM transmitter has been on the air daily, permitting exhaustive research and experimentation in all phases of FM transmission and reception. All the good things derived from this intensive groundwork are yours in the new Zenith FM-AM receivers.

**Phone, Write or Wire Your ZENITH Distributor for Full Information**

**ZENITH**  
MADE IN U.S.A.  
**RADIO**  
REG. U.S. PAT. OFF.

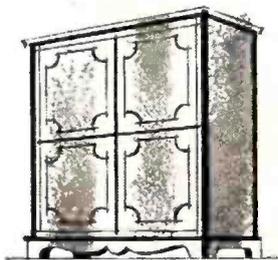
**MADE BY AMERICA'S OLDEST MANUFACTURER OF FINE HOME RADIOS**

# 3 reasons why other dealers envy the man who handles **STROMBERG- CARLSON**



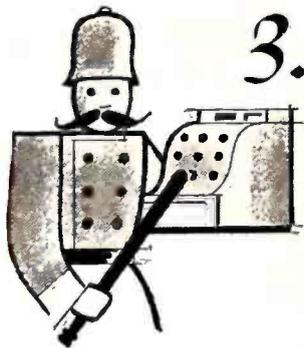
## 1. THE FRANCHISE:

The Stromberg-Carlson franchise is a document whose value is jealously guarded. To obtain it a dealer must prove himself worthy to represent this pioneer line of high-fidelity radio receivers and radio-phonographs. One fact alone enables you to judge how this policy of careful selection and controlled distribution protects the individual dealer—more men today want the Stromberg-Carlson franchise than ever before.



## 2. A HIGH UNIT OF SALE:

The Stromberg-Carlson line is deliberately planned for selling up. Each chassis series—in progression—has all the features of the preceding series, plus certain specific and demonstrable added features. When you realize the importance of a high unit of sale, you realize it means that you sell fewer sets, but make far more net profit. The larger the sales unit—the more dollars come in and the fewer sets to uncrate, deliver, install, service, and the fewer trade-ins and finance problems. The Stromberg-Carlson line provides just that—since its average unit of sale is high; yet the line is completely competitive.



## 3. PROFIT PROTECTION:

Because Stromberg-Carlson hand picks its dealer and controls distribution, the franchise holder's profits are better protected. A Stromberg-Carlson is not a "shopping" item. As a result the dealer works within a more stable price structure. Not only this, but he reaps the benefit of Stromberg-Carlson's great national advertising campaign, with fewer dealers to share the active prospects it creates.

**TO TOP OFF THESE BENEFITS,** a Stromberg-Carlson dealer has the rich opportunity of growing with a firm that for 47 years has blazed the trail in voice transmission and reception . . . that leads the way in FM. with more field experience than any other manufacturer . . . and that today has its FM-AM sets in more homes than all other makes combined! See the new 1942 line at your local distributor's showing and you'll agree, *"There is nothing finer than a Stromberg-Carlson."*

# STROMBERG-CARLSON

ROCHESTER, NEW YORK

THE FINEST RADIO FOR STANDARD PROGRAMS • THE ONLY RADIO FOR FM AT ITS BEST

JUN 11 1941

# RADIO *and Television* TODAY

## RADIO IN THE EMERGENCY

To hold America alert and ready, President Roosevelt has declared an Unlimited National Emergency. Resulting possibilities affecting radio are that all broadcast stations and news communication channels may be taken over by U. S. Manufacturing plants and raw materials may be put on an all-out war basis.

On the other hand, as revealed by the President in his later press statements, such moves were not then contemplated. So pending further events in Europe, normal U.S. status may continue with little change.

\* \* \*

Whatever comes, it is the duty of radio men to work energetically, and to do the best and biggest job of serving the public with radio, that is possible from day to day. (Such a course follows the policy of the British government which, after 20 months of actual war, has instructed its business people to "carry on" their regular jobs,—even in the supreme emergency of actual invasion!)

The American public wants radios at a time like this. Proof is that this year public demand has virtually doubled in this vital field.

Radio men will be doing a patriotic duty if they work as never before to supply the public with radio. And by keeping their own organizations and own efforts up to full speed, they will be safeguarding our normal national economies,—and helping to pay the taxes which are the very sinews of the present Defense effort.

\* \* \*

In bomb-torn England, radio factories turned out more radios in 1940 than in 1939—in addition to making munitions and fuses. In Canada despite staggering war taxes people have been demanding and buying more radios than ever.

What U.S. radio-set production will be this Fall in the face of material shortages, no man can now predict. But Yankee ingenuity can be counted on to accomplish miracles in adapting substitutes and utilizing our vast supplies of the many materials in which shortages do not exist. So it may be anticipated that a lot of radios will keep rolling off the production lines this year.

And if there should be shortages in radio-set production, dealers can keep themselves and their organizations working, and their own earning economies operative, by turning to the aggressive servicing and repair of existing radios. With 54 million radios now in the public's hands, many needing attention, a big job of radio-set maintenance, sales and re-sales, faces the radio trade from that quarter alone.

So, whatever comes, sell radios.

Sell new sets; sell the improved 1942 models.

Overhaul old sets, and sell them, if necessary. Sell service, and tube replacements. Sell repairs. Sell antennas. Sell noise elimination. Sell auto-radios.

Sell radio!

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# RADIO'S TRENDS

## Boom Coming in Servicing

Because radio-set production is bound to be greatly curtailed during 1941, many radio leaders see a marked boom coming in radio servicing of existing receivers.

With some 54 million radio sets now in use in the United States, and probably another five million lurking inoperative in closets, attics, and other storage spaces, there are felt to be plenty of listening posts for the 34,861,625 U.S. homes (latest census total for 1940), if only these millions of sets can be kept in good operating condition.

Accordingly servicemen are urged to get set owners to replace tubes and faulty parts, and give to their older receivers a good overhauling. Counsel from nation's capital also is to dig out all the old radios now idle or not working, and rehabilitate these old sets and sell them to the public. In recognition of the National Defense importance of such radio servicing, it is proposed to advance the priority rating for materials going into replacement tubes and other replacement parts, from the present general radio rating of B7, to a new "replacement" rating of B2 or B3.

It all boils down to bigger and better radio serving business in 1941 and 1942.

## Use of Metals Sharply Cut

At a New York meeting of the radio manufacturing industry, presided over by President Knowlson of RMA, and following a report by Chairman Paul V. Galvin of the Association's priorities committee, the following unanimous industry agreements were made:

1. That the use of aluminum in radio sets be restricted to material for foil in the manufacture of capacitors, and to rotors in variable condensers. Aluminum substitutes will be used for coil cans, condenser cans, tube shields, etc., when present aluminum supplies for such radio components are exhausted.
2. That set manufacturers immediately will begin use of variable condensers having steel stators (instead of aluminum), and after June 15 will receive and use only condensers having stators of processed steel.
3. That set and speaker manufacturers will immediately discontinue purchase of aluminum and also

nickel for permanent magnets for sets for domestic and export sale, other than battery, portable, and farm sets that operate from batteries, and 3-power (AC-DC) portable and farm sets. This involves drastic reduction in types and models of small radio sets using permanent-magnet speakers containing aluminum and nickel.

Arrangements also were made for regulation and procedure to insure enforcement of the industry agreements.

## Radio Week at Chicago, June 9-13

Thousands of radio men will travel to Chicago the second week in June, to attend one or more of the various conventions of manufacturers, distributors, sales managers, representatives, retailers and service men, scheduled to be held during Chicago's Radio Week, June 9-13.

RMA meetings will be held at the Stevens Hotel June 10-11, with the members' luncheon on Tuesday, and the industry banquet Wednesday evening. The Radio Trade Show will continue at the Stevens until Friday, June 13, which will be Servicemen's Day.

Meetings of the Sales Managers' Club, the Radio Servicemen of America, and the Representatives, are also scheduled, together with sessions of various manufacturer organizations as scheduled by the Trade Show headquarters. RCA Mfg. Company's "Radio & Electronics Parade" opens the week, June 9, at the Hotel Morrison.

A closing report on the Chicago show and Radio Week events will be given Friday at 6:15 CDST over stations of NBC's Blue network by Editor Caldwell of RADIO TODAY.

## Re Home, Big-Screen, and Color Television

Following upon FCC authority for commercial operation of television stations beginning July 1, Chairman Fly of the Commission expressed his belief that the National Defense situation imposed no reason for delaying commercialization of either television or frequency-modulation. "Even under present conditions, the industry has an opportunity to square away and use the time to good advantage," he commented.

Meanwhile, big-screen theatre television is getting underway in New York City and may become a forerunner of home tele. For a number of months RCA has been giving pri-

vate showings of its 25-ft.-wide projection television system in the New Yorker Theatre on West 54th Street. Amusement promoters are also making arrangements to open a Broadway theatre for paid-admission showings of the Scopphony television projector.

Color television was demonstrated by NBC early in May. CBS also announced programs televising in color, famous art objects and paintings from the Metropolitan Museum collections.

## Station Gift of Forty Sets

Some of the thoughtful and generous radio interests in the state of Kentucky are at work again, to provide the remote mountain families



Roy Burlew, above, and Les Muter, below, are new members of radio's Government Relations Committee. They will serve with Paul Galvin, the chairman, Fred Williams and A. H. Gardner, in ironing out production problems during the national emergency.





Celebrating \$60,000,000 sales of Stromberg-Carlsons by Gross Sales, Inc., New York, these Stromberg-Carlson executives are, left to right, A. F. Gibson, credit manager; Wesley M. Angle, president; Ben Gross, NY distributor; Lloyd Spencer, general sales manager; Dr. Ray Manson, vice pres. and general manager; and Lee McCanne, assistant general manager.

with radio listening facilities. Station WHAS, Louisville, is making a gift of 40 new receivers to the University of Kentucky, to be used in the 40 listening posts established in the out-of-the-way regions by the University.

The "post" system was started eight years ago, especially to get the educational and other worthwhile broadcasts to the families of southeastern Kentucky. Radio set ownership among these people is of course on the increase, but the posts still serve as focal points for the big broadcasts, and the plan has worked so well that a similar plan has been undertaken in eastern Tennessee.

## 28 FM Stations on Air

After months of construction, commercial FM stations are beginning to spring up with accelerating speed throughout the country. At least 14 are now operating in widely-scattered cities.

The entire list, in the sequence that these FM stations began broadcasting, includes:

- W47NV—Nashville, Tenn. (operated by WSM)
- W71NY—New York City (operated by WOR)
- W51C—Chicago, Ill. (operated by Zenith Radio Corp.)
- W39B—Mt. Washington, N. H. (operated by The Yankee Network)
- W55M—Milwaukee, Wis. (operated by The Milwaukee Journal)
- W43B—Paxton, Mass. (oper. by the Yankee Network)
- W51R—Rochester, N. Y. (oper. by Stromberg-Carlson)
- W65H—Hartford, Conn. (operated by WDRC)
- W45D—Detroit, Mich. (operated by The Evening News Ass'n)
- W45CM—Columbus, Ohio (operated by WBNS)
- W45RG—Baton Rouge, La. (operated by WBFO)
- W45V—Evansville, Ind. (operated by WGBF-WEOA)
- W49D—Detroit, Mich. (operated by John Lord Booth)

The Don Lee Broadcasting System of California has been authorized to operate its K45LA on a temporary commercial basis with a power of 1000 watts to cover the Los Angeles area. A 10,000-watt transmitter will be installed later.

Another 14 experimental transmitters are still on the air regularly.

## "World Time" Window Nets Good Results

A window display stunt which fits in nicely with the public interest in broadcast war news is now being used by dealers in the Seattle, Wash., area. It features a string of sketches of the international figures whose names are in the headlines, along with radios and electric clocks. The "world-wide" flavor is obtained by a relief map of the world, in the background.

In the foreground are small radios, and then the passerby sees the enlarged sketches of such men as

Churchill, Roosevelt, Mussolini, Pe-tain, Hitler and Stalin. These are flanked by console sets, and in the background is the map and the pinned-up electric clocks. Ribbons run from the sketches to appropriate spots on the map. The whole window is called "unusual and effective" and it is identified with "good results throughout the area."

The display was worked out by John Klenke, the radio field representative for GE in the Seattle area, and it worked so well that the company is planning to supply enlarged sketches of the headliners in quantity.

## Radio Magic, Every Friday Evening

Radio Magic programs designed to acquaint the public with new uses of radio principles, and to explain to listeners how to get better reception, are scheduled to continue during the summer every Friday evening at 7:15 p.m. EDST (6:15 CDST, and 3:15 p.m. PT). These programs are conducted by Editor Caldwell of RADIO TODAY, with topics planned as follows:

June 13—New Things in Radio. From Chicago Show.

June 20—How Television Works.

June 27—Molecules and Radio.

July 4—Training Radio Men for National Defense.

July 11—Music That Allays Pain.

July 18—Radio and Relativity.

July 25—Electric Eyes in Defense.

Programs thus far presented in this Radio Magic series already approach 80 in number. They are broadcast over the NBC Blue network with WJZ as Key Station, and are rebroadcast to Europe and South America every Sunday at 12:30 p.m. over the 50-kw transmitter WNBI (17.78 mc).

## Black Box Mystery

The more you hear about them, the more you must think that the new personal radios are good for just about everything. And now you will see how perfect they are, for adding surprise and novelty to a house party.

There's the story about the wandering guest who finally wound up in that corner of the house which consists mostly of tile and traffic. There she saw an oblong box, black and mysterious on the window sill. She couldn't decide whether it was part of the equipment or what-the-blazes, so she opened the lid.

It happened that the sturdy little RCA was then tuned to a dramatic program, and it gave out with a sharp command, "Put that down and get from behind that door!"



The new vice-president and director of sales for Zenith Radio Corp. is J. J. Nance, who resigned from a similar post at Easy Washing Co. to take the new position. See page 56.

TO KEEP THE PLANES FLYING—



# RADIO PUTS NATIONAL DEFENSE FIRST

## ALUMINUM TAKEN FOR PLANES, CUTS RADIO'S SHARE. TANKS IMPOSE PRIORITIES ON STEEL

A situation wholly without parallel in all the history of radio faces the radio trade at this time.

The Defense program has speeded up general industry and employment so that an extraordinary demand exists for radio sets of all types. Radios and related merchandise are "selling like hotcakes."

Yet the shortage of raw materials, due to the Defense program, threatens to cut down the production of radio merchandise for domestic sale far below last year's levels, and many manufacturers, distributors and dealers are today literally tearing their hair to find the goods to sell.

Plenty of customers! But merchandise scarce! And may be scarcer.

### ARMY-NAVY'S BIG ORDER

Meanwhile the radio manufacturers have been called on by Uncle Sam to produce a vast amount of radio equipment for the Army and Navy. This

apparatus now on order totals about \$200,000,000 and represents 18 months' production, or at the rate of about \$130,000,000 per year.

When it is recalled that the total home radio-set and radio-tube output in the industry's record year, grossed the manufacturers only about \$170,000,000, it can be seen that this new government business represents a fat proportion of their former domestic sales. But the new Army and Navy apparatus involves special problems, for it all has to be especially designed and manufactured, requiring individual engineering and production studies, which absorb the industry's technical and production personnel.

Latterly another factor growing out of our "Good Neighbor" policy to South America, promises to introduce a new set of priorities in behalf of home radio sets destined for Latin America.

If the Western Hemisphere is to be

economically self sufficient, it is reasoned that U. S. factories must begin furnishing South American wants right away. And this includes radio sets, if European radio producers are to be circumvented.

So now U. S. radio makers can get precious materials to be used in either U. S. government or South American export production—although at the same time the very same materials are forbidden to sets intended for sale in the U.S.A.

### SEEK ADVANCED PRIORITY

Radio sets and tubes now have a priority rating of B7, which puts them behind many seemingly less important products. But the reasoning of Washington is that, with 53 million radios now in use in the U. S., there will be no dearth of listening posts for morale and news purposes, and that the trade in coming months should concern itself primarily with keeping existing sets in operating condition, rather than with selling new sets. Accordingly there is a move now underway to transfer radio tubes and other replacement items to an advanced priority rating—perhaps B2 or B3.

Aluminum was the first radio metal

# AND THE TANKS ROLLING!



U.S. Army Signal Corps

to be withdrawn from the manufacturers' assembly lines. Demanded for America's vast airplane production program, aluminum for the radio manufacturers was first cut to 30 per cent of their last year's use, and then to 10 per cent. And now assurance is given by OPM Director Batt, that in 1942 there will be no aluminum for non-defense uses.

Already aluminum substitutes are being applied in variable condensers, which are now coming through with steel stator plates. Rotor plates of steel may be next, although steel here is subject to the difficulties of greater weight and wear on bearings, microphonism, and magnetic attraction of filings, changing settings and introducing noise. But even if steel comes as a general substitute, the new fear is that steel itself may be next on the "short" list.

#### NICKEL AND STEEL

There are many structural uses of aluminum which can easily be dropped and replaced by steel. In electrolytic condensers, aluminum for cans can go by the boards. But no substitute is in sight for the condenser foil on which the electrolytic film is formed. Since this essential use of aluminum is perhaps only 1/2 per cent of the present aluminum output, it is expected that enough material may be made available for this special purpose.

Nickel is another metal on the taboo list, and its restrictions are being felt in radio tubes (when steel is a

possible substitute) and in permanent-magnet loudspeakers (which may be eliminated in favor of coil-excited magnets, as in earlier days).

#### RETAILERS SHOULD PUSH REPAIRS

Thus there is a group of radio industry leaders who, reflecting Washington thinking, are "preparing for the worst" by advising the retail trade to expect greatly reduced allotments of radio merchandise during the last six months of '41. Under such conditions, radio men are urged to expand their service departments, overhaul customers' sets and renew tubes and parts, while furnishing up old sets for sale in place of the new sets that will not be available.

On the other hand, criticism is being expressed that the rigid priority limitations on aluminum, nickel, copper and steel have been excessive, and that when more complete official knowledge is obtained of both supplies and requirements of these metals it will be found that unnecessary reserves have been set up to meet the munitions building program. If this is the case, more metals may be released for domestic use. Certain manufacturers report that their supplies for this Fall's production are on hand or in sight, and that it is only 1942 that concerns them. Others feel that with aluminum production being tripled and other raw materials being stepped up, the stringency will be less next year.

#### PLANTS ON DEFENSE WORK

Meanwhile many radio manufacturers are turning their plants over in part to Uncle Sam for government

production. RADIO TODAY has invited comment from those whose factory facilities are more or less given over to Defense work, and while a number begged off from any expression, some very informative views were received as follows:

#### AEROVOX CORPORATION

*S. I. Cole, President*

Our company is engaged in building a considerable quantity of transmitting capacitors for the National Defense Program.

Fortunately, when we moved our plant from New York to New Bedford, Mass., we purchased a building sufficiently large to take care of this additional business. Thus, we are able at this time, to adequately meet whatever demands have been made on us for Defense material and, at the same time, we have been able to take care of regular business from our radio manufacturers and jobbers with reasonable promptness.

There have been some delays in our shipments to our regular trade only because of the difficulty in obtaining materials now and then because of the many priority orders outstanding and, to which raw material suppliers must give preference.

Of course, we are highly pleased that we have been able to meet the rigid requirements as to quality, of the Signal Corps, Navy, Wright Field, and CAA.

#### BURGESS BATTERY COMPANY

*E. C. Nickerson,  
Distributor Sales Manager*

Defense today comes first. It is only natural that as patriotic citizens we cooperate 100 per cent in serving our country by supplying all necessary battery product requirements promptly. With Uncle Sam's

*(Continued on page 64)*



## INDUSTRY USES P. A. SYSTEMS TO AID EXPANSION

As American industry takes over the Defense production load, applications of sound apparatus are finding extended and expanded uses to speed the manufacture of munitions, tanks, planes, engines and all the other equipment.

All over the new war plants, loudspeakers are being installed for the purpose of paging executives and sec-

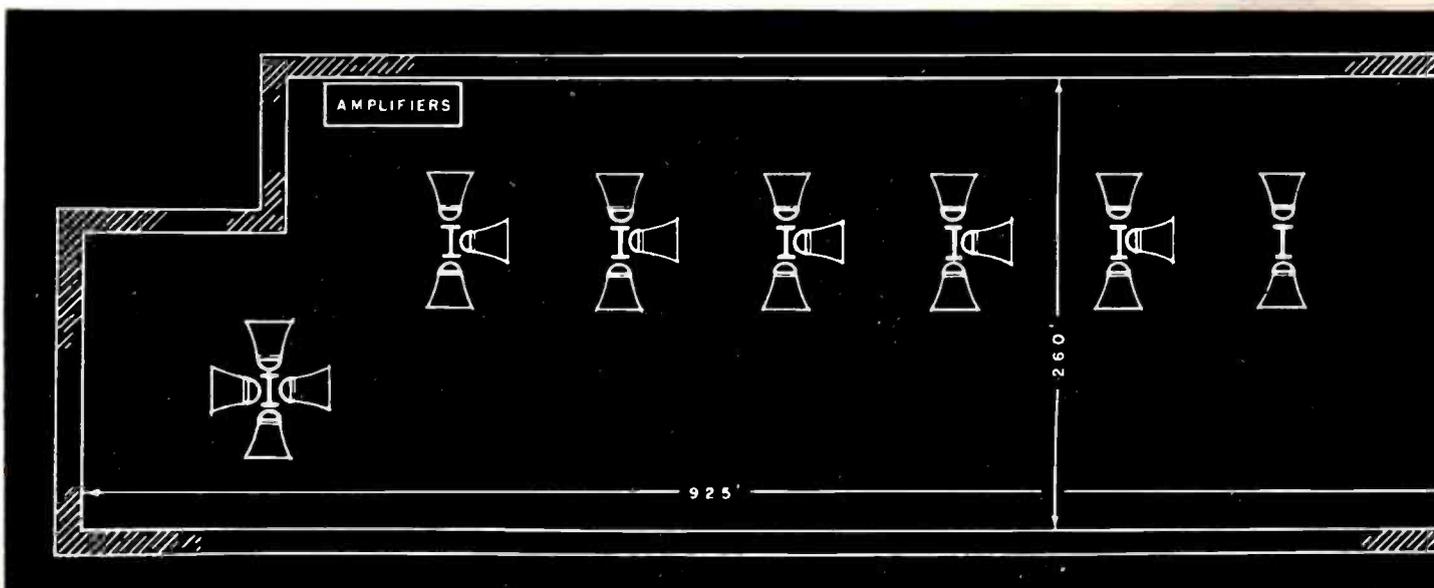
tion bosses, and speeding up communication between departments.

Speakers inside and outside shops aid in expediting orders and shipments and facilitate the loading of trucks and freight cars.

In departments where large numbers of employes, principally women, are doing repetitive operations, it is found that cheery phonograph music

played over the loudspeaker system at levels well above the plant noises, speeds up production, improves morale, reduces nervous tension and lessens mistakes and spoilage. Such a public-address system also stimulates

Speaker layout at Pratt-Whitney plant. The speakers may be connected into groups of seven for paging purposes.



good spirits and patriotic endeavors when used for messages from the plant executives and visiting government officials.

#### HOW SOUND HELPS

Music during lunch hours and recreation periods provides an attraction in drawing more women employes, in communities where labor is scarce.

Sound units also have important uses as guard systems to protect plants against sabotage, and enable

based on the large area to be covered—925 feet long by 260 feet wide—a single floor, topped with the customary angled roofing (framed glass) with alternate high and low bays of approximately 50 to 70 ft. This is the assembly floor, and except for the relatively small composite offices of the production manager and his staff, is unbroken by any partition. There are, however, parallel lines of machines and assembly tables from which come all sorts of noises varying

ability of the sound to “punch through” the previously mentioned noise gives the system its effectiveness.

Another big defense sound job was sold by Jesse Tillett, Universal Radio Supply Co., Louisville, Ky. for the huge powder plant being constructed at Charlestown, Ind.

#### SOUND AND GUNPOWDER

Nucleus of the installation is a mobile public address system and a combination phonograph capable of being operated either from regular automobile storage batteries or from a 110 volt AC, 60 cycle power supply. The amplifier is rated at 75 watts.

This mobile amplifier feeds five 20-watt Atlas Sound PM-23 P.M. dynamic driver units which are coupled to a similar number of DR-42 “Dynamic Reflex” projectors. The double re-entrant air column speakers have a low cut-off frequency of 140 cycles.

Over this public address system orders and instructions are given out to the 8,000 employes on this huge project as they check in and out of the turnstiles in the morning and evening. In addition, special orders, traffic directions and safety messages are broadcast over this system throughout the day. At various intervals, recorded music is played for the workmen. Request tunes are included in the disc session. It is expected that further additions to this setup in sound and radio equipment will become necessary as construction of the plant progresses.

Initiative in analyzing the sound systems which are facilitating the construction and operation of the tremendous plants engaged in defense work is the vital element in selling these jobs. With time such an important factor in present national defense needs, it is obvious how modern public address and paging equipment play such an important part in the issuance of regular or special orders, locating people and boosting production.

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### USES OF SOUND IN DEFENSE PLANTS

- Paging and announcing.
  - Speeding up orders.
  - Facilitating loading of cars and trucks.
  - Guarding plant against sabotage.
  - Music during working hours.
  - Music during lunch and rest periods.
  - Testing products.
  - Masking discordant machine noises.
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# N DEFENSE

night guards and plant patrols to be quickly assembled or apprised of any emergency.

Sound apparatus is also playing many novel roles in testing munition products, measuring surface smoothness of machined surfaces, detecting incipient faults, and instructing men and women workers and supervisors in new tasks.

Typical of the many defense industry sound installations that are doing “their share” is the one at the Pratt & Whitney Aircraft Corporation. This big job was installed by the R. G. Seeli Radio Inspection Service Co., of Hartford, Conn. R. M. Caswell of the Radio Inspection Service Co. made the study of the plant layout and specified the type, size and positioning of the equipment.

Briefly, the initial problem was

Speakers at the airplane plant were mounted on the steel columns as shown here. The reflex-type projectors give good speech reproduction.



from the sharp rasp of ignition testing, to the loud staccato beat of air and kerosene vapor compressors. The large open floor area and multitude of machine noises meant that the areas covered by each speaker group had to be carefully controlled.

Fortunately, the steel uprights of the building were so positioned that by using every other one, it was possible to mount the re-entrant speakers in groups of three on five of these pillars. The speakers are placed 90° apart with the fourth quadrant being covered by the speaker on the adjacent column. Due to the design of the building, however, it was necessary to mount four speakers at one end of this row, and two at the opposite end. See the block diagram layout. This arrangement so positions the speakers that the distance between the center of each speaker group is the same as the distance from each side speaker to the opposing wall. This arrangement eliminates the overlapping of sound or “splashing,” which invariably results when sound is started from several speakers, but travels unequal distances to certain sections. These different length “paths” for the sound cause “echoes” and other bad effects.

Three 75-watt power amplifier stages are mounted in a gray crackle finished rack cabinet together with a two-channel mixer. Switching is provided to permit progressive paging by groups of seven speakers to each power stage. Relay control of the amplifiers is employed, the relays being operated by six volts DC from a separate power pack. The whole system is controlled by grip-to-talk microphones.

#### SPEAKER SWITCHING

It was found unnecessary to incorporate any frequency cut-off networks of either the high or the low range, within the amplifiers beyond the usual manual tone controls. The design of the Atlas Sound DR-42 reflex projectors and PM-23 driver units did this work quite well as they are most effective in the speech range. The



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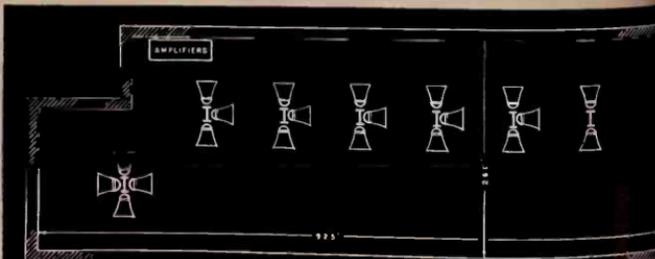
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## TODAY'S FACTORS IN FINDING THE CHOICE SPOTS FOR DOING RADIO BUSINESS

Choosing the proper location for your radio store is very important, and involves many new factors.

Some of these factors are easily measured, such as the daily and hourly flow of pedestrian traffic, and its buying character. But some other considerations are not as easily reduced to factual measurement, depend more upon judgment and opinion, such as the *trend* in the movement of the shopping district, and why.

Rents are usually based upon, and are fairly proportional to, the size and the regularity of flow of pedestrian traffic.

Some types of stores, such as women's specialty shops, chain drug stores, 5 & 10s, dry goods stores seek high traffic locations.

Their sales volume is predicated



The question is, will radio prospects in your town favor downtown locations, or trend to more suburban stores?

# WHERE'S THE BEST



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Crowds are necessary to create enough "buying impulses" from such displays in lieu of extensive advertising.

In recent years as the automobile has become such a vital factor in our everyday life, parking has become a serious problem in the "center."

### BUYING SCENE SHIFT?

The shopping habits of the nation have been drastically changed by the automobile, but the changes yet to come will make those of the past shrink to insignificance.

Many smart merchants, large and small, have seen this trend in the making, have begun to forsake the old high traffic "center" locations for the more easily accessible locations outside the business district.

And so the *first* decision as to your store's location, whether it will be in the old "shopping district," or in the newer more easily accessible locations, must be based upon *your* knowledge of your own town, the movement of its shopping center, and *your vision of its future*.

The character of the business you operate, your merchandising methods, will of course influence your decision to a large degree.

Do you expect to have 60 per cent of your business in compacts and records, low unit sale high transaction items?

Then think twice before moving out of the "center."

Are you going to use an outside salesforce, to carefully cultivate suspects into prospects, and bring them into the store when ready to buy?

And are you going to concentrate

on combinations, refrigerators, and major appliances?

Then an easily accessible location, with free parking facilities, certainly merits your earnest consideration.

Will most of your customers come to your store in their own cars, by bus, or on foot?

Will you practice "impulse merchandising" or "customer cultivation?"

These are some of the questions you must answer before you can intelligently locate your store, or evaluate its present location.

### ADAPTING YOUR POLICY

If you decide to stick to the high traffic location, then get the best location you can, and *make the most of it*, for less than the best may not be as good as you think, and failure to make the most of it may be expensive.

The great chain organizations, such as Woolworth, Penney, Liggett, Wheelan and many others have reduced the location of their stores to a very exact formula, measuring the hourly flow of traffic, the trend of the shopping district, and the "buyability" of the passing people.

Usually a "movie" will not be far away. South or west sides of the street are ordinarily preferred, so that the afternoon sun does not reflect blinding glare from windows, and sidewalks may be more comfortable for afternoon shoppers.

In these "preferred" locations rents are high, in dollars, but if properly capitalized on, may be low in percentage of sales.

If the location will not produce average monthly sales 20 times the monthly rent it is no "bargain" any way you measure it.

Actually, of course, the location alone is not the controlling factor.

Rather it is the combination of the location, and *what you do with it* that determine the ultimate success of your store.

#### LOCATION CHANGES ADS

In giving consideration to a location out of the high rent district, it must be remembered that advertising costs will necessarily be higher to draw people to you, away from their accustomed shopping habits.

It is a wise precaution then to combine the rent, occupancy, and advertising costs, to better appraise the

ferent" front. It makes your store *stand out*, invites passersby to *come in*.

It is the visible and tangible sign of success, the outward expression of an alert state of mind, keyed to the times. Modernizing your store in *any* location pays dividends in publicity, goodwill, sales, and profits.

It is good advertising, good business, any way you measure it, to have your store look better than your neighbor's, have it looked at and talked about more, by more people.

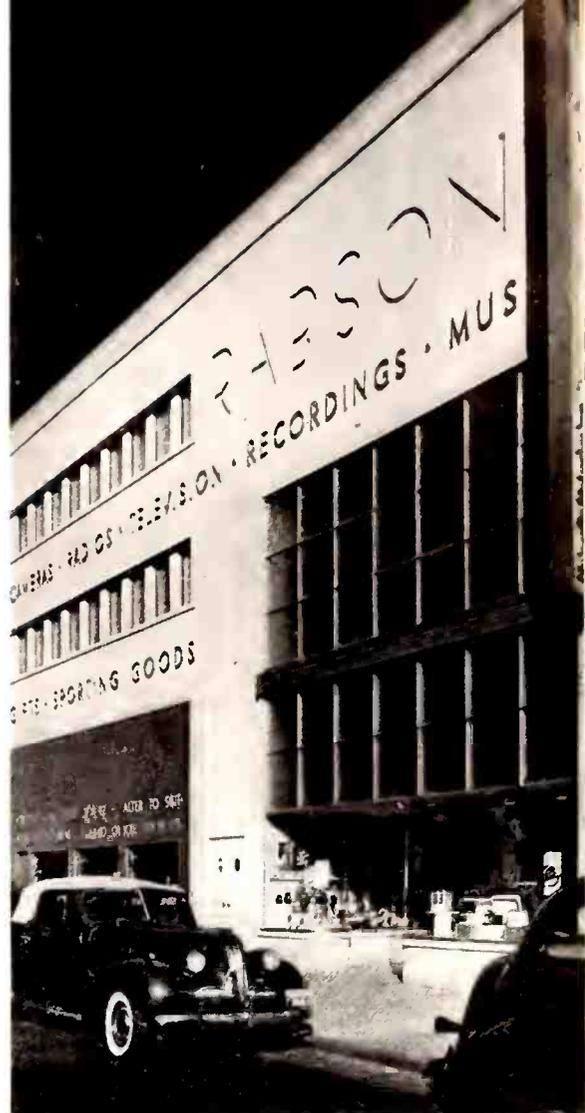
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Much can be done with lights, and lighting, to make your store stand out, and attract attention to itself. Your lighting can complement the season, the color of your displays, influence the psychological reactions of your customers to your store, increase sales directly. Light, color, motion, attract the eye.

Windows equipped with fluorescent lighting in various colors, slowly changing, with electronically controlled "spots" to focus attention, can be made to attract a surprisingly high percentage of passers, and to create an unusually high ratio of "buying impulses."

No matter where you are located, appearance, *modern appearance*, is a strong factor in making that location a good one for you.

Radio is modern, and *deserves* a modern store, in a modern location.



Designed to attract customers is this distinguished store-front for Rabson's, on famed 52nd St. in New York. Architect was Joseph Weiss. Below is the "downtown" location chosen by J. W. Lier, San Bernardino, Calif., another dealer who sees the value of store-front streamlining in modern radio merchandising.

# LOCATION?

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Then the trend of the shopping district demands consideration.

And it must be remembered that the amount spent in institutional advertising has cumulative effect, ever increasing value, whereas a similar sum spent in the form of high rent is definitely gone when spent, has no cumulative value whatever.

#### FIXING THE FRONT

In *any* location the appearance of your store, your "front," is important in attracting favorable attention to your store.

A "different" front than your neighbors, such as the "red" of Woolworth's, the "yellow" of Grant's, may in time come to identify your store.

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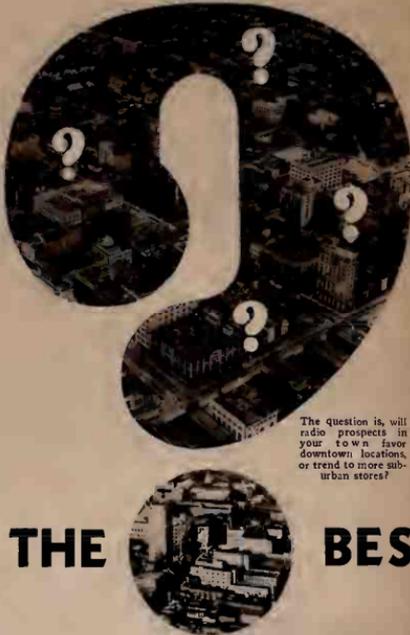
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Lier  
RADIO & TELEVISION CO.  
PHILCO RCA VICTOR





Smart young ladies are making it a habit to carry portables on their vacations and visits such as the 7-tube Philco model, 854T, shown. Features new noise-reducing converter tube.

Wilcox-Gay's new A-112 Recordio has 10 tubes, tilt front tuning panel and features an exclusive development, a uni-control Insta-Matic record changer. Remote control selector. Mahogany cabinet, \$169.95.



## AS THE '42 RADIO SEASON

PREVIEW MODELS OFFER SPECIAL

### Majestic phono-radio

★ Model 7C40, a 7-tube, 2-band superhet table automatic phono-combination. Plays and changes 10 and 12 in. records with lid closed. 4 watts pushpull output, R.F. stage on all bands, 3 gang condenser, 5 in. dynamic speaker, loop antenna. Walnut cabinet. \$49.95 list. Majestic Radio & Telev. Corp., 2600 W. 50 St., Chicago, Ill.—RADIO TODAY.

### S-W portable

★ Model 6U2GA, 1 of 3 new self-charging (charges any standard dry battery), 6-tube portables, has built-in loop, 5 in. speaker. AC-DC battery. Stewart-Warner Corp., 1825 Diversey Pkwy., Chicago, Ill.—RADIO TODAY.



### Howard combination

★ A 14-tube AM-FM phono-radio housed in a period Chippendale cabinet, has 4 bands. Tunes 3 AM bands from 540 kc. to 22 mc. and FM from 41 to 50 mc. Record player changes 12 intermixed 10 and 12 in. records. Special 12 in. speaker. Dual-tone control. Howard Radio Co., 1735 Belmont Ave., Chi., Ill.—RADIO TODAY.



### Farnsworth CT-43

★ A dual-purpose radio designed for battery operation from single "AB" pack with added feature of being convertible into 110 v. AC-DC set by adding one 117Z6GT tube. 4-tubes, heavy duty P.M. dynamic speaker, 535-1730 kc. Iron core antenna coil. 2-tone plastic cabinet, mahogany finish, bronze speaker grille. Farnsworth Telev. & Radio Corp., 3700 Pontiac St., Ft. Wayne, Ind.—RADIO TODAY.





This 1942 Crosley portable, model 62PB, in its weather-proof cowhide-grained case adds enjoyment under the open summer sky. Has 5 tubes and operates on AC-DC or battery power.



When the great outdoors calls, General Electric's deluxe portable, LB-702, is a welcome addition to any group. Beamscope antenna is located in the lid. Controls mounted on horizontal dial under the lid.



#### Westinghouse Carryette

★ WR-62K1, AC-DC battery superhet portable with Stratoscope antenna and untuned R.F. stage. 5 in. P.M. dynamic speaker. 540-1600 kc. 6 tubes on line power, 5 tubes on battery power. Washable brown and ivory, airplane luggage fabric with darker contrasting striped saddle. Westinghouse Elec. Supply Co., 150 Varick St., New York, N. Y.—RADIO TODAY.

# OPENS

## ES FEATURES

### RCA "Pick-Me-Up"

★ A new luggage-type portable, light in weight, is model 25BP. Durable 2-tone tan leatherette covering. 5-tube superhet, operating on batteries or 110 v. AC or DC. Dynamic loudspeaker, built-in Magic Loop antenna, "frequency locking" magnetite core I.F. transformers, A.V.C. External antenna connections provided for weak signal areas. RCA Mfg. Co., Camden, N. J.—RADIO TODAY.



### Sentinel portable

★ One of 32 models in the 1942 line is the 6-tube, 3-way portable, 262-P. Includes R.F. stage and 3-gang condenser. Has Sen-Tenna and also built-in loop aerial. Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—RADIO TODAY.

### Emerson "Power Mite"

★ Model 432, 4-tube battery superhet, designed to fit the pocket, weighs 3 lbs. and is 2 x 4 1/8 x 8 1/4 in. P.M. dynamic speaker, inclosed loop. \$19.95. Emerson Radio & Television Corp., 111 8th Ave., New York, N. Y.—RADIO TODAY.



### Admiral 77-P5

★ 5-tube, AC-DC-1 1/2 v. superhet with P.M. dynamic speaker, super aeroscope, on-off indicator. Lucite escutcheon. 535 to 1550 kc. Automatic power change switch guards life of self-contained batteries. Grey tweed portable luggage case, 13 1/4 x 8 1/2 x 5 3/8 in. Continental Radio & Telev. Corp., 3800 Cortland St., Chicago, Ill.—RADIO TODAY.





Smart young ladies are making it a habit to carry portables on their vacations and visits such as the 7-tube Philco model, 8347, shown. Features new noise-reducing converter tube.



Wilcox-Gay's new A-112 Recordio has 10 tubes, tilt front tuning panel and features an exclusive development—a uni-control Instant record changer. Remote control selector. Mahogany cabinet, \$169.95.



This 1942 Crosley portable, model 62PB, in its weather-proof cowhide-grained case adds enjoyment under the open summer sky. Has 6 tubes and operates on AC-DC or battery power.

When the great outdoors calls, General Electric's deluxe portable, LB-702, is a welcome addition to any group. Beamscope antenna is located in the lid. Controls mounted on horizontal dial under the lid.



Westinghouse Carryette

★ WR-62K1, AC-DC battery superhet portable with Rhapsody antenna and unilux R.P. stage. 5 in. P.M. dynamic speaker. 540, 1600 kc. 6 tubes on line power; 5 tubes on battery power. Washable brown and ivory, alpine lacquer fabric with darker contrast-stripe inside. Westinghouse Elec. Supply Co., 150 Varick St., New York, N. Y.—Radio Today.



Sentinel portable

★ One of 32 models in the 1942 line is the 6-tube, 3-way portable 263-P. Includes R.P. stage and 3-gang condenser. Has Sen-Tuna and also built-in loop aerial. Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—Radio Today.

Admiral 77-P5

★ 6-tube, AC-DC 1½ v. superhet with P.M. dynamic speaker, super-aeroscope, on-off indicator. Lucite enclosure. 535 to 1550 kc. Automatic power change switch. Earpiece of self-contained batteries. Grey tweed portable luggage case. 13½ x 8½ x 5½ in. Continental Radio & Telev. Corp., 380 Cortland St., Chicago, Ill.—Radio Today.

Emerson "Power Mite"

★ Model 432, 4-tube battery superhet designed to fit the Pocket. Weighs 3 lbs. and is 2 x 4½ x 8¼ in. P.M. dynamic speaker, enclosed loop. \$39.95. Emerson Radio & Television Corp., 111 8th Ave., New York, N. Y.—Radio Today.



JUNE, 1941



## AS THE '42 RADIO SEASON OPENS

PREVIEW MODELS OFFER SPECIAL SALES FEATURES

### Mojestic phono-radio

★ Model TC40, a 7-tube, 2-band superhet table automatic phono-entertainment. Plays and changes 10 and 12 in. records with lid closed. 4 waite push-pull output, R.P. stage on all bands. 3 gang condenser, 5 in. dynamic speaker, loop antenna. Walnut cabinet. \$49.95 list. Majestic Radio & Telev. Corp., 3600 W. 50 St., Chicago, Ill.—Radio Today.

### S-W portable

★ Model 6U2GA, 1 of 3 new self-charging (charges any standard dry battery), 6-tube portables, has built-in loop, 5 in. speaker. AC-DC battery. Stewart-Warner Corp., 1828 Diversey Plwy., Chicago, Ill.—Radio Today.

### Howard combination

★ A 14-tube AM-FM phono-radio housed in a Period Chippendale cabinet, has 4 bands. Tunes 3 AM bands from 540 kc to 32 mc and FM from 41 to 60 mc. Record player changes 12 Internated 10 and 12 in. records. Special 12 in. speaker. Dual-tone control. Howard Radio Co., 1735 Belmont Ave., Chi., Ill.—Radio Today.

### Fornsworth CT-43

★ A dual-purpose radio designed for battery operation from single "AB" pack with added feature of being convertible into 110 v. AC-DC set by adding one 117Z6GT tube. 4-tubes, heavy duty P.M. dynamic speaker, \$35.1799 kc. Iron core antenna coil. 2-tone plastic cabinet, mahogany finish, bronze speaker grille. Fornsworth Telev. & Radio Corp., 3700 Postville St., Ft. Wayne, Ind.—Radio Today.

### RCA "Pick-Me-Up"

★ A new luggage-type portable, light in weight, is model 25BP. Durable 2-tone tan leatherette covering. 5-tube superhet, operating on batteries or 110 v. AC or DC. Dynamic loudspeaker, built-in Magic Loop antenna, "frequency locking" magnetic core I.P. transformers, A.V.C. External antenna connections provided for weak signal areas. RCA Mfg. Co., Camden, N. J.—Radio Today.



# CERTIFIED BY

● The advanced engineering and precision manufacturing of Utah products have won universal user preference. Manufacturers, dealers and servicemen assure their customers of satisfactory performance with Utah parts.

UTAH SPEAKERS give you the benefits of the

constant laboratory testing and research which result in sound improvement.

UTAH VIBRATORS are precision made and delicately adjusted for long life, correct electrical balance, current output and freedom from noise.

UTAH TRANSFORMERS avoid failure due to



## UTAH RADIO PRODUCTS

### 810 ORLEANS STREET

CANADIAN OFFICE: 560 KING STREET WEST, TORONTO  
CABLE ADDRESS: UTAH RADIO

# USER PREFERENCE

moisture because of the complete impregnation of interlayer insulating paper by Utah's vacuum-pressure methods.

UTAH-CARTER PARTS—Vitreous Enamel Resistors, Volume Controls, wire-wound type, improved carbon type; Potentiometers, Rheostats, Plugs, "T" and "L" Pads, Long and Short Jacks,

Impjacks, Jack-Switches, Push-Button Switches, Plug-In Type D. C. Relays, because of their dependable performance, assure the proper functioning of the unit in which they are used.

Utah Radio Products are distributed nationally through recognized jobbers and dealers. Be sure the Utah trademark is on the carton.



## PRODUCTS COMPANY

### CHICAGO, ILLINOIS

ARGENTINE: UCOA RADIO PRODUCTS CO., S.R.L. BUENOS AIRES  
MEXICO: RADIO PRODUCTS CO., S.R.L. MEXICO CITY

# CERTIFIED BY USER PREFERENCE

• The advanced engineering and precision manufacturing of Utah products have won universal user preference. Manufacturers, dealers and servicemen assure their customers of satisfactory performance with Utah parts.

UTAH SPEAKERS give you the benefits of the

constant laboratory testing and research which result in sound improvement.

UTAH VIBRATORS are precision made and delicately adjusted for long life, correct electrical balance, current output and freedom from noise.

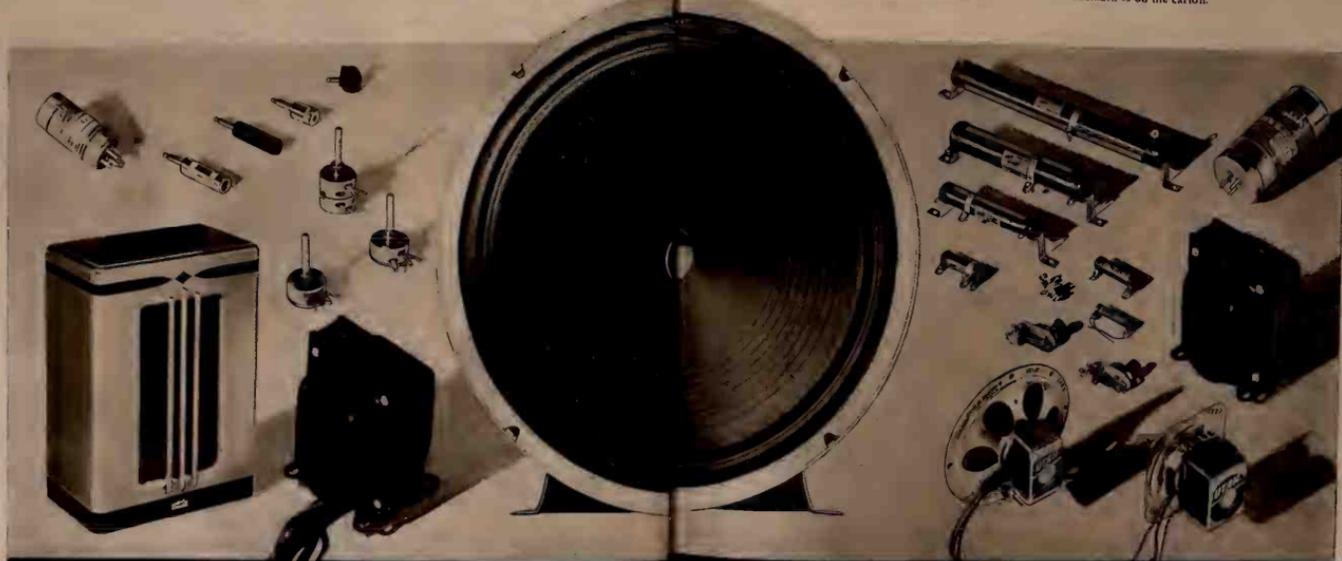
UTAH TRANSFORMERS avoid failure due to

moisture because of the complete impregnation of interlayer insulating paper by Utah's vacuum-pressure methods.

UTAH-CARTER PARTS—Vitreous Enamel Resistors. Volume Controls, wire-wound type, improved carbon type; Potentiometers, Rheostats, Plugs, "T" and "L" Pads, Long and Short Jacks,

Impjacks, Jack-Switches, Push-Button Switches, Plug-In Type D. C. Relays, because of their dependable performance, assure the proper functioning of the unit in which they are used.

Utah Radio Products are distributed nationally through recognized jobbers and dealers. Be sure the Utah trademark is on the carton.



## UTAH RADIO PRODUCTS COMPANY

810 ORLEANS STREET CHICAGO, ILLINOIS

CANADIAN OFFICE: 560 KING STREET WEST, TORONTO  
CABLE ADDRESS

IN ARGENTINE: UCOA RADIO PRODUCTS CO., S.R.L. BUENOS AIRES  
UTARADIO, CHICAGO

# DISCS FIGURE IN U. S. MORALE

While a radio in one corner of the store is loudly giving out with the latest news of the War, a number of shoppers are seen to drift around to the record counter. They don't quite know why, maybe, but they have a yen for some good recorded music of their choice.

Plenty of retailers have noticed this, and the reports add up to the fact that there is afoot in this country today a quiet and steady increase in the number of records that people buy. Disc volume is strong and dependable; the records seem to fill a new need that the public regularly feels.

The experts say that the upswing in record sales can be traced directly to the fact that people now feel the urge to "get away from It All." They are looking for escape and reassurance, because they are disturbed by the national and international crisis. This is a year of emotional stress and many a person feels like taking a few minutes off, to retire into a corner and listen to favorite music.

## TREND TO REMEMBER

Such terms as "escape" and "reassurance" are not the brisk kind of words that are likely to be used in a conversation between a jobber salesman and a dealer, but nevertheless they are now terrific sales factors. The history of record sales shows that whenever people are plunged into an emotional crisis, the number of discs sold is noticeably increased.

"It has been proved that in times of uneasiness and distress people turn to music for comfort and relaxation, with a consequent increase in demand for musical instruments," is the view of William A. Mennie, secretary of the National Piano Manufacturers Association. Mr. Mennie reported that April shipments of pianos amounted to 12,848, an increase of 29.3 per cent over April of last year. He said that the "return to music" was noticeable in this country and in Europe, where the blackouts keep people home at nights.

In the column at the left is a quartet of new record-players, all ready to take part in new national swing to discs. Top one is Lucile Norman, WLW contralto, with Crosley Glamour-Tone model that offers full-foreign reception. Then comes Wilcox-Gay's new A-111 Recordio with Uni-Control Insta-Matic disc changer. Second from bottom is Detrola compact portable job, model 402, featherweight tone arm, AC, \$19.95. At the bottom, GE offers the stylish LC-608, with 6½ in. speaker, life-time needle, record changer, etc.

That this record-playing group is a sizable one already is seen in the new estimates of the number of record-playing instruments now in use. Including the hand-wind jobs along with the fancy new combinations, the total is now around 5,000,000. This means that among every ten radio owners in a dealer's trade area, there is one record fan.

## MILLIONS TO BUY

This mob of disc enthusiasts will increase in the coming weeks, as the big demand for portable record-players gets under way. Many dealers are now featuring these jobs in the window, heading into the warm-weather interest. The idea of the Family Weekend, in which these portables will play such a big part, is also expected to gain favor as a result of the nation's state of tension.

(A string of albums which the folks will be needing during the outdoor jaunts were mentioned in the "Summer Records" feature on page 18 of the May issue of RADIO TODAY.)

Another big advantage that the record business has, is the fact that there will apparently be no "war shortages" in it. While deliveries on other merchandise may be so unpredictable as to be anybody's guess, the shipments of records are expected to come through as usual. Just when  
(Continued on page 60)

## Good Sales Bets Among New Records

BOB HANNON with orchestra, singing *Intermezzo*—Decca 3692.

TOMMY DORSEY and his orchestra playing *I Love It So*, with VR by Paul Mason and The Pied Pipers—Victor 27392.

THE CHARIOTEERS with orchestra singing *I Understand*—Columbia 36094.

TONY PASTOR and his orchestra playing *Maria Elena*, with VR by Dorsey Anderson—Bluebird B11127.

GUY LOMBARDO and his Royal Canadians playing *The Last Round-up* with VC by Kenny Gardner—Decca 3722.

LAWRENCE WELK and his orchestra playing *You Are My Sunshine* with VC by Jayne Walton, Parnell Grina, Shirlee Grundy—Decca 3725.

TITO GUIZAR with orchestra singing *Yours*—Victor 27410.

BARRY WOOD and the FOUR KING SISTERS with orchestra singing *Bless 'Em All*—Victor 27407.

GLENN MILLER and his orchestra playing *The Spirit Is Willing*—Bluebird B11135.

JACK LEONARD with orchestra singing *My Sister and I*—Okeh 6158.

FOUR KING SISTERS with The Rhythm "Reys" singing *The Hut-Sut Song* (other side has *Music Makers*)—Bluebird B11154.

# What's New at the Trade Show?

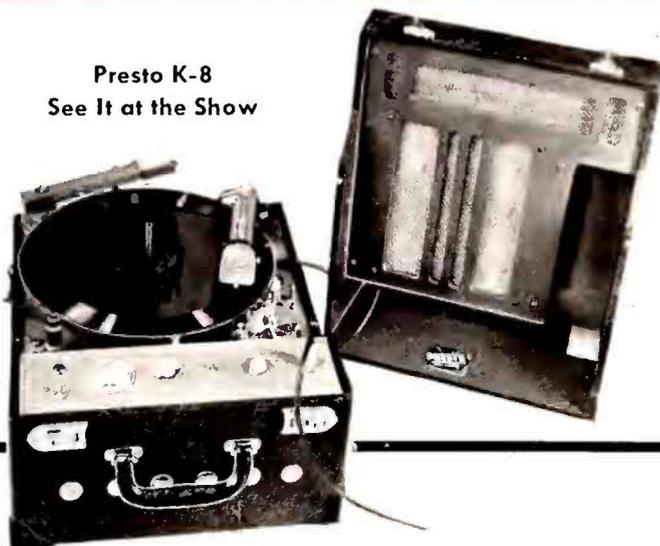
# SEE PRESTO

## BOOTHS 430-32

### NEW PRESTO K-8 RECORDER

The smallest, lightest, lowest priced recorder on the market that will make and play a continuous 15 minute recording at 33 $\frac{1}{3}$  RPM. The newest "best seller" in the Presto line. Announced May 1st. Hundreds now in use. See it at the Show.

Presto K-8  
See It at the Show



SEE  
IT AT  
THE SHOW

### NEW PRESTO GLASS BASE DISC

Made in the new \$250,000 Presto disc plant. Better than the finest aluminum base disc. Smoother, flatter, thicker than metal base discs. Replaces the famous Presto Q disc for high fidelity recording in radio

stations and studios. Reasonably priced. Full distributor discounts. See it at the Show.

### NEW PRESTO STEEL BASE DISC

For radio stations, schools, studios and home recording. The perfect recording medium for your customers who want something BETTER in recording blanks. Made in 6", 7", 8", 10", 12" and 16" sizes. Ask for a Presto steel base disc at our booth 430-32. Take it and compare it with other discs offered for general purpose recording. Decide to stock this new Presto moneymaker. See it at the Show.



Camera Drive Unit    Turntable Unit    Projector Unit  
Syncrosound System—See It at the Show!

### NEW PRESTO SYNCRO SOUND SYSTEM

Gives perfect lip synchronization of disc recordings with 8mm and 16mm movies. Makes 8mm talking pictures at home. Easily attached to any make of recorder, phonograph, projector or camera. On demonstration at booth 430-32. See it at the Show.

**JUST RELEASED!** New Presto Catalog and Distributor's Catalog Sheet. Send for Your Copies Today.

# PRESTO

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

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

In Other Cities, Phone . . . ATLANTA, Jack. 4372 • BOSTON, Bel. 4510  
CHICAGO, Har. 4240 • CLEVELAND, Me. 1565 • DALLAS, 37093 • DENVER,  
Ch. 4277 • DETROIT, Univ. 1-0180 • HOLLYWOOD, Hil. 9133 • KANSAS  
CITY, Vic. 4631 • MINNEAPOLIS, Atlantic 4216 • MONTREAL, Wel. 4218  
PHILADELPHIA, Penny. 0542 • ROCHESTER, Cul. 5548 • SAN FRANCISCO,  
Yu. 0231 • SEATTLE, Sen. 2560 • WASHINGTON, D. C., Shep. 4003



radio listeners of their favorite sustaining programs sent out by the networks, such as the New York Philharmonic-Symphony broadcasts, educational and religious programs, world news service. We do not see how, under these "regulations," Columbia or anyone else can afford to, or has any real inducement to, produce and broadcast programs of this kind and to maintain and improve the character of its public service.

3. It will establish radio monopolies in many sections of the country which are now served by compet-

# FCC HITS YOUR BUSINESS

## COMMISSION ORDER STRIKES BLOW AT RADIO WHILE PRETENDING TO PROTECT IT

"Sometimes you have to take a thing away from people, to get them to realize what it means to lose it!"

That is going to be true of radio broadcasting as we know it in America, unless people understand what is happening and do something about it, declares an official statement of the Columbia Broadcasting System.

And because the radio dealer's whole business existence is bound up in the quality of the programs delivered to his customers, radio men will want to study carefully the unparalleled blow which the FCC has just handed to the broadcasters, particularly the networks. Every radio serviceman, too, is vitally interested in these new orders, which may change the whole course of radio servicing if future programs lack popular interest, so that fewer people feel it worth while to have sets repaired.

### EIGHT BODY-BLOWS

The Federal Communications Commission has adopted eight new "regulations." Most people will never see them or read them. They are wrapped up in a thick government report. Like

a bitter pill, they are sugar-coated with nice words and high-sounding phrases about the public interest. Then, to make the deception complete, says CBS, they are handed out with a press release that would make people think the Commission is protecting what it is actually wrecking. "Like calling a blitzkrieg a rescue party."

It is its report, and in subsequent utterances by its Chairman, the Commission bolsters its attack on the networks by the loose, unsubstantiated use of such words as "monopoly," "domination," and "control."

The analysis prepared by CBS shows that, instead of benefiting the public, instead of promoting sound competition, instead of improving radio broadcasting, what the Commission proposes to do in its orders will have these effects:

1. It will threaten the very existence of present network broadcasting service, bring confusion to radio listeners, to radio stations, and to users of radio, and deprive, business of an orderly and stable method of presenting sponsored programs to the people.
2. It will threaten the continuance to

ing stations and competing networks and deprive hundreds of radio stations of an important source of revenue, besides seriously affecting their opportunity to build up their local audiences through network programs.

4. In weakening the ability of the radio industry to give the kind of broadcasting service that people have come to demand, it may, in the end, encourage the government to take over broadcasting altogether. Meantime it opens the door to the complete domination of radio by whatever government happens to be in power.
5. It will cripple, if it does not paralyze, broadcasting as a national service at a time when radio should be encouraged to continue and enlarge its contribution to national unity and morale.

### "NOBODY'S BUSINESS"?

Nearly all listeners in the United States now have at all times a choice of more than one program. In many instances the choice may be among as many as fifteen or twenty. The listener is interested in the quality and content of the program and in his ability to receive it clearly. Competition carried to the absurdity of the Commission's new "regulations" will certainly detract from the former. Of course, it will do nothing for radio reception.

The new "regulations" indicate far less interest in program quality than in program source. A station might well lose its license because it broadcasts fine programs from one source, instead of poor programs from several sources.

The Commission holds out a hazy hope that the public will somehow hear the best programs in all places  
(Continued on page 32)

# Highlights In THE 1941

## Jensen LINE

*Hypex*  
PROJECTORS

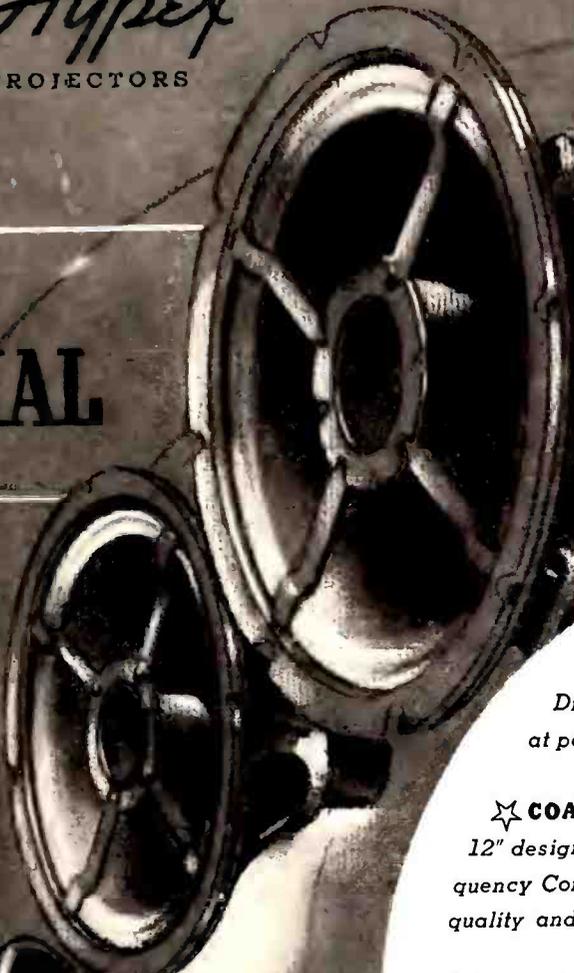
**COAXIAL**  
SPEAKERS

*Speech  
Master*  
REPRODUCERS

*Bass Reflex*  
REPRODUCERS



★ **HYPEx Projectors** are entirely new, more efficient. They have a new, better "flare formula"—not exponential, developed by Jensen acoustical research. Driver units employ the Jensen "Annular" diaphragm, clamped at periphery and center—another exclusive feature!



★ **COAXIAL Speakers** Now a total of four improved 15" and 12" designs for high-fidelity extended-range reproduction. High Frequency Control provides instant fidelity adjustment to suit program quality and listener preference. Available in complete reproducers.

★ **SPEECH-MASTER Reproducers** Designed especially for crisp, highly-effective speech reproduction. Desk, panel, wall-mounting types in power ratings for low-level and high-level applications.



★ **BASS-REFLEX Reproducers** A complete line of reproducers with speaker installed, and enclosures only, in fine furniture and utility styles—all with the smoothly extended low-frequency range for which Jensen Bass Reflex is justly famous.

★ These are only a few of the many distinguished products in the complete Jensen line. Write for new Condensed Catalog No. 125 for further information.

**Jensen**  
6601 SOUTH LARAMIE AVENUE • CHICAGO



Radio tubes are used in this Chronoscope to measure bullet speeds in milliseconds.

Radio methods of measuring speeds of projectile travel and explosion pressures in guns. Testing airplane instruments. Microphone aids in studying bombs.

# ELECTRONICS IN DEFENSE

Radio tubes and electronics are now at work for Uncle Sam on a wide front, performing many important parts in defense production and in actual battle-line operations.

But midway along the line between factory production and the actual use of munitions and war equipment, there is one major military service where radio tubes rank supreme—the electronic testing and inspecting of war materials and seeing that they are fit to perform their vital functions when called upon.

For here electronics and the radio tube become the super-eyes and super-ears of Uncle Sam, and perform amazing feats of scrutiny of both raw materials and finished products.

## BULLET SPEEDS

No projectile is too fast for the radio tube to measure its speed with micro-second accuracy. No explosion-chamber pressures can be built up but that the tireless crystal and radio tube can gauge them as easily as your gas-station attendant checks the air-pressure in your tires!

Many interesting examples of such electronic applications are found in the research laboratory of the Remington Arms Co. at Bridgeport, Conn., where for 75 years these historic Yankee munitions makers have been producing cartridges for American riflemen in peace and in war.

Cartridges, to be dependable, must be loaded with utmost uniformity. Such uniformity has to be checked by frequent tests, during production, and also the cartridges must be tested to see that no deterioration has occurred in any component. In most tests these firing-speed measurements are made by the Boulengé timer—a relatively crude system of falling weights, electrically released by the bullet traversing electrical contacts.

But now radio tubes have entered the picture, and with a new electronic super stopwatch called the Chronoscope, bullet velocities and explosion time are being measured in thousandths of a second. In making the tests, the cartridges are fired down a long bricklined gallery. As the bullet leaves the gun barrel, it passes through a loop of wire in which a tube-gen-

erated high-frequency alternating current is flowing. The passage of the metallic mass of the bullet through the rapidly reversing magnetic field inside the loop, causes sudden currents to flow in the bullet which upset the electrical balance of the loop and sends a sudden "kick" back to the timing device. This is the first timing impulse received by the Chronoscope, or super-stopwatch, for timing the bullet.

Meanwhile with velocity unimpaired, the bullet speeds on through a distance of 15 ft. and strikes a steel plate, which breaks an electrical circuit sending the second impulse to the Chronoscope. During the brief interval between the two impulses marking 15 ft. of bullet travel, a tiny current flows into a galvanometer, causing the pointer to swing over proportionately to the current or time interval and so measuring the time interval in "milliseconds."

## THIRTY MILES PER MINUTE

In a number of tests on .30 caliber cartridges, the pointer each time swung to six milliseconds for the 15 ft. travel of the bullet. This, as a little figuring will show, corresponds to a bullet speed of about 2500 ft. per second. The .30 caliber rifle bullet was thus traveling about 30 miles per minute,—or 30 times as fast as an express train moving a mile a minute. Such bullet speeds incidentally are 6 to 10 times faster than best airplane speeds—which is an answer to the misapprehension some people have that a modern airplane flies faster than its own or enemy bullets!

Even a .22 caliber rifle bullet travels 15 miles per minute or 3 to 5 times faster than the best planes.

This chronoscope which is the invention of C. I. Bradford of the re-

(Continued on page 66)

## Defense Jobs for Radio Men to Install and Maintain

Intercommunicator Systems  
Public Address Hook-ups  
Smoke and Fire Alarms  
Music Distribution Systems  
High-Frequency Heating

Production Speed-up Devices  
Black-Light Burglar Alarms  
Listening Systems, Concealed Mikes  
Production Counters, Photocell  
Concealed Conversation-Recorders  
Safety Devices on Machines

*Company Attention-n-n!*

# Centralab VOLUME CONTROLS



Millions of CENTRALAB Volume Controls are marshalled to meet the "listening" needs of the nation.

For more than a decade Centralab Controls reflect the superb engineering skill . . . the meticulous care in manufacture and the precision perfection of every tiny part.

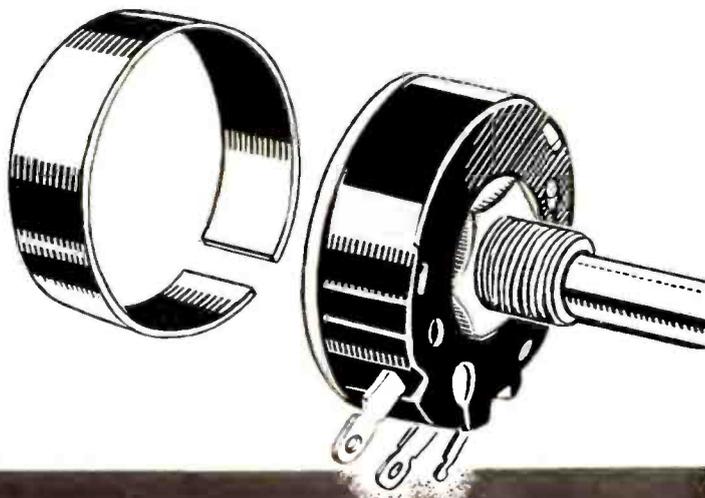
Whatever your need . . . service man or service technician . . . amateur . . . experimenter, scientist, manufacturer . . . always specify Centralab Volume Controls.

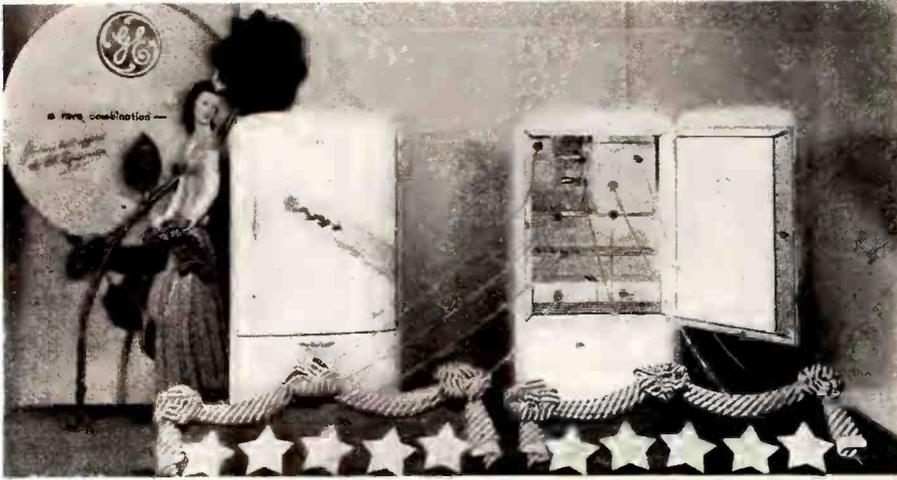
**CENTRALAB: Division of Globe-Union Inc.**  
Milwaukee Wisconsin

The outstanding feature of the Centralab Volume Control not found in any other make is the wall-type resistor that hugs the inner circumference of the case.

. . . giving a larger and more uniform resistance surface than the ordinary "horse shoe" type . . . of resistor form.

. . . smoother and quieter performance throughout the entire rotation. Available in STANDARD RADIOHM...MIDGET RADIOHM...ELF RADIOHM . . . and SUB MIDGET RADIOHM.





Ten flashing stars in the foreground of this window give a quick account of refrigerator features. The giant rose and the snappy gal get attention, too. It's one of two special displays from GE, available to key display points.

## WARM-WEATHER PROFITS

### Rentals to Boost Room Cooler Sales

The dealer who sells room unit air conditioners can greatly increase his volume, if he will *rent* the units, according to findings reported by Gale Products, pioneer makers of the window type conditioners, Galesburg, Ill. The suggestion is based on a number of actual tests conducted by retailers and distributors.

Too much emphasis has been placed on the *product* itself and not enough on the *pleasant atmosphere* it manu-



Two new "Mountaineer" room cooler models just shown by Gale Products, Galesburg, Ill. Top unit is the "Lake Placid" G5-R, 1/3 h.p. job with capacity up to 4,700 btu, \$149.50. Lower one is C-50 "Lake Louise" rated at 6,100 btu, a 1/2 h.p. unit for \$199.50.

factures, from the Gale point of view. The average individual doesn't care about what is inside an air conditioning unit—all he wants is a roomful of cool, refreshing air when it's hot and humid outside. The dealer who rents room coolers is actually selling "pleasant atmosphere" rather than merely leasing the device itself.

Dealers and jobbers in several big cities achieved outstanding success with Gale rental programs last summer. They found that many people were willing to pay high prices for a roomful of conditioned air who could not be persuaded to buy the merchandise at the outset. The same people who thought that \$150 or \$200 was too much money for cooling one room had no hesitation in spending as much as \$50 for the use of one of the machines for the summer.

### DECIDE TO BUY

But once these rental customers had an opportunity to enjoy the benefits of a unit air conditioner, a large portion of them wished to buy. Each rental contract used last summer had a "option to buy" clause which gave the customer an opportunity to apply the entire amount of the rental contract price to the purchase price of the machine. Better than 25 per cent bought before the end of the season.

Profit opportunities in the field of renting air conditioners are enormous, according to the reports. The dealer can charge a rental high enough to cover complete installation, service and removal charges, and pay for his equipment in two years. At the end of the second summer season, the dealer should be able to have a rental income of \$30 or \$40 per year a unit without any investment in equipment at all. Merchandise of this type is as trouble free as a modern refrigerator. As the dealer's equipment ages, he can

reduce the rental charge on the older equipment slightly, and keep up his prices on rental of new equipment which he adds to his inventory.

### LONG-TIME BENEFITS

One of the beauties of the rental plan is the fact that the dealer does not have to go out every year and find a new group of customers. He can build up a large group of rental patrons who will rent from him year after year so that he has a steadily increasing volume of business. Those same rental customers are splendid prospects for other appliances, so that the dealer can be sure of obtaining other income throughout the year from the same customers.

Under the rental plan, units are installed during warm weather and are usually removed by the time cold weather sets in. In the average climate there are at least 200 days during winter and spring when comfort cooling is not necessary, and it is during this time that the machines are cleaned, oiled and placed in readiness for installation next season. One service man in his spare time could take care of the maintenance of more than a thousand units.

### Refrigerator Volume Continues Up

The latest monthly figures on the shipments of household refrigerators to distributors and dealers, with 12 manufacturers reporting their volume, show that the total is running over 42 per cent over last year. Total boxes for April amounted to 448,835 this year; last year the figure was 315,935, according to totals issued by NEMA.

### Air Conditioners in Sales Spree

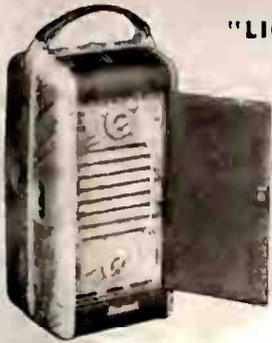
An exceptional jump in the sales of air-conditioning units has been noted by Philco, who reports that volume for April and May of this year were 39.7 per cent ahead of total sales for the entire season last year. The figures were released by Harry Boyd Brown, Philco AC manager, who also announced that the average unit value is up about 10 per cent.



One of Philco's four new window unit air conditioners, the 76-A, a 3/4 h.p. model rated at 7,500 btu, priced at \$259.50.

# NOW DELIVERING!

## The New Sentinel 1942 Line



### "LIGHTWEIGHT CHAMPION"

Amazing new Personal Portable with "SEN-TENNA" extra loop antenna that permits reception anywhere — in cars, trains, planes. 3-Way: AC, DC, Battery. Model 247-P.



### TOP-TUNING

Record-breaking value featuring new easy-to-read "Top-Tuning" and luxurious plaskon cabinet. A real sales and profit winner! Model 264-I.



### COLOR

### Radio-Phono with Automatic Record Changer

Sensational Table Combination sure to make a hit with value-minded prospects. Plays 10" or 12" records automatically. Model 248-K.



*During the Show!  
See Sentinel at  
Blackstone Hotel  
June 10, 11, 12, 13*

### SEND COUPON FOR FULL DETAILS!

SENTINEL RADIO CORPORATION  
2020 Ridge Ave. Dept. RT-6 Evanston, Illinois  
Please send me full details on Sentinel's new 1942 line, including facts on Sentinel's all-out merchandising program.

Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

### NO AERIAL! NO GROUND!

#### On Battery Sets

Added value to clinch the rural market! New built-in loop eliminates outside aerial and ground. Self-contained power pack. Model 265-T.

### VALUE

### DE LUXE CONSOLE

9 Tube, 3 Band, AC. ⚡

Win new customers with this new, beautiful model. Beats anything in its price class. Model 269-C.



### 1st CLASS



QUALITY RADIO SINCE 1920



H. M. L. CAPRON, Merchandising Editor

**CAP SAYS:—**

## “ETERNAL VIGILANCE IS THE PRICE OF SECURITY”

- No lesson we can learn from the worldwide events of the last few years is more important NOW, than the lesson of VIGILANCE.
- We all know that today, our whole country is “ALL OUT” for Defense. But all too few realize just what that may mean.
- Production will fall short of demand, prices will increase, discounts and allowances should decrease, and *expense will go up*.
- Smart—vigilant—dealers will recognize these trends, and develop their plans accordingly.
- The reconditioning and sale of trade-ins, and the maintenance of customer’s existing radios will become increasingly more important and profitable.
- The need for greater gross margin will continue to increase, as dollar volume shrinks, and the shrewd merchant will give more thought to the preservation of margin than mere volume.
- The preservation of customer good-will during this period will be of increasing importance, in anticipation of the time when ample merchandise IS again available, and when television and FM will release a pent-up buying urge, as AC sets did in 1928.
- Under the prevailing conditions and trends, there never was a more opportune time for the industry to purge itself of the many practices which have sucked the profits away for so long. Now is the time to prepare to take advantage of the profit opportunities of the future.
- The future security of our industry depends to a major degree upon how vigilant we now are—how we take advantage of the conditions which come unasked. And how SMART we REALLY are.
- **YOU CAN’T AVOID THE CONSEQUENCES, IF YOU AVOID YOUR RESPONSIBILITY.**

### Indiana Station and Servicemen Cooperate

During the “Radio Movin’ Day” activities in Ft. Wayne, Ind., the radio servicemen of the area started working more closely with the local stations WOWO-WGL, and now the studios of the station have been made

available to the servicemen’s group for their monthly meetings. J. B. Conley, station manager, extended the invitation, and programs of movies, lectures and discussions will be held.

Broadcasters and servicemen both feel that the plan involves much mutual benefit. Some 140 radio men attended the first meeting in the studio.

### FCC HITS YOUR BUSINESS

(Continued from page 26)

at all times. It overlooks the obvious fact which we have already pointed out; namely, that network broadcasters would be reduced to the position of time brokers selling an hour today and five minutes tomorrow, their responsibility ending with the time sold. The Commission maintains that “somebody” will provide non-commercial programs of nationwide interest. That “somebody” is a myth.

#### NO NATIONAL RESPONSIBILITY

Nowhere in the Commission’s thinking is any responsibility placed on anyone to render a national service. The station is obliged only to render a local service. The network is left in the position of not being able to afford to render a national service if it wanted to. Vital nationwide service is no one’s responsibility under these “regulations.”

As the two members of the Commission who condemned the adoption of these regulations said in their minority report:

“Responsibility for carrying sustaining programs of public importance would be so diffused that such service would likely become nobody’s business. . . . The incentive would be removed for the origination of such sustaining features as the European war broadcasts, the American Farm and Home Hour, the Town Meeting of the Air, Toscanini, etc. If the proposals of the majority are enforced there can be no logical determination of who will pay for such service or how it will be developed.”

### Astatic Changes Name

Announcement from Youngstown, Ohio, is that The Astatic Microphone Laboratory, Inc., of that city, will now be known as The Astatic Corporation. The holdings, contracts, personnel and policies of the firm remain the same.

**SELLS 'EM LIKE**  
*Hot Cakes*  
 THE NEW  
**WILCOX-GAY**  
**DISC**  
**MERCHANDISING**  
**PLAN**  
 ASK YOUR DISTRIBUTOR



**WILCOX-GAY** *World's Largest Disc Manufacturers*

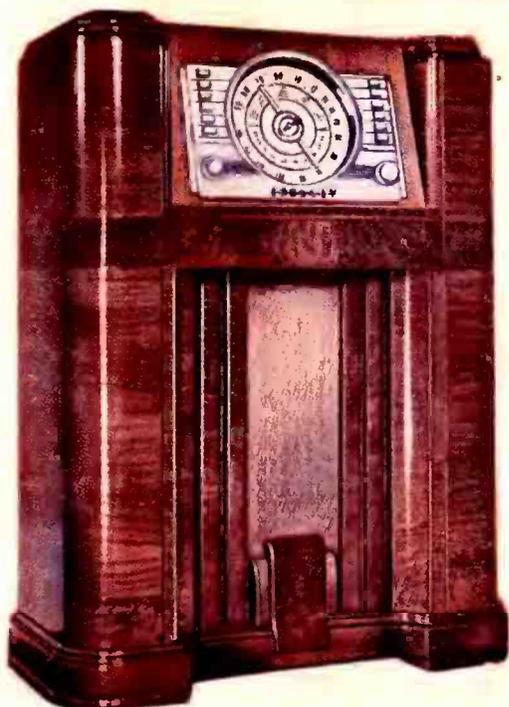


# CROSLEY

Presents

# The Rainbow

**Model 52TD.** Radio's greatest value in a **TWO COMPLETE BAND SET.** This is more than the usual two band set. Complete reception from 19 Meter through 49 Meter Band. A 5-Tube AC-DC Superheterodyne with beam power output, automatic sensitivity control and many other desirable features. The big full-view dial illustrated is completely illuminated and the cabinet is of genuine brown-mottled bakelite... \$12.95\*



**Model 02CA.** The ultimate in an inexpensive radio. Five times more pick-up. More than 60 tone variations by merely pressing the buttons of the exclusive Crosley Master Tone-Control. A 10-Tube AC Superheterodyne with 12-Tube performance. 3 complete bands and many other features found only in higher-priced sets. The lustrous, lovely cabinet is further enhanced by a large, clear-vision dial and handsome escutcheon. \$69.95\*



# of Sound

## TWO GREAT NEW HIGHS IN CROSLLEY ENGINEERING DRAMATIZED BY ANOTHER SMASHING THEME

*See Crosley Radio before you buy!*

Inventive genius and engineering skill at Crosley now offer the surprises of the year in Radio.

The Master Tone-Control—to let listeners draw more variety and beauty from Radio than ever before. It's like sitting at the studio controls!

AND NOW.. }  
ANNOUNCING }  
A New Sensational }  
Crosley Invention }  
"THE }  
FLOATING JEWEL" }  
TONE SYSTEM }  
(PATENT APPLIED FOR)

GOOD-BYE,  
NEEDLE SCRATCH!  
NO MORE NEEDLE  
CHANGING

Greatest invention for phonographs since the record-changer! Exclusive with Crosley!

Big handsome cabinets—giant dials, a fully balanced line, skillfully priced—tonal perfection—and TWO Engineering Advances to lead the field!

Just as "Twice as Much FOOD TO THE FRONT" has made Crosley Refrigerators the Excitement-Line this year—

So "The Rainbow of Sound" is the central theme that will lift the new Crosley Radio line to new highs!

Get in touch with your Crosley Distributor—attend Crosley dealer meetings—and *don't buy a single set* until you have heard and seen Crosley!

**NEW! STARTLING! SENSATIONAL!**

*\*Prices slightly higher in far west and south.  
Prices and specifications subject to change without notice.*

THE CROSLLEY CORPORATION, CINCINNATI, OHIO  
POWEL CROSLLEY, JR., Pres.  
HOME OF WLW, "THE NATION'S STATION"—70 ON YOUR DIAL



**Model 82CP.** There's nothing quite like this Crosley Console *Anywhere At Any Price!* This gorgeous all wood walnut cabinet is a triumph in design. An outstanding record player, radio-phonograph combination. 10-tube performance in an 8-tube\* superheterodyne, and now for the first time is the Floating Jewel Tone System, exclusive with Crosley. Two bands, full American and complete Foreign band. Three gang condenser with tuned R. F. stage. 10-inch speaker. Here is a value that will make money for you. \*Including rectifier..... **\$79.95\***



**Model O2CP.** This Radio-Phonograph with automatic record-changer guarantees a completely new type of reproduction. The Patented Floating Jewel Tone System not only gives records longer life but makes possible renewed enjoyment of old records discarded because of excess surface noise and needle scratch. A 10-Tube AC Superheterodyne with "Rainbow of Sound" and Master Tone-Control, 3 complete bands and **FIVE TIMES GREATER PICK-UP**..... **\$99.95\***

**Model 52PA.** Here is an inexpensive portable that gives performance not normally duplicated by other sets in this price class. Finest superheterodyne performance. Airplane luggage style case. And weather-proof too. 5-tube\* superheterodyne. low drain tubes with the exclusive Crosley "Magna-Loop" Antenna. **\$19.95\***  
\*Including rectifier



# JOBBER INVENTORIES

## NEW JERSEY DISTRIBUTOR PROVES VALUE OF STOCK CONTROL SYSTEM

A certain amount of red tape must enter into any business. To control its growth, without affecting the growth of the business itself, calls for a well-planned, flexible scheme, capable of being enlarged in scope without becoming over-burdening. In this case, the law of diminishing returns is unlike most laws; it is easily obeyed. To find the loopholes in that law takes far-sightedness and careful attention to all special conditions.

Consider, for instance, the difficulties entering into maintaining a simple method of inventory control when that inventory is continually—even if only gradually—increasing. The extensive stock which must be maintained by even the smallest radio jobber presents reason enough



for recurrent headaches. Constant check must be kept; yet if the system is too elaborate, the tail wags the dog: the inventory controls the jobber. A haphazard method of control may save overhead costs, but a good many dollars which represent profits must be chalked up to "shrinkage."

### TIME-SAVING METHOD

Aaron Lippman, Inc., with headquarters at Newark, N. J., has a simple method for controlling the stock in three outlets. Little more time is required today to maintain the system than was formerly required for Mr. Lippman's original one, and then two, stores. But one would not expect to find any profit-eaters in the system of a man who entered the jobbing end of radio during the lean year of 1932.

Inventory control is just one interesting ramification of this interesting business story. Briefly, in 1923



Aaron Lippman, proprietor of the healthy, nine-year-old radio jobbing business in New Jersey, is shown above. At the left is the main store at Newark, N. J., headquarters for the concern that managed to flourish when general business was 'way down. Directly below is the "Back Order" slip which plays a key part in the Lippman stock control system. At the right are two thriving evidences of expansion; above, the branch at New Brunswick, and below, the store at Paterson.

**B. O.** Mfrs. No. \_\_\_\_\_

ATTACH TO STORE ORDER WHEN B. O.

Branch \_\_\_\_\_ Date \_\_\_\_\_ Order No. \_\_\_\_\_

Part No. \_\_\_\_\_

B. O. recorded by \_\_\_\_\_

B. O. filled by \_\_\_\_\_ Date \_\_\_\_\_

Aaron Lippman was shown a home-made radio receiver by a friend who had the radio bug. Lippman saw more in that set than a maze of circuits and components, even more than the miracle of early wireless. He saw the appeal of home entertainment, and a good business proposition.

Right then they made a deal. Lippman and his friend entered the radio manufacturing business in the back room of the former's candy store. For a while, business boomed.

The advent of the dynamic speaker

and accompanying lower prices spelled the end of the small-scale radio manufacturer. But the radio bug had bitten Lippman deeply by this time and he forsook the confectionery business to continue in radio as a serviceman.

In the poorest year of the Thirties, Aaron Lippman decided upon another change. Single-handed, he opened his Network jobbing outlet. All transactions were strictly cash, which was supposed to be a first class method of slitting one's own throat in 1932. But in the years that followed, Lippman opened two more stores: first in Paterson, New Jersey, then in New Brunswick, in the same state. Perhaps he was too busy in the early days of his jobbing business to find out how bad the depression really was.

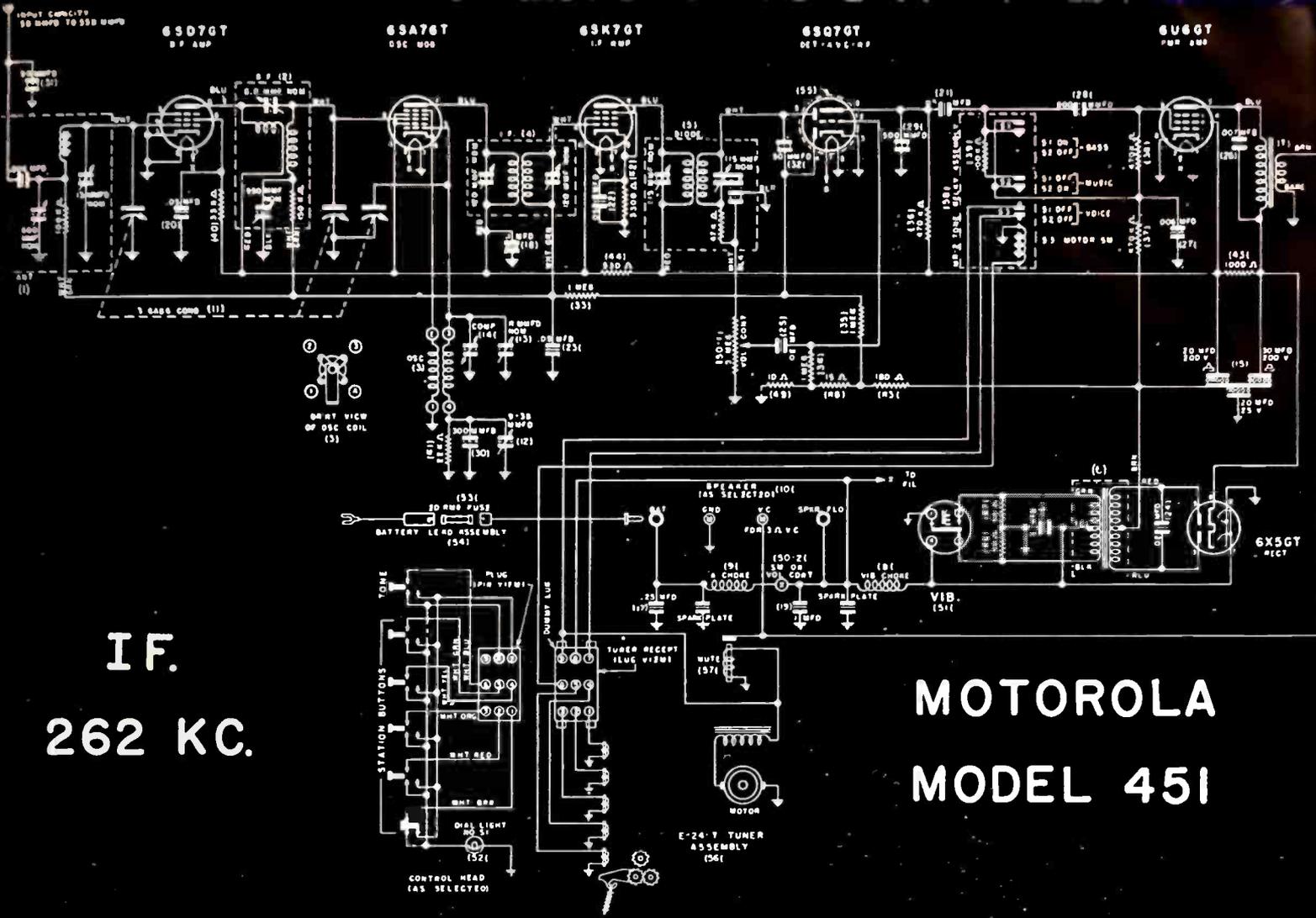
From the one-man jobber, Aaron Lippman, Inc., has grown to a firm with eighteen employees, including several office workers in Newark. There are five salesmen on the road, each covering a large territory once a week.

Despite this growth, inventory control is no bother. And it is accurate.

### CONVENIENT BLANKS

Each branch is supplied with pads (approximately 12 x 19 inches) of daily tally sheets. Individual sales for each day are itemized on these sheets in duplicate, by the branch manager, under ten headings: Condensers, Batteries, Volume Controls, Wire, Tubes, Auto Radio Accessories, (Continued on page 68)





# SERVICING CIRCUITS

## Push Button Tone Controlled Auto Set

Remote control of the tone response of the Motorola model 451 auto set is accomplished by a push-button on the control head and a relay operated switch in the set. From the accompanying diagram the tone control circuit can be traced from the tone button through the relay which is energized each time the button is depressed. The tone response is altered by shunting the grid circuit of the 6U6GT with the resistor-condenser combination.

### ALIGNMENT PROCEDURE

Align IF transformers, starting with the diode circuit and working back, at 262 kc. Use a 0.1 mfd. dummy antenna with the signal generator connected to the grid of the osc.mod. With the same connections and dummy antenna adjust the oscillator parallel trimmer at 1600 kc. Adjust the oscillator series padder for tracking at 600 kc. These two trimmers are located at the end of the set below the gang tuning condenser.

To align the antenna and RF cir-

cuits, a dummy antenna consisting of a Booster coil, Motorola No. 24A26751, and a series 35 mmfd. capacitor should be connected to the antenna terminal. With the set and signal generator tuned to 1400 kc., adjust the RF trimmer on the top of the RF coil can. At the same frequency, adjust the parallel antenna trimmer. This is the trimmer on the antenna coil can nearest the outside of the set. Tune the generator and set to 600 kc. and adjust the antenna padder located on the antenna coil can nearest the center of the chassis.

Normal current drain of the set is 6.5 amps. at 6.3 volts. Three microvolts input to the antenna terminal through the booster coil and 35 mmfd. dummy antenna should develop 1.74 volts (1 watt) across the voice coil with the volume control full on.

## Tube Rating Definitions

In the new system of ratings, the meaning of a maximum rating is changed from "absolute maximum" to "design maximum." The following paragraphs include the new RMA rating definitions.

The heater or filament voltage is given as a normal value unless otherwise stated. This means that transformers or resistances in the heater or filament circuit should be designed to operate the heater or filament at rated value for full-load operating conditions under average supply-voltage conditions. A reasonable amount of leeway is incorporated in the cathode design so that moderate fluctuations of heater or filament voltage downward will not cause marked falling off in response; also, moderate voltage fluctuations upward will not reduce the life of the cathode to an unsatisfactory degree.

In the case of plate voltage and screen voltage, however, recommended maximum values are given. The interpretation of this maximum value depends on the power source.

The maximum ratings of plate and screen voltages and dissipations given on the tube type data sheets are design maximums. For equipment designed for use in the United States on nominal power-line services of 105-125 volts, satisfactory performance and serviceability may be anticipated provided the equipment is designed so as not to exceed these design maximums at a line voltage of 117 volts.

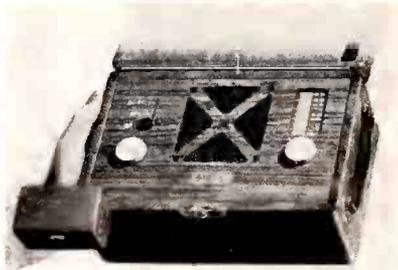
# SUMMER SELLERS

**Zenith Consol-Tone**



★ 6D614W, of the new Zenith line, has 6 tubes, Consol-Tone circuit and dial, Wavemagnet, 3-gang condenser and AC-DC operation. White and black contrasting plastic cabinet. \$19.95. Zenith Radio Corp., 6001 Dickens Ave., Chicago, Ill.—RADIO TODAY.

**Sonora leather "Candid"**



★ A 3-way "Candid" portable in genuine top-grain cowhide leather. Superhet circuit uses 5 miniature tubes. Sonorascope loop. Tunes 535-1650 kc. Off-AC-DC-Battery indicator. Sturdy carrying handle (brown shoulder strap also available). Hinged door. 8 1/2 x 5 1/4 x 4 in. Weighs only 4 1/2 lbs. \$29.95. Sonora Radio & Telev. Corp., 2626 W. Washington, Chi., Ill.—RADIO TODAY.

**Fada PL41**



★ A 3-way portable with lid that fits over the instrument panel is a 5-tube superherteodyne. Automatic power shift. 2-tone leatherette covering in ivory and redwood saddle colors. Tuning range 535 to 1660 kc. 5 in. full response PM dynamic speaker. Built-in loop antenna. Fada Radio & Elec. Co., 30-20 Thomson Ave., L. I. City, N. Y.—RADIO TODAY.

**Westinghouse WR12X12**



★ A 6-tube AC-DC superhet, walnut grain plastic set with 2 bands—standard, police and foreign shortwave. 2 position tone control. 5 in. dustproof dynamic speaker. Phono-telev.—FM jack. Inclosed loop antenna on standard band. hank on foreign with auxiliary terminals. Tilted dial, 3-knobs. Westinghouse Elec Supply Co., 150 Varicvk St., New York, N. Y.—RADIO TODAY.

**Detrola record players**



★ Models 400 and 401 record players have a 2-tube amplifier and dynamic speaker. Featherweight tone arm and permanent needle. Self-starting AC motor. Plays 10 and 12 in. records. 110 v. AC. Model 400, finished in tan Detrokoid, and sells for \$14.95. Model 401 (shown) in finished hardwood veneer cabinet, \$16.95 complete. The Detrola Corp., Beard & Chatfield, Detroit, Mich.—RADIO TODAY.

**Birch record players**



★ Two new phonographs, models 80 and 81. No. 80 is a wireless model operating on 60 cycles AC. Plays through a radio. No. 81 is a wired model and is similar to mod-

el 80 except that it connects directly to the radio. Covered with simulated rawhide in natural and Cordova brown. Boetsch Bros., 221 E. 144 St., NYC.—RADIO TODAY.

**Majestic console**

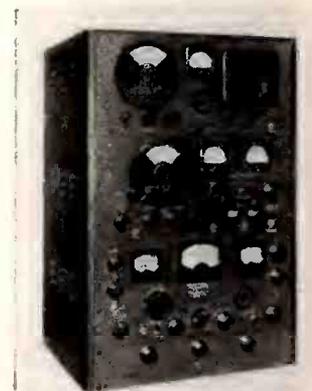


★ One of the new 1942 line of Majestic radios is the 7-tube console, model 7K60, with 2 bands, 550 to 1700 kc and 6 to 18 mc. Three gangs, tuned R.F. stage, 10 in. speaker. Lists at \$49.95. Majestic Radio & Telev. Corp., 2600 W. 50th St., Chicago, Ill.—RADIO TODAY.

**Knight 6-tube superhet**

★ AC-DC table model, No. B17-100, has 2-bands, domestic band 535 to 1650 kc. and shortwave band, 5.7 to 18.3 mc. Magna-Beam loop aerial, 5 in. dynamic speaker, full A.V.C. 2 watts beam power output. Walnut veneer cabinet. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.—RADIO TODAY.

**Hallicrafters RSC-1**



★ A complete radio receiving station which tunes continuously from 1.8 to 2730 meters 165 mc. to 110 kc. Monitoring speaker connects to anyone of the 3 units. Separate speakers as desired. \$450. Hallicrafters, Inc., 2611 S. Indiana Ave., Chi., Ill.—RADIO TODAY.

## Distributors Jam Philco Convention

More than 1,000 enthusiastic Philco distributors, officials and guests attended the 3-day convention held at Atlantic City, May 29, 30 and 31, where the company introduced 1942 lines and made new announcements for the season. Two hotels at the famous resort, the Ambassador and the Chelsea, were occupied by the Philco men, and the meetings taxed the capacity of the Chelsea's big auditorium. This meeting was for eastern distributors; a convention for western divisions is being held at Del Monte, Calif., June 9-11.

President James T. Buckley outlined Philco policies, and executive vice-president Larry E. Gubb presented the features of the new Philco radios. The new lines included some 60 different models, including a number of units offering FM reception. Sales manager Tom Kennally and vice-president Sayre Ramsdell outlined new sales and promotion plans for the coming season. J. H. Carmine presented the details of the dealer cooperation program, and W. Paul Jones, speaking for the refrigerator division, described the importance of food preservation in the national emergency.

Other Philco executives on the program included O. F. Achtenhagen, Harry Boyd Brown, and Robert Herr, who respectively took up the matters of accessories, air conditioning and parts, as important features of Philco's year 'round sales program.

Features of the 1942 Philco radios will be described and illustrated in **RADIO TODAY** for July.

## "The Reps" Add New Members

Recent additions to the membership of "The Representatives" of Radio Parts Manufacturers include Herb Erickson Co., P.O. Box 307, Asheville, N. C.; Bob Whan, 831 N. Wabash Ave., Chicago; and J. E. Goode, 82 W. Washington St., Chicago.

A pair of Reps in Ft. Wayne, Ind., have changed their addresses. Bud Fisch is now at 419 Sherwood Terrace, and Forrest C. Valentine is at 1212 Old-First Bank Bldg.

## Coogan Sees Better Business Abroad

Upon his return from a trip through Mexico and Cuba, W. A. Coogan, foreign sales manager for Hygrade Sylvania Corp., reports his impressions of Mexican-United States relations, and says that "a new feeling of mutual cooperation" was noted in business circles to the South.

Mr. Coogan visited Monterey, Mexico City, Taxco and Merida, and from Mexico City, Mr. Coogan flew to Havana, Cuba, and spent a few weeks in the sugar metropolis studying the general rise of business from the grip of a recent depression there.

The attitude of official Washington has inspired a state of confidence on the part of influential Mexican businessmen who speculate on and extend operations according to the prospects of increasing Mexican-American busi-

ness in the years to come, according to Mr. Coogan's observations. He noted that business volume in Mexico is very good, in fact, he opined, "the best it has been for many years and certainly best since the last election."

Analyzing the radio situation in Mexico, Mr. Coogan affirmed that Mexico has been the largest purchaser of American made receiving sets, since there are no receiving set manufacturers in Mexico, and there exist no foreign exchange restrictions such as plague the free flow of U. S. goods to some Latin American countries.

In addition to promoting the Sylvania "Lock-In" radio tube, Mr. Coogan initiated into the Mexican market the Hygrade Mirastat starter for fluorescent fixtures, and Hygrade spectron tubing.

## Kelvinator Will Operate Propeller Plant

Nash-Kelvinator Corp., has announced that it will manufacture propellers and propeller hubs in Lansing, Mich., for the Army and Navy air service. The Defense Plant Corp. of the government has acquired a large unit of the Reo Motor Car Co. factory at Lansing for this purpose, and Nash-Kelvinator has been selected to operate the plant.

Between 2,000 and 3,000 employees will be needed when the propeller plant gets into full operation. Complete propeller assemblies of a recently designed type to power the large planes of the Army and Navy will be produced.

## The GREATEST LINE in PHONOGRAPH HISTORY

*Celebrating Our 25th Anniversary*



MANUFACTURERS OF QUALITY PORTABLE PHONOGRAPHS SINCE 1916

## ASTOUNDING VALUES

TO INCREASE YOUR SALES AND PROFITS



**\$29<sup>95</sup>** RETAIL

The "ROLLS ROYCE" of PORTABLES—PHONOLA Super Deluxe Amplifying Model.

• Famous for its extraordinary volume and tone quality. Features the new, exclusive removable record-carrying drawer. There is a PHONOLA, Acoustic or Electrically Amplified, for every purpose. A wide variety of models, colors, sizes and prices.

Retail prices range from . . .  
 . . . \$6.95 to \$39.95

Write for

Silver Anniversary Catalog No. 25

## WATERS CONLEY CO.

ROCHESTER MINNESOTA

Chicago Sales Office:  
 5050 SHERIDAN ROAD, CHICAGO, ILL.

New York Sales Office:  
 17 EAST 42ND ST., NEW YORK, N. Y.



HAVE you ever wondered why certain dealers have made a TREMENDOUS SUCCESS of portable phonographs, year after year?

More than likely, the answer is "Waters Conley," whose outstanding products have given dealers a splendid merchandising advantage.

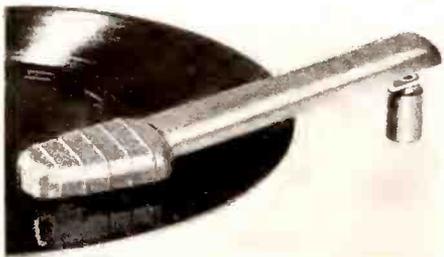
Waters Conley Phonolas excel in Performance, through scientific design and skilled craftsmanship; in Eye Appeal, through advanced yet sensible styling; in Value, through efficient production and marketing.

Whether your customer is interested in something at a low price or can afford a deluxe instrument, you can serve him best with a PHONOLA—The Superlative Product that Justifies Superlative Description.

Here is the  
**BIG OPPORTUNITY  
OF 1941 KNOCKING  
AT YOUR DOOR!**



Never have you had a greater value to offer your customers—or a product so easy to sell—as the new



## Webster Electric AJ1 Crystal Pick-Up

for Modernizing  
Tone Reproduction

This new Pick-Up completely revolutionizes the tone reproducing quality of record players and combinations . . . a streamlined bakelite tone arm with precise balance, light weight, and only 40 grams controlled pressure on a new long life needle! The AJ1 Pick-Up will vastly improve the reproducing quality of your customers' present equipment.

Here is a **BIG VALUE** that all of your customers can afford . . . priced so low they will jump at the chance to buy it when you explain the improved tone quality, freedom from surface noise and longer record life they can get at such low cost by using a Webster Electric AJ1 Pick-Up.

Display it in your store—show and demonstrate it on your service calls—order today and start cashing in without delay.

*(Licensed under patents of the Brush Development Company)*

**WEBSTER ELECTRIC COMPANY**  
Racine, Wis., U. S. A. Established 1909  
Export Dept.: 100 Varick St., New York City. Cable Address: "ARLAB", New York City



# WEBSTER ELECTRIC

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

# SOUND PRODUCTS

## University radial speaker



★ Model IBR radial intercommunicator booster speaker is compact and efficient. The unit is mounted vertically in the center of the area to be covered. Bell diameter is 8 in. Comes complete with sealed PM driver rated at 10 watts; 8 ohms impedance. University Labs., 195 Chrystie St., New York, N. Y.—**RADIO TODAY.**

## Jensen "Speech-Master"



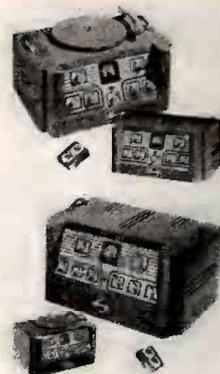
★ Type AP reproducer for speech is available for wall or desk mounting and AP 11 for panel mounting. The speaker is a special PM unit with the Peri-dynamic principle. Power rating is 5 watts. List, \$9.95 for AP 10 and \$8.10 for AP 11. Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill.—**RADIO TODAY.**

## American crystal mike



★ New model C-7 crystal mike features more efficient coupling system between diaphragm and crystal. Higher output and smoother response. The mike will be available in both high and low impedance models. A transformer will be used to provide 200 to 500 ohms. American Microphone Co., 1915 S. Western Ave., Los Angeles, Calif.—**RADIO TODAY.**

## Clarion Amplifiers



★ 25 w. Clarion "Streamliner" (at top) amplifier, A-11-R, has 3 mike input channels, 1 phono channel, separate bass and treble controls, inverse feed-back. Model A-54-K 30 w. "Superliner" has 4 mike inputs, a low gain input, equalizer controls and an output meter calibrated in both watts and decibels. Available with built-in turntables. Transformer Corp. of America, 69 Wooster St., New York, N. Y.—**RADIO TODAY.**

## Duro Point needles

★ Duro-Point phonograph needles designed to play 2000 times. The fine grained metals from the platinum group are used on the playing tip. 12 needles are attractively mounted on an easled-back counter card and each needle retails at \$1. The Eldeen Co., 176 W. Wisconsin Ave., Milwaukee, Wis.—**RADIO TODAY.**

## Atlas "Trigger"



★ A microphone stand adjustment, by the "Trigger" principle requires only a "touch-of-the-finger" to release. Allows one-hand control at all times. Available on 6 of the mike stands in the new 1941 line. Atlas Sound Corp., 1449 39th St., Brooklyn, N. Y.—**RADIO TODAY.**

## Webster-Chicago Sound Now "Webster-Rauland"

The sound division of the Webster-Chicago Corp. has been purchased by the Rauland Corp., also of Chicago, according to an announcement from E. N. Rauland, widely known radio manufacturing and communications engineer who is head of the latter firm. Products will now be sold under the trade name of "Webster-Rauland" and expansion plans are under way which will make the organization "the largest manufacturers of sound equipment in the country."

Mr. Rauland started the Rauland Corp. in 1929, after his earlier success as a designer of deluxe audio transformers. He had seen active service in France in the World War as an officer of the U. S. Signal Corps, and had been a radio amateur since 1912. The Rauland firm built up a notable reputation for engineering skill and production ability in the sound field, and now in combination with the likewise distinguished Webster-Chicago experts, will boast "co-ordinated and enlarged engineering division to rank with the finest in the U. S." Rauland will continue its extensive manufacturing activities in the national defense program.

C. P. Cushway, another veteran radio man who had been general sales manager of Webster-Chicago, joins Webster-Rauland as vice-president and sales manager. R. M. Gray has been named assistant sales manager, and J. R. Fredrickson is advertising manager. Headquarters are now at 3825 W. Armitage Ave., Chicago, pending the construction of a new plant to house the three plants of the Rauland Corp.

## Specialists in New Batteries for Portables

Portable Electric Power, 545 Fifth Ave., New York City, a company which is now specializing in rechargeable, non-spill batteries for portable radios, points out that the firm is still active in the battery market, in spite of the fact that two of its principals are now in military service.

One of Portable Electric's executives, Capt. Dorsey Owings, is on duty at Army Information Service, 90 Church St., New York City, and another exec, Capt. C. E. Wall, is stationed at headquarters of the Second Corps Area.

The non-spill lead plate batteries made by the company range in size from a pack of cigarettes to those used in airplanes.

## Weston Picks New Rep

Weston Electrical Instrument Corp. has appointed Cowperthwait & Brodhead, 126 Newbury St., Boston, Mass., as Weston representative to succeed the late James O. Murray. The new company will serve Weston in Massachusetts, Rhode Island, Maine, Vermont and New Hampshire.

W. M. Brodhead had been associated with Mr. Murray since 1938 and is well known in the New England area. F. N. Cowperthwait has been with Weston in Newark and New York for the past 12 years.

# ASTATIC'S *New* N-SERIES MICROPHONES



*Made in Wide  
Range N-30  
and Voice  
Range N-80  
Models. List  
Price each  
\$17.50.*

*Both models in the N-Series are available with convenient off-on switch as illustrated at left. Complete as shown: List Price, each \$20.00.*

Because of an exceptionally smooth frequency response and other improved characteristics, Astatic's new N-Series Crystal Microphones are especially desirable for modern public address installations. Swivel joint tilting head, cushion protected internal diaphragm, concentric cable connector, low cost and grand performance, make the N-Series highly desirable from every angle.

Astatic N-Series Microphones will be displayed at the Radio Parts National Trade Show, and are included in Astatic's new 1941 Catalog, now available.

# ASTATIC

## THE ASTATIC CORPORATION

In Canada: Canadian  
Astatic, Ltd., Toronto, Ont.

## YOUNGSTOWN, OHIO

CRYSTAL PRODUCTS LICENSED UNDER BRUSH DEVELOPMENT CO. PATENTS

# tone control circuits

## HOW THE BASIC RESPONSE CONTROL NETWORKS OPERATE

The "ideal" radio receiver would be one which had a "flat" or linear frequency response and would reproduce each note as it was transmitted. Usually, the audio amplifier circuit must be compensated to correct the non-linearity of the speaker, pick-up, or transmitter pre-emphasis as in the case of FM. Also the individual preference in tone range varies, and some provision is usually made to control the frequency response. The non-linear characteristics of other equipment is corrected by a fixed network, while the variable adjustment of the range is known by several names, tone compensation, tone control, base boosting, etc.

The common methods of controlling the frequency range or radio sets usually employ simple resistance, capacitance and inductance circuits. These control circuits can be divided into two groups, resonant and non-resonant.

### RESONANT NETWORKS

The resonant control systems can further be broken down to "boosting," and "attenuating" systems. The boosting resonant circuit usually consists of an inductance and capacitance in parallel with their resonant frequency in or near the audio spectrum. By using this network in the plate or grid circuit, the impedance at the resonant frequency of the parallel circuit is changed and more gain at that frequency results. The amount of gain at resonance depends upon other constants in the circuit. See Fig. 1.

If the load resistance and plate resistance, which is effectively in parallel with it, are large compared to  $R_g$ , the gain at resonance will be much greater than if  $R_g$  is equal to or greater than  $R_L$  and  $R_p$ . If the parallel resonant circuit is in the plate circuit its rise in impedance at resonance also boosts the output

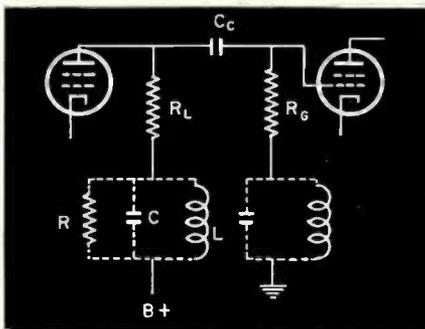


Fig. 1—Resonant boosting network for use in either plate or grid circuit. R is damping resistor to limit response.

voltage. Here again, the rise in output at the resonant frequency is only appreciable if  $R_L$  is considerably less than  $R_p$  and  $R_g$  in parallel. The effect of the plate resistance on the circuit is less if it is high and for that reason, a pentode is used.

In either circuit, the amount of boost depends upon how much the impedance of the circuit can be changed at resonance. The series element,  $R_g$  must be considerably less than the parallel combination of  $R_p$  and  $R_L$  in the case of a grid resonant circuit, if appreciable gain is to be realized.

If too much peaking is occurring due to the resonant circuit, it can be smoothed out by putting a parallel resistor across the coil. In an average pentode circuit, a 50,000 ohm shunt will cut the peak gain to about one-half, and 15,000 ohms will cut it to approximately one-fourth of the peak.

### ATTENUATING CIRCUITS

Attenuating-resonant circuits are of the series variety and operate like the series wave trap in antenna circuits. Fig. 2A, shows a circuit that

is used in high fidelity receivers to cut the 10 kc "monkey chatter" interference. When this type of circuit is used to control the frequency response, a resistor of 20,000 ohms to 250,000 ohms can be put in series with the coil and condenser to limit the amount of attenuation. The larger R becomes, the less the attenuation at resonance.

A similar circuit, Fig. 2B is often used to compensate for the apparent loss of low frequencies at low volume levels. When music is reproduced at a lower volume level than the original, and in a radio receiver it usually is, there is an apparent loss of the low and high frequencies. This is due to the characteristic response of the human ear. A 100 cycle note has to have an intensity of about 60 db to sound as loud as a 20 db 1000 cycle note. As the average intensity is lowered, the lows are lost due to insensitiveness of the ear at low volume levels.

The series circuit from the tap to ground is resonant at about 1000 cycles and by cutting the volume of that frequency, the lows and highs are amplified and sound more natural. The compensation is greatest when the variable arm is right at the tap and this position is one which corresponds to a low volume level.

### BASS COMPENSATION

Similar circuits are used to take care of bass compensation but do not use the resonant circuit. In Fig. 3, two typical bass compensation circuits are shown using a shunt condenser from volume control tap to ground to cut the high frequency response at low volume levels. The volume control and series condenser-resistor form a low-pass filter with respect to the grid circuit of the following stage. In the RCA VHR 307 circuit on the left, compensation is provided at two volume levels.

Some non-resonant circuits are often used in smaller sets to cut down on the high-frequency response. The non-resonant member is usually a series combination of variable resistor and capacitor. This is the common "tone control" that is found from the grid or plate circuit to ground. By cutting the high frequency tones it apparently adds bass. Untuned inductances are usually not used because of their cost and trouble with hum pick-up.

The gain of the audio stage shunted by a high frequency control capacitor depends upon the plate resistance of the tube, the load resistance, and the size of the capacitor. For a pentode, the gain with plate circuit shunt reactance 0.1 the size of the load resistance will be about 10 per cent of the gain without the capacitor at the frequency for which the reactance was calculated. For a

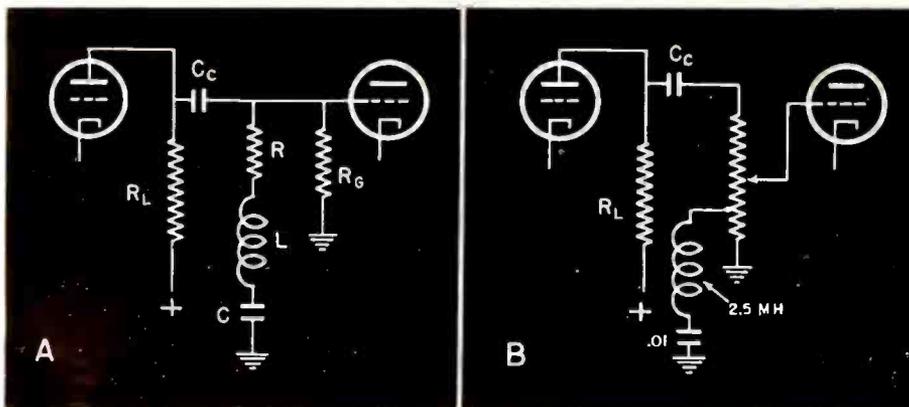


Fig. 2—Resonant compensating circuits used to reduce a particular group of frequencies. Circuit A is commonly used as a 10 kc. trap for TRF sets. Circuit B is one type of bass compensation network which cuts the highs at low volume levels.

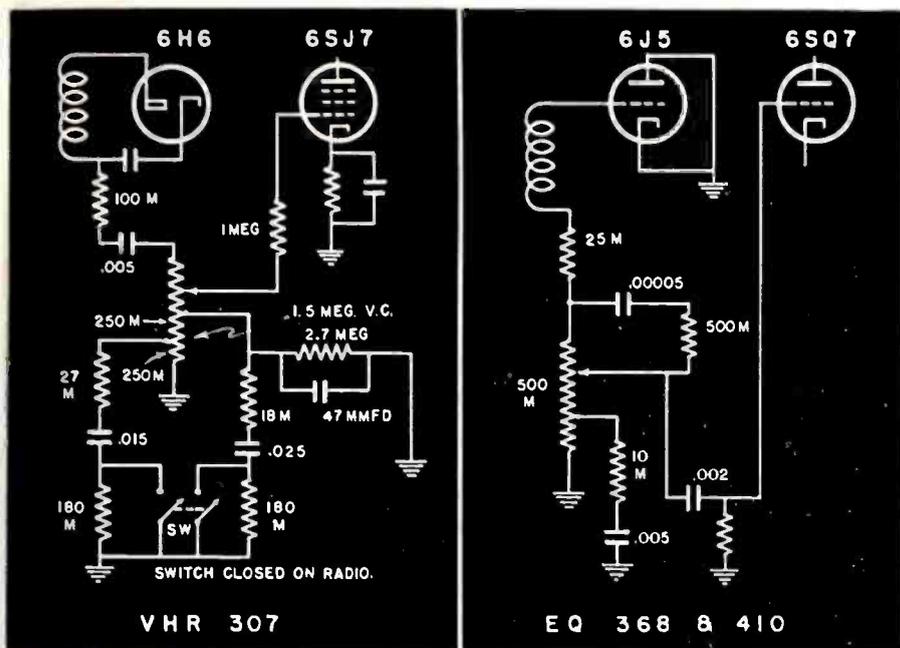


Fig. 3—Two typical compensation circuits which build-up the highs and lows at low volume levels where the ear is less sensitive to these frequencies. See text.

one to one ratio of reactance to load resistance, the gain is 71 per cent of the no-capacitor gain. For a 10 to 1 ratio, the gain is 99 per cent of the no-capacitor gain.

The loss in gain is less severe with hi- $\mu$  triodes, and still lower with medium- $\mu$  triodes.

#### TONE CONTROL NETWORKS

The cathode and screen by-pass capacitors are sometimes omitted to smooth out the response characteristics of the amplifier. Omitting the cathode by-pass causes attenuation of all frequencies because of the degeneration. The bass notes seem to suffer the most because of the characteristic of the ear.

The basic tone control systems using non resonant circuits are shown in Fig. 4. These circuits control the response through attenuation of a band of frequencies, and thus give an apparent boost to the rest of the spectrum.

Fig. 4A is the circuit that is equivalent to the usual bass-boosting arrangement used with tapped volume controls. Note the similarity with the circuits in Fig. 3. In Fig. 4A,  $R_1$  and  $R_2$  may be the same resistance such as a tapped volume control, or  $R_1$  may be the plate resistance of a triode, and  $R_2$  the load resistance. The value of  $R_3$  determines the value of  $E_0$  at the high-frequency-end. Increasing the capacity of  $C_1$  moves the whole curve to the left. If  $R_3$  is zero,  $E_0$  approaches zero at the high frequencies.  $R_3$  is sometimes a tone control resistor where it functions by elevating or decreasing the high end of the response curve.  $E$  represents the input voltage from the diode rectifier, or the  $\mu \times e_g$  voltage in a triode.  $E_0$  is, of course, the voltage applied to the following grid.

Circuit of Fig. 4B is the conventional input circuit of a resistance coupled stage.  $C_1$  is the coupling condenser, and  $R_1$  is the grid resistor.

#### COMBINATION CIRCUITS

Fig. 4C is a limited treble boosting circuit. A form of this basic circuit may be seen in the VHR 307 circuit of Fig. 3 where the second tap on the volume control has both a bass boost and treble boost compensating circuit. Remember, however, that the "boost" is obtained by cutting down the response at the middle frequencies.

#### SELECTIVE DISTORTION

Fig. 4D is a constant current input network such as a pentode plate circuit. It has approximately the same characteristics as the constant voltage triode plate circuit of Fig. 4A.

Notice the combination bass boost and treble boost of the Emerson EQ 368 & 410 circuit of Fig. 3. This is a combination of the circuits of Fig. 4A and Fig. 4C with the volume control acting as  $R_1$  and  $R_2$ .

One problem found with treble boosting is the selective distortion which may result. If for example, an amplifier has a 0 db boost at 1000 cps, 3 db at 2000 and 6 db at 3000, a 1000 cycle signal with a 4 per cent second harmonic, and a 2 per cent third harmonic will be distorted in the following way. The second harmonic output voltage will be 3 db higher than 4 per cent or, 5.6 per cent and the third harmonic will be 6 db higher than 2 per cent or 4 per cent.

Another method of tone control which offers wide flexibility if carefully handled, is the scheme of controlled negative feedback. In this system, the frequency of the voltage which is fed back to the preceding stage is controlled through a suitable network. With this method, the frequencies which are fed back are reduced in amplitude in the final output.

#### NEGATIVE FEEDBACK

Stromberg Carlson models 455 and 555 use the controlled feedback system shown in Fig. 5. The 1.5 meg tone control changes the magnitude of the higher frequencies which are fed back. Thus when the tone control arm is moved to the left so that the .002 capacitor is in parallel with the total 1.5 megs, the maximum amount of highs are being fed back and due to the 180 degree phase difference, the highs in the grid circuit are cancelled. This gives a boosting of the bass. As the tone control arm is moved to the right, fewer highs are returned to the grid circuit, and the frequency response is practically uniform. Since the voltage is fed back into the phase inverter plate circuit, it is inverted by the second half of the 6SC7 and applied to the lower 6V6-G. grid to maintain push-pull balance.

The bass and treble tone control system used in Farnsworth home models, uses a circuit similar to Fig. 4A for the control of the treble. The bass boosting system uses the tapped volume control method with a variable control shunted across the capacitor used in the series circuit from tap to ground.

The Zenith Radiorgan tone con-  
(Continued on page 49)

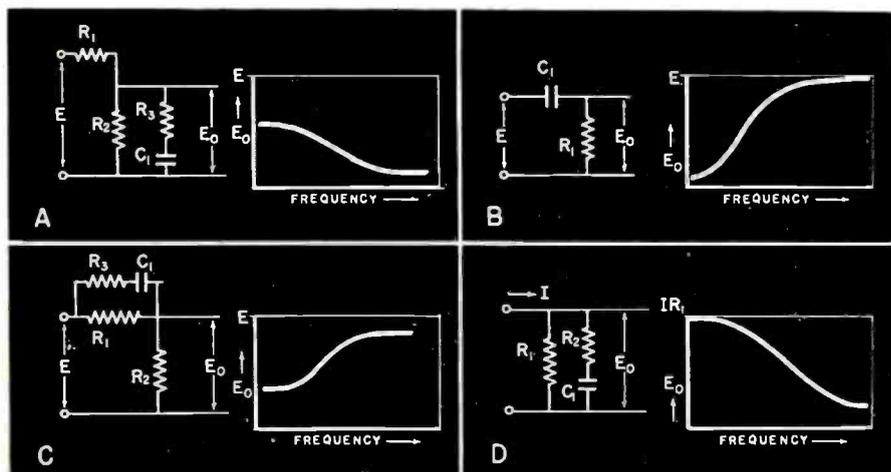


Fig. 4—Basic non-resonant circuits used to attenuate certain frequencies. Circuit A is typical of bass compensation networks where  $R_3$  limits the attenuation of highs.

# RADIO TODAY'S -

# SIGNAL-PATH DIAGRAM

## Poketradio Circuit 4K600 Model

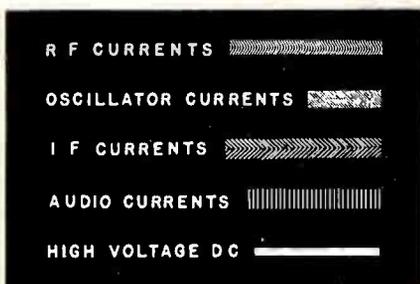
The Zenith camera type radio model 4K600 circuit diagram is shown below. It uses four of the miniature type tubes, two No. 2 flashlight cells, and a 67½ volt battery such as Eveready 467; Burgess XX45, etc.

To align, proceed as follows: Remove the back, B battery, and case from the receiver. The case is held on by spring clips which can be released with a screwdriver. The chassis should be placed with bottom side down on some type of jig to hold it. The loop-lid is opened up to a vertical position. On the left end of the chassis is a socket with a bare jumper wire between the two plate terminals of the 1S4. Connect one side of the output meter to the bare jumper and the other to the yellow B— lead at the battery. Reconnect the B battery.

Use a 0.1 mfd. dummy antenna capacitor for IF adjustments. Feed 455 kc. into the first detector grid and adjust the IF transformers for peak output. Use a loosely coupled radiating loop antenna for all RF adjustments. Keep the output below the AVC point.

Set the test oscillator to 1600 kc. and dial to 1600. Adjust the oscillator trimmer condenser for peak output. Set the oscillator and dial to 600 kc. and while rocking the gang adjust the oscillator tracking condenser for peak response. Set the dial and oscillator to 1400 kc. and adjust the antenna trimmer for peak output.

This is the third Signal-Path circuit to be featured in RADIO TODAY. This typical "personal" portable cir-



This is the code diagram to be used with all Radio Today Signal-Path diagrams. See example below.

cuit can be studied as a guide for other sets. Note the distribution of RF, IF, and audio currents through the circuit. Component parts can be judged for their effectiveness by the presence or absence of a signal of the correct frequency.

## 1941 Sylvania Tube Complement Book Released

The up to date edition of the tube complement book compiled and published by Hygrade Sylvania Corp., Emporium, Penna., includes several new features. In the 272 pages are lists of the trade names, business addresses of 190 manufacturers, tube type numbers, IF peaks, and for the first time panel lamp numbers, for nearly 17,000 models. Valuable servicing information on alignment, and tube replacements is also included. The price of this new Wire-O bound book is 35c from jobbers or direct from Sylvania Corp. at the above address.

## Storage Battery Operates New Portable

All operating power for a new five tube General Electric Co. portable model LB-530 is obtained from a rechargeable 2-volt battery. The battery is a special type developed for airplanes. It is light in weight, cased in transparent plastic, and is non-spillable. The battery, made by Willard, is charged automatically when the set is operated on AC, or can be charged from a built-in copper oxide rectifier when the set is not operating but is connected to the AC line. A further charging provision allows a car storage battery to be used to bring the 2-volt cell back to normal. Three colored balls are used to indicate the amount of the charge. When the cell is fully charged (this corresponds to the highest specific gravity of the electrolyte) all three balls float.

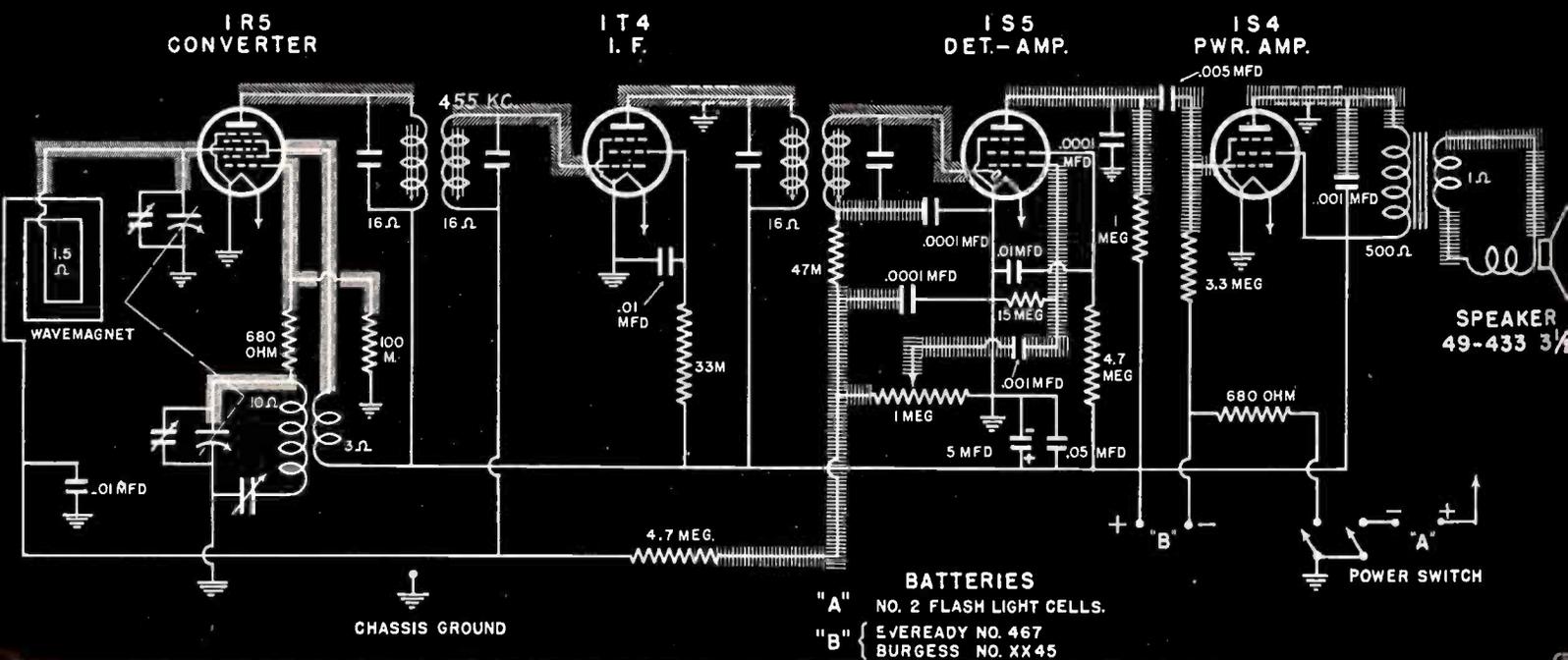
## AUTO-TYPE CIRCUIT

The battery operates a special synchronous vibrator of the auto type. The power supply is a typical auto radio circuit as may be seen in the accompanying diagram. The transformer T<sub>3</sub> is the full-wave charging transformer. X<sub>1</sub> represents the full-wave copper oxide rectifiers.

To check the operation of the rectifier unit, measure the charging current when the switch is in the "Charge" position. With a line voltage of 117, and a battery voltage of 2.1 volts, the current will be 1.35 amps. A higher line voltage or a lower battery voltage will increase the charging current. If the current

(Continued on page 50)

## ZENITH MODEL 4K600 I.F. 455 KC.



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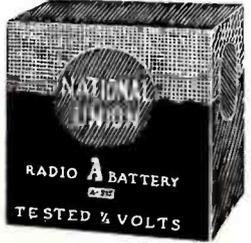


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# NEW EQUIPMENT

## RCA mike control

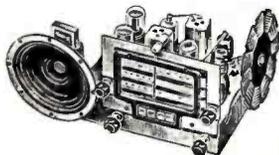


★ New "pushmike" adaptor and stand for uses where it is desirable to cut the microphone in and out. Finished in polished chromium and is available with or without a chromium finished base. Switch adaptor has a double-pole-double throw leaf switch with a "push-to-talk" button that can be locked. RCA Mfg. Co., Inc., Camden, N. J.—RADIO TODAY.

## United mercury rectifier

★ Z225 is a new mercury vapor type rectifier with same ratings as 866-866A but tube occupies less than one-half the cubic space of that type. T-14 bulb, 5½ inches high, 1¾ inches in diameter. Inverse peak, 10,000 volts. List, \$1.65. United Electronics Co., 42 Spring St., Newark, N. J.—RADIO TODAY.

## Allied training kit



★ Model B9820, a 6-tube, 2-band superhet receiver kit designed for the radio student, experimenter and builder. Built-in loop, push-button tuning, variable tone control, AVC, 2½ w. output, phono-television-FM connections. Allied Radio Corp., 833 W. Jackson Blvd., Chi., Ill.—RADIO TODAY.

## Ideal etcher

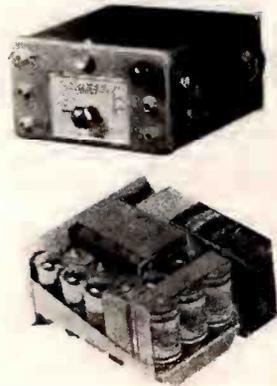
★ Small, thin-line electric etching tool used like ordinary lead pencil. The etcher can be used to permanently mark tools, and other metal objects. The unit operates from 115 volts 60 cycles. Etching heat is 125 watts. \$9.75. Ideal Commutator Dresser Co., 4033 Park Ave., Sycamore, Ill.—RADIO TODAY.

## ATR battery converter



★ A power supply for standard portable receivers replaces both A and B units. Unit delivers 90 volts DC at 10 ma from five ordinary flash-light cells or three of the rechargeable flash-light cells. Weight of power unit and five cells is about 3 lbs. List \$9.95 with container for cells. American Tele. and Radio Co., 300 E. 4th St., St. Paul, Minn.—RADIO TODAY.

## Setchell-Carlson model 501



★ A new aviation receiver with tuning range of 195 kc. to 605 kc. Push button selector for traffic control. Superhet circuit, 3 gang tuning condenser. R.F. stage for sensitivity. 2 mike inputs and 2 phone jacks. Plug-in shielded antenna lead. Weighs 6½ lbs. complete with batteries. \$39.95 with batteries and 1 set of phones. Setchell-Carlson, Inc., 2233 University Ave., St. Paul, Minn.—RADIO TODAY.

## JFD static collector

★ Special wheel static collector for 1940-41 GM cars now made only by JFD. Recommended replacement for part no. 494786 and 1286759 flat contact spring. Designed to securely ground the wheel to the frame of the car. No. 4007, list 20 cents each. JFD Mfg. Co., 4111 Ft. Hamilton P'kway, Brooklyn, N. Y.—RADIO TODAY.

## W.E. marine radio

★ Model 226D marine radio telephone is a complete unit. A single control shifts both receiver and transmitter simultaneously to any of 10 crystal frequencies. The latest type of handset is used. Built-

in monitor speaker takes care of incoming calls. Power requirements are 110 volts, 60 cycles. Western Electric Co., Inc., 195 Broadway, N. Y.—RADIO TODAY.

## GTC Porta-Power

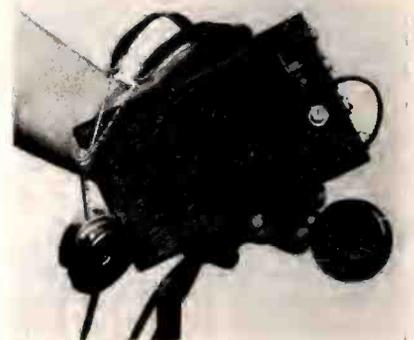
★ Model C Porta-Power supplies 1½ v. A and 90 v. B to battery radios from a 6 v. DC source. Should be of special interest in rural districts away from the high lines. General Transformer Corp., 1250 W. Van Buren St., Chi., Ill.—RADIO TODAY.

## RCP electronic meter



★ Model 661 electronic multimeter which combines functions of a vacuum-tube volt-meter for AC and DC, vacuum-tube ohmmeter and vacuum-tube capacity meter. AC-DC volts to 6000, resistance from 1/10 ohm to 1000 megohms, capacity from 30 mmfd. to 1000 mfd. Radio City Products Co., 88 Park Pl., New York, N. Y.—RADIO TODAY.

## Mellaphone communicator



★ Aviation type inter-communicator for student-trainer use is compact, battery operated amplifier with plug-in provisions for two mikes and two sets of headphones. Provision is made for connecting to plane's radio so that both persons can listen to radio instructions. Mellaphone Corp., Rochester, New York—RADIO TODAY.

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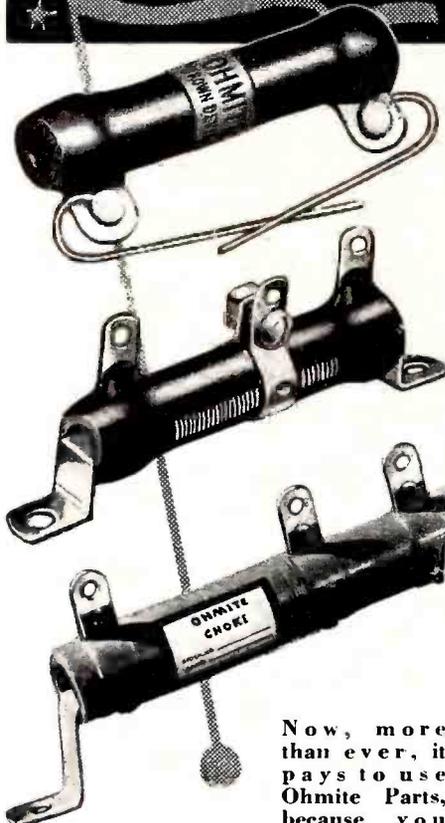
IRC has gone the whole distance in compiling and publishing the 3rd Edition IRC Volume Control Replacement Manual. Larger page sizes for easiest, quickest reference. Easy on the eyes! PLUS . . . more replacement specifications than have ever been listed before. Reserve your copy today. You'll say it's the finest Volume Control Manual you ever saw!



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**OHMITE**  
 RHEOSTATS RESISTORS TAP SWITCHES

## SERVICE NOTES

### Inductance Chart for the L-C Checker

The graph shown, Inductance Chart, is for use with the Aerovox Corp., L-C checker in the measurement of inductance. The L-C checker dial is calibrated in kilocycles and in microfarads for direct reading of resonant frequency and capacity. By using a 0.001 standard mica capacitor, this instrument can be used to measure inductance over a range of 0.1 to 10,000 micro-henries. The standard 0.001 is connected in parallel with the coil to be measured, and the probing loop is coupled to the coil. By tuning the L-C instrument to resonance and noting the frequency on the dial, the inductance can be determined with the aid of the graph shown. Follow the resonant frequency value over to the diagonal line, then go vertically upward to the inductance scale.

Other values of condensers can be used to measure different ranges of inductance. Use the following formula:

$$L = \frac{25,400}{f^2 C}$$

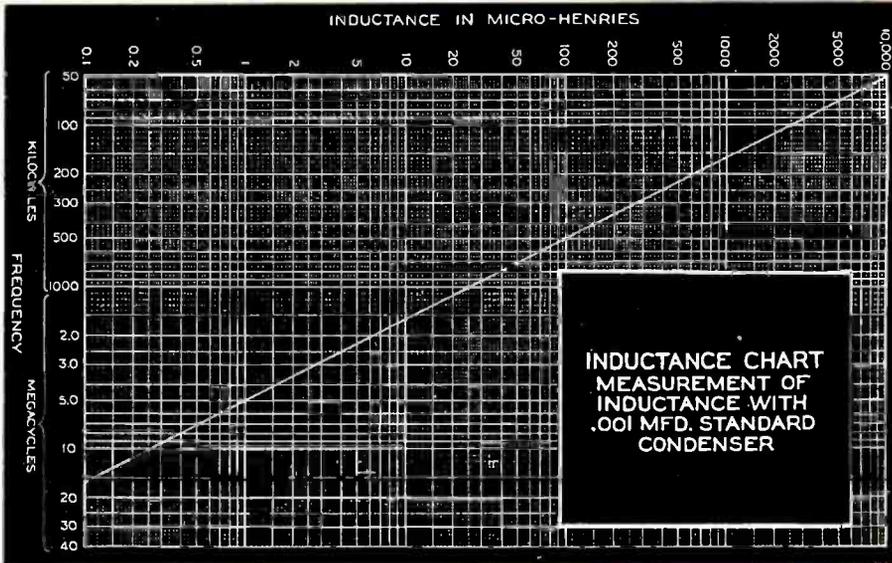
where f is in megacycles, C in micro-microfarads, and L is in micro-henries.

Another unusual and helpful use for the L-C Checker is finding mechanical troubles which change the tuning and cause noise. The procedure for finding a noise which seems to be associated with the tuning condenser, is to connect the Checker to each gang section and tune the instrument to resonance. Then use a wooden rod, or fibre tuning wrench and run it along the stator and rotor plates, picket fashion. Also tap the associated coil and wiring. Loose parts or connections will immediately show themselves up by a flicker of the "eye" in the tester. The same method applies to other portions of the high frequency end of the set.

The chart is reprinted from the Aerovox Research Worker.

### Service Book Issued

Volume IV of Emerson Service Notes is now available to servicemen at a cost of 50 cents from Emerson Radio & Phono. Corp., 111 8th Ave., New York City.



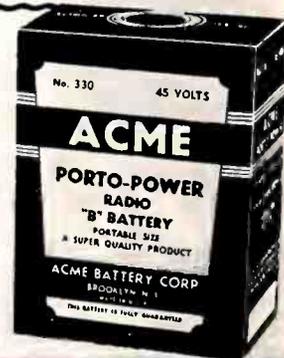
Conversion chart for measuring inductances with the L-C checker and 0.001 mfd. capacitor. Read resonant frequency from dial of instrument and inductance from this chart.

### "ADVANCE" BATTERIES COME HOME TO ROOST!

Back they come to the home in which they were born. Back they come under the supervision of the same expert technicians who built them into colossal sale giants. Back they come to join hands with our famous Acme Batteries.

Jobbers, dealers and servicemen of Portable Radios welcome this old addition to our line because now they know that the power and long life that make the Acme line so popular also goes into the Advance line.

Write Dept. T for detailed information.



If it's **ACME** it's O.K.!

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BROOKLYN, N.Y.

NEW ATLAS SOUND SENSATION!

ILLUMINATED  
"ORGANETTE"

★ ACOUSTIC SPEAKER  
ENCLOSURE



MODEL OR-12 . . . . . LIST PRICE \$15.00  
Add GLAMOR to P. A. Installations . . .  
Try the new Illuminated "ORGANETTE" Enclosure on your next night club or cafe job. The OR-12 is made of natural walnut veneers, mandarin red plastic, gold lacquered "pipes," and acousti-cloth grille. Wiring, bulbs, plug, and line cord supplied . . . JUST PLUG IN TO LIGHT UP. For all 12" speakers, 17" x 13½" x 8".

FREE: NEW P. A. CATALOG, AND COLORFUL WINDOW DISPLAY

★ Write Dept. RT-6 NOW!

**ATLAS SOUND CORPORATION**

1448 38th Street, Brooklyn, N. Y.

AT THE SHOW . . . BOOTH 503

**TONE CONTROL CIRCUITS**

(Continued from page 43)

trol system is a combination of bass compensation networks and positive feedback. A group of switches control the capacities across a tapped volume control bass boosting network and the frequency of signals returned to the volume control circuit from a following stage. Thus different degrees of bass boosting may be obtained as well as different degrees of treble boosting.

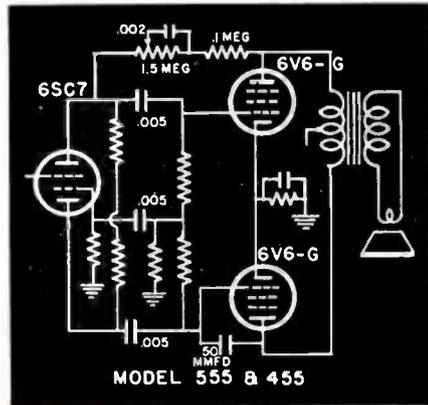
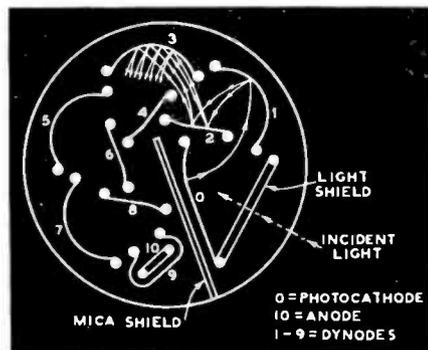


Fig 5—Tone control by inverse feedback in Stromberg model.

**Multiplier Phototube Has Nine Stages**



The electron multiplier principle is used in a new phototube to increase the feeble currents of weak illumination by 230,000 times. The output current, under normal operating conditions is a linear function of the exciting illumination. The S4 surface is sensitive to blue-rich light such as that from mercury arc sources. The tube has a small T9 bulb and a 11-pin base.

A plan view of the multiplying electrodes is shown. The elements are arranged and shaped to focus the secondary electrons electro-statically when the voltages between each successive pair of electrodes or dynodes are equal. A 100 volts per stage is a common value. The gain of the tube may be varied by making the voltage of one stage unequal to the others and thus "de-focus" the electrons. The dynodes may be supplied by a tapped transformer, a DC supply, or a high frequency oscillator and multi-tapped supply coil.

This tube is the new RCA 931.

**It's Meissner again**

WITH A BRAND NEW

**F-M ★ A-M**

3-BAND COMBINATION



**TABLE MODEL RECEIVER that has everything!**

- ★ Two-tone, hand-rubbed walnut cabinet
- ★ 12¼" high — 22¾" wide — 11" deep
- ★ FM and AM in two separate channels
- ★ Covers Broadcast and Short Waves on AM
- ★ Full coverage of 42-50 mc FM band
- ★ Calibrated glass scale, edge-lighted
- ★ Tuning indicator, accurate adjustment
- ★ Includes seventeen latest type tubes
- ★ High-gain RF stage on all three bands
- ★ Wide-band I-F channel on both AM bands
- ★ 3-stage I-F channel on FM at 4.3 mc
- ★ Audio system common to both channels
- ★ Response flat from 30 to 15,000 cycles
- ★ Push-pull output, 6½ watts undistorted
- ★ Heavy-duty 8" PM Hi-Fidelity Speaker
- ★ Operates on 105-125 volts, 50-60 cycles

Complete Receiver as shown, with tubes, Model 9-1053 List Price . . . . . \$108.00

Chassis Only, with tubes **\$95.00**  
Model 9-1054 List Price . . . . .

**See Your Jobber Today!**

**1941 INSTRUCTION MANUAL**



**Now Ready!**  
Contains complete instructions for all Meissner Kits  
Circuit Diagrams  
Parts Lists  
Pictorial Diagrams  
Charts and other useful data  
**ONLY 50c NET!**

WRITE TODAY FOR FREE 48-PAGE COMPLETE CATALOG

Address Dept. T-6



**"PRECISION-BUILT PRODUCTS"**

**PHONOGRAPH NEEDLES**

ASK ABOUT OUR DISTRIBUTORS SET-UP ON LONG LIFE TYPE REPRODUCING AND CUTTING STYLUS.

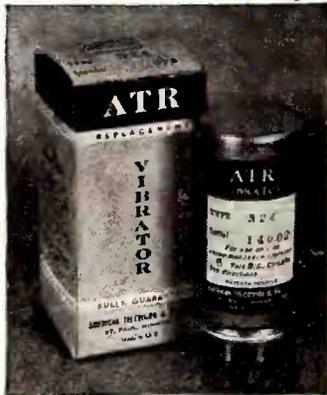
ASK ABOUT OUR LOW PRICE CUTTING STYLUS

FAMOUS BRANDS IN ALL LINES

**THE ELDEEN CO.**

176 W. Wisconsin Ave.  
Milwaukee, Wis.

# ATR VIBRATORS



## PROVEN UNITS of the HIGHEST QUALITY

Engineered to perfection, ATR Replacement Vibrators set high standards of performance and construction. Their greater life and reliability is made possible by new designs utilizing 3/16" diameter tungsten contacts with full wiping action. Other important features:

- Perforated Reed of highest quality Swedish spring steel.
- Highly Efficient Magnetic Circuit with formed base.
- Mica and Metal Stack Spacers with 2-bolt stack construction.
- Extra Flexible Leads with Tinned Clamp Supports.
- Highest Precision Construction and Workmanship.

Visit our display at Booth 731.

### NEW VIBRATOR GUIDE

IT'S FREE — Write For It!

The most comprehensive and complete in the industry, covering ATR replacement vibrators for practically all standard vibrator-operated receivers, including Automotive, Aviation, Police and Household Sets

ATR vibrators, the heart of vibrator-operated power supplies, are proven units of the highest quality, engineered to perfection. They are backed by more than ten years of vibrator design and research, development and manufacturing—ATR pioneered in the vibrator field. American Television & Radio Co. has consistently devoted its efforts and energies to the perfection and production of vibrators and associated equipment, and today, after ten years of painstaking, persistent and diligent work resulting in steady development and progress, is considered the World's leader in its field. All ATR Products incorporate only the best materials and workmanship and are carefully manufactured under rigid engineering inspections and tests, making them the finest that can be built.

ATR VIBRATORS ARE FULLY GUARANTEED 1 YEAR. *Insist Upon ATR.*

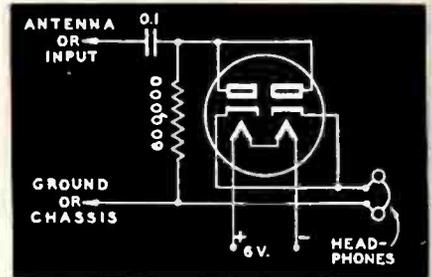
AMERICAN TELEVISION & RADIO CO.  
ST. PAUL, MINN., U.S.A.

## SERVICE NOTES

(Continued from page 44)

is much less than 1.35 amps, the disks of the rectifier should be tested. The main test of an oxide disc is its current capacity in the "forward" direction and its resistance in the "reverse" direction. Each disc should pass 0.5 amp or more when a ½ volt is impressed across it. The positive terminal of the testing voltage should go to the oxide surface which is a dark blue coating and is nickel plated for better contact. The reverse current through the disc should not exceed 2½ mills with 2 volts applied to the disc; negative terminal of the battery going to the oxide coat.

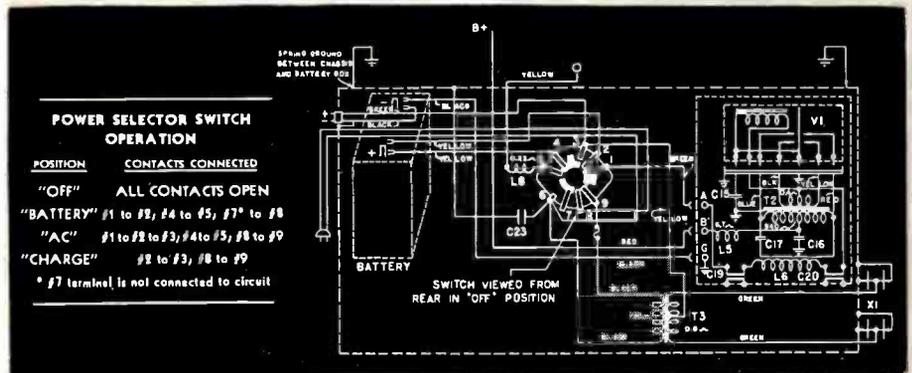
The battery should be recharged within 24 hours after all three indicators sink.



and they should be connected from the control arm to the cathode.

A similar circuit could use the diode section of any 1.4-volt filament tube and a single flash light cell to get around the filament supply. Keep the input leads short.

This circuit is reproduced from the technical section of the Sylvania News, published by the Hygrade-Sylvania Corp., Emporium, Penn.



Battery charger and power supply circuit for GE portable receiver.

### Simple Signal Interceptor

An effective yet simple signal tracer can be quickly assembled from a 6H6, a resistor, capacitor, pair of phones, and some clips. The circuit shown functions as a diode detector when connected to any part of the RF circuit under test. The signal can thus be traced through the set and the amplification of certain stages roughly estimated. Sources of hum, cross-modulation and other interference can be located in the stages where they originate. A further improvement might include a volume control across the phones. A half-meg volume control could be inserted in place of the phones

### New Amplifier Manual From ACA

Direct-coupled FM-AM Amplifier Manual is the title of a brand new 32-page book published by Amplifier Co. of America, 17-45 W. 20th St., New York, N. Y. Over 100 diagrams are included and cover the various push-pull direct coupled amplifier circuits, volume expansion, audio spectrum control, and other auxiliary equipment. Complete details are given for several high quality audio amplifiers. The price of this 8½ x 11 book is 20c and is available from the publisher.

## SABOTAGE...

and other conditions arising from defense activities means plus business for Jobbers with

## WORNER PRODUCTS CORP.

Fotoelectric Equipment

SEE US AT THE SHOW { BOOTH 435 ROOM 509

## Admiral Sets New Sales Records

April, famous as a shower month, just flooded Admiral with orders, establishing a new high in sales volume, largest in history of the company, according to Ross D. Siragusa, president Continental Radio & Television Corp.

Orders booked during the month exceeded the previous high of 83,000 sets made in March, by more than 12,000 sets—making a grand total of over 95,000 units. This was over four times sales of the corresponding month a year ago. Based on an average retail price of \$40 a unit the total exceeds \$3,800,000. Admiral Radio-Phono Combination Models 69-M5, 70-N6 and 71-M6 still continue to lead, with the new 1942 three-way portables holding second place.

Admiral portable sales are running far in excess of last year and are headed by Model 78-P6 at \$27.95 while models 77-P5 at \$22.95 and 79-P6 at \$29.95 are close follow-ups. Orders for the bakelite portable, Model 76-P5 at \$19.95 have proven that there is a very definite place in the portable picture for this smart dual set.

## Sentinel Shows '42 Line at Blackstone

Scheduled for a showing at the Blackstone Hotel, Chicago, from June 10 to 13 is the 1942 line of Sentinel Radio Corp., Evanston, Ill., comprising 32 models featuring "Studio-Tone" and "Sentenna-Scope."

The firm sees big sales opportunities because of increased employment, growing payrolls, and a hike in farm income, and has outlined "a dynamic merchandising plan" for the new features of the portables, table models (in colored plastics and wood cabinets), consoles and radio-phonos in console and table styles. Battery sets will feature low operating costs, and the whole line is backed by "an all-out sales promotion and advertising campaign."

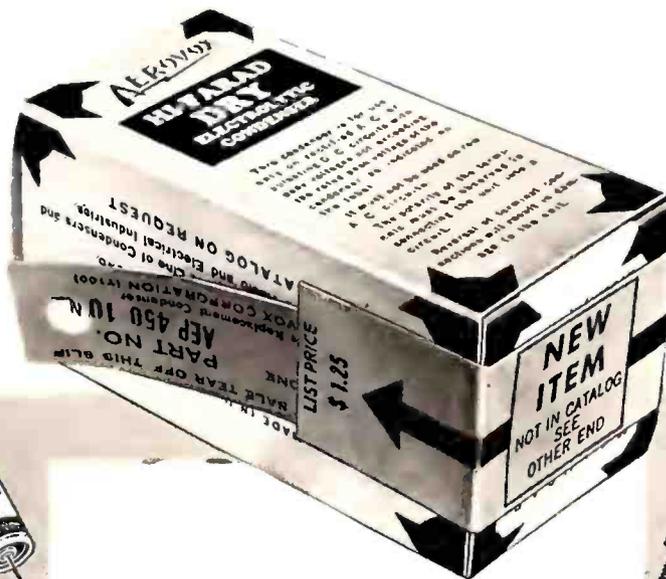
## New Recordios Shown in Chicago and New York

A feature showing of the new 1942 radios and recorders introduced by Wilcox-Gay Corp., Charlotte, Mich., is being held at the Blackstone Hotel in Chicago from June 10 through June 13. It is reported that considerable interest surrounds the new and exclusive "Uni-Control Insta-Matic" record changer, developed by Wilcox-Gay. This and other features of the new line will also be shown at the Pennsylvania Hotel in New York City, June 19-21.

Highlight features of the new Recordios appear in the "New Products" pages of this issue.

## Solar Has New Board Member

William F. Seeman, 523 Ellicott Square, Buffalo, N. Y., who is a district sales manager for Solar Mfg. Corp., has been elected to Solar's Board of Directors, according to news from the Bayonne, N. J., headquarters of the firm.



## A good condenser plus . . .

• Yes, there's no better condenser made in any corresponding type than AEROVOX. But there's more than just a real good condenser involved when you insist on the yellow-and-black carton. There are additional values coming to you, such as . . .

### CHOICE . . .

The very completeness of the Aerovox line assures the logical selection for initial equipment or replacement requirements. The largest line of metal-can electrolytics; a dozen and a half molded-in-bakelite mica types; four whole pages of exact-duplicate replacement listings—and so on and on. The Aerovox line is outstanding in the choice of types. You don't have to resort to makeshifts or guesses when you use Aerovox condensers.

### STOCK . . .

And whatever type and value you pick out for that job, you are sure of getting it. The nearby Aerovox jobber carries a good stock of condensers. And more important still, he can draw upon the huge jobber stock at our factory, which insures prompt filling and shipping of orders even in these times.

### GUARANTEE . . .

Each and every Aerovox capacitor—the ten-cent tubular and the ten-dollar transmitting capacitor alike—is individually guaranteed by the clean-cut guarantee slip wrapped with it. That protects you against defective merchandise and, more important still, unwarranted service breakdowns.

### DATA . . .

Lastly, to insure the proper application of Aerovox condensers, you can have a FREE SUBSCRIPTION to the monthly Aerovox Research Worker. Packed full of practical, valuable, indispensable engineering data. Ask your favorite jobber for a subscription. Ask for latest Aerovox catalog. Or write us direct.





# AEROVOX CORPORATION

## New Bedford, Mass.

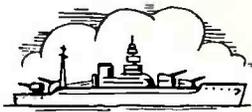
Sales Offices in All Principal Cities



**SOLAR**  
SERVES  
THE  
SERVICES



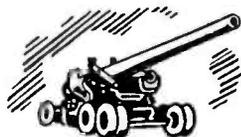
**IN THE AIR**  
special Solar capacitors function down to -40°C. or at 50,000 feet altitude, under severe vibration.



**ON THE SEA**  
are Solar capacitors which have passed saltwater immersion tests, and are corrosion-proof and stabilized.



**MOBILE FORCES**  
Solar capacitors of compact special design can take punishment from extremes of heat and cold and have passed exacting vibration tests.



**ARTILLERY**  
directed from aircraft — or controlled electrically from the ground—gains certainty of action from reliable electrical equipment — including Solar capacitors.

Solar is proud of . . . and is zealously guarding . . . the reliability which its Capacitors add to radio and electrical control equipment for the Armed Service Branches of our Government. Solar reliability is built into all types of electrical condensers for industrial, radio and service applications.

**SOLAR MFG. CORP.**  
**BAYONNE, N. J.**

# CHICAGO EVENTS

## Annual Meet of "The Reps" on Tuesday

One of the big events set for June 10th at the Hotel Stevens in Chicago is the 6th annual meeting of "The Representatives" of Radio Parts Manufacturers. The huddle will precede the annual banquet, to be held at noon in the Council Room—both events are open to all Reps and all those who intend to join the organization. There's no charge for the banquet.

Newest application for membership to be accepted by the Chicagoland Chapter of The Reps is that of J. W. Berggren, 2007 S. Michigan Ave., Chicago.

## Sylvania Ready with Big Sales Exhibit

A mass display of the sales advertising, business and technical helps available to jobbers and dealers will be the interest center of the exhibit of the Hygrade Sylvania Corp. at the Parts Show, in booths 18 and 20. An exposition of "Lock-In" tube features will also be a feature of the exhibit.

Engineers, advertising men and salesmen will be on hand to greet Show guests. According to Sylvania Show manager R. P. Almy, the booth personnel will include men from five divisions of the company: renewal, equipment, engineering, export and administration.

## Clarostat Hosts at Show

Clarostat is planning to have a large and representative group of execs on hand at its double booth (620 and 622) at the Parts Show, to greet visitors and to help them with technical and merchandising matters. Personnel will be headed by Victor Mucher, sales manager, George J. Mucher, chief engineer, and J. Edward Trefz, sales engineer, along with William Mucher, Frank Murphy, I. J. Youngblood, and sales reps from all over Clarostat will hold "open house" in rooms 2306A and 2310A, Stevens Hotel.

## Aerovox Plans Specials for Show Exhibit

A series of "startling" slides will be a feature of the Aerovox exhibit at the Parts Show, at 828 Franklin Ave., Hotel Stevens. S. I. Cole, Aerovox president, and jobbers division sales manager Charley Golenpaul will head the group at the booth, and it is planned to have different sales reps there to greet their own jobbers at scheduled times.

## Homer Comes to Life

The reports are that Homer G. Snoopshaw, that sharp-eyed little guy who has been leering from the ads of the Burgess Battery Co., will show up at the Parts Show, in person.

The way Homer wears his pipe and his cap makes a comic figure out of him, but the truth is that the fellow gets mail, knows his replacement batteries, and has plenty of friends. You can be sure that once he goes prowling around such a matter as a Radio Show, it will be an uproar to remember. The Stevens, which has probably been snooped by experts, will know that it's been visited by a detective extraordinary.

## Scheel to New Offices

Harry J. Scheel has occupied new and larger export offices at 176 W. Adams St., Chicago, Ill., within the loop downtown district of the city.



**WAXES**  
AND  
**COMPOUNDS**  
FOR  
INSULATION & WATERPROOFING  
of ELECTRICAL and RADIO  
COMPONENTS

● such as transformers, colls, power packs, pot heads, sockets, wiring devices, wet and dry batteries, etc. Also WAX SATURATORS for braided wire and tape and WAXES for radio parts. The facilities of our laboratories are at your disposal to help solve your problems.

**Zophar MILLS, Inc.**  
FOUNDED 1846  
128-26th ST., BROOKLYN, N. Y.

## Parts Jobbers in RCA Convention

A dramatic review of what's ahead for radio men in the field of the electronic arts, will be given by RCA executives at the second annual convention of RCA tube and equipment distributors, at the Hotel Morrison, Chicago, June 9. Over 200 jobbers from all parts of the U. S. are expected to see an "Electronics on Parade" feature, a new line of sound equipment, new Radiola models (including phonoradios and farm jobs), new test equipment, and new tubes.

RCA execs on the program include Robert Shannon, L. W. Teegarden, Fred D. Wilson, Henry C. Bonfig, Thomas F. Joyce, D. J. Finn, E. W. Engstrom, Dr. V. K. Zworykin, Max C. Batsel, Dr. G. R. Shaw, Dr. Drayton C. Ulrey, and all of the RCA district sales managers.

## Admiral Names New Jobbers

One of the leading jobbers in the Philadelphia area, the Franklin Electric Co., 117-119 N. Seventh St., Philadelphia, has been announced by the Continental Radio & Television Corp., Chicago, as an Admiral distributor. The Franklin firm held a big open house event May 19-22 at the Hotel Warwick, to present the complete Admiral line to local dealers.

Continental has also announced half a dozen new distributors elsewhere: Kaemper-Barrett, Inc., 246 S. VanNess Ave., San Francisco, Calif.; Modern Appliance & Supply Co., Inc., 4300 Washington St., New Orleans, La.; and Radio Distributing Co., 235 Market Ave., S. W., Grand Rapids, Mich. Mutual Distributing, Inc., 402 Mt. Vernon, Columbus, Ohio; Peaslee Gaultbert Corp., 2301 Main St., Jacksonville, Fla.; Lawrence-Ryan Company, Inc., 216 S. State St., Jackson, Miss.

## Quick Heads New Isolantite Radio Division

Appointment of Howard L. Quick as sales engineer to head the new Radio Specialties Division of Isolantite, Inc., has been revealed by K. D. Hamilton, vice president and general manager of the firm.

The creation of the Radio Specialties Division is part of the company's general expansion program to handle defense contracts. The new division, under Mr. Quick's direction, will be devoted to sales, engineering, and servicing of transmission lines, fittings, antenna systems and other specialized products manufactured by the company for the radio and broadcasting fields. Mr. Quick will have headquarters at Isolantite sales offices at 233 Broadway, N. Y. C.

## Emerson Service Manager

Irving N. Lipschutz, Philadelphia radio man who has been with Gimbel Bros. for the past four years, will now take the post of service manager for Emerson radio, in that city.



# The RIGHT PRODUCT *plus* The RIGHT DATA

Composition-element and wire-wound controls for all purposes.



Power rheostats and power resistors (Greenohms) with unique Clarostat cement coating.



Flexible resistors including glass-insulated Glasohms and many other types found in no other line.

★ Two factors spell satisfactory results with controls and resistors: First, the product must be properly designed, manufactured, tested; second, it must be backed by correct application data. One or the other alone is insufficient. You need both. Anything less spells taking a chance.

That's why Clarostat stresses these two things over and over again. Clarostat controls reflect 20 years of enviable pioneering experience. There's no substitute for that. And Clarostat is constantly compiling, revising, publishing fresh, concise, accurate servicing data for you.

Ask for **CLAROSTAT MANUAL . . .**

Just come and get it. Our local jobber will gladly hand you the latest edition. Supplements available to you as issued, keeping the data right up to date. And by all means try a Clarostat control or resistor. You'll be surprised. ★If you prefer, write us direct.



# CLAROSTAT *Manufacturing Co. Inc.*



285-287 NORTH SIXTH STREET  
BROOKLYN, NEW YORK, U.S.A.

• OFFICES IN PRINCIPAL CITIES •

## GE Farm Sales Drive a Success

The early success of the big farm appliance sales promotion undertaken by General Electric Co. is being outlined to retail salesmen in a series of meetings now being held by chapters of the GE Retail Development League throughout the U. S.

New estimate of the potential farm sales, according to GE farm section head George Mullin, Jr., is \$120,000,000 annually. Mr. Mullin reported that the elaborate GE farm catalog "went like a best-seller" and that an improved edition is being snapped up, too. Other parts of the farm sales drive include transcriptions on 95 radio stations and direct mail featuring the "Rural 8"

refrigerator and the suburban kitchen heater. Also, a big GE exhibit travels with the REA shows, and appears at county fairs and all farm expositions.

## Emerson Expands Tube Line

Adding new types of tubes as they become factors in replacement sales, the Emerson Radio and Phonograph Corp., New York City, now announces the addition of eleven types. These include: 1LA4, 1LA6, 1LB4, 1LH4, 1LN5, 3S4, 5W4GT, 6A3, 6SG7, 7B4, and 117P7GT.

Type 3S4, an improved output tube in the miniature series, is used in new

"personal" battery sets. The 117P7GT, a combination beam power output and rectifier tube, has a higher output than its predecessor and is used in the new Emerson 3-way, 3-gang condenser portable sets.

## New Line of Eck-Co Radios

It has been announced by E. A. Eckstein, veteran radio and sound engineer, that the Eckstein Radio & Television Co., Le Roy, Minn., has bought the business and the complete stock of the L'Tatro Mfg. Co., Decorah, Ia. Factory and offices have been moved to Le Roy, and about July 1, Eckstein will start production of a new line of 32, 6, and 1.4 volt line of sets, as well as AC units. The new firm will also make a specialized line of sound equipment. Mr. Eckstein is general manager and chief engineer of the organization.

## Stromberg Shows Features of 1942 Line

One of the first distributor showings being held in key cities to honor the 1942 radio lines of Stromberg-Carlson was held late last month at the Hotel Astor in New York City. Particular emphasis went to FM at the debut of the new lines, and SC also announced a new system for selection of tuning range, plus a number of other refinements.

Stromberg executives introducing the new units, and outlining the promotion plans for them, included Wesley M. Angle, Lee McCanne, Fred Anibal, Lloyd Spencer, Dr. R. H. Manson, Cliff Hunt, and Warren T. Eastwood.

Detailed descriptions of the new Stromberg jobs will appear in RADIO TODAY for July.

## New Antenna Manual for Hams and Servicemen

A new 32-page book on antenna design and construction has just been published by Premax Products, Niagara Falls, N. Y. The text material has been edited by Arthur H. Lynch, well known amateur and radio authority.

Complete details are included for many types of antennas for all ham frequencies; rotary beam, vertical, pitch-fork, double extended zepp, and multi-element arrays. Antennas for reception of FM are included in the book. A chapter of data on all types of antennas and feed systems simplify calculations. The price of this book, No. H-4 is twenty-five cents.

## McCall to Aseco

Frank A. McCall, long-time export sales head for the Columbia Phonograph Co., has been appointed sales manager of the Columbia Record Division of the American Steel Export Co., New York City.



**Things to Take Along to Make a Good Connection**

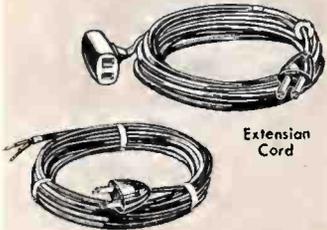
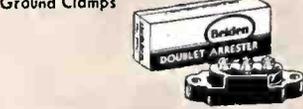
Good radio service usually requires more than tube replacement, which any clerk might handle. As a professional serviceman—you can easily find the other troubles that interfere with good reception. A new antenna, a power line filter, hook-up wire, or one of the many other radio wire accessories may restore that "brand new" set condition. Take them along—give satisfaction to your customer—get the real profits your knowledge of this business deserves.

You'll find these fast selling items and many more in the Belden radio wiring line. Make a good connection—buy Belden from your jobber.

Belden Manufacturing Company  
4613 W. Van Buren St., Chicago, Ill.

# Belden Wire

**FOR GOOD CONNECTIONS**

 All-Wave Antenna Systems  
 Terminals  
 Extension Cord  
 Replacement Cards  
 Indoor Aerial Wire  
 Ground Clamps  
 Lightning Arresters  
 Power Line Filters  
 Hook-Up Wire

## Ohmite Sales Head



Roy S. Laird of Ohmite Mfg. Co., Chicago, who has been promoted to post of sales manager.

## Kay Sales Opens New Branch

The Kay Sales Co., 313 Central Bank Bldg., Tulsa, Okla., well known manufacturers' representative, has opened a branch in Kansas City, Mo., according to news from Jim Kay. In charge of the new branch will be W. N. "Lefty" Wellman, who has had extensive technical training and wide practical experience in radio. The Kansas City branch will be located at 406 Reliance Bldg., 10th and McGee Streets.

## Brunswick Radio Corp. Bought by Decca

Jack Kapp, president of Decca Records, Inc., has announced that his company has purchased all of the Capital stock of Brunswick Radio Corp., from Warner Brothers Pictures, Inc. Brunswick was a wholly owned subsidiary of Warners, and its holdings include, among other things, plant properties at Dubuque, Iowa, and at Muskegon, Mich.

## Postcards Keep Them Reminded

"The radio dealer who does not advertise occasionally during the year may expect to see old customers drifting away. And he cannot expect to see new names added to his string, without using some effective sales promotion method to bring in business," says G. L. Cox of the Glenn Radio Company in Washington, D. C.

"We feel that if you are going to increase your business, you can only do so by inviting people to patronize you, either through direct-mail advertising, the newspapers, door-to-door circulars, or some other method of contact.

"We have been plugging along with postcards now for over a year with periodic mailings. The object being to bring our name before the prospective customer living in our immediate neighborhood, thereby stimulating telephone or drop-in business.

"We have used various methods of approach, usually featuring recondi-

tioning or trade-in. Thus we planted the seed for service calls where we could go out to look over a radio and make an entering wedge for sales. Often the cards get people to bring the radio in (nine cases out of ten when they have midgets for repair), or just drop by to see what we have."

The wording on each postcard is short, as "Take your choice of weapons against poor radio reception." Each card is always illustrated with a drawing of some kind or sketch to catch the eye. The other wording on this particular card reads: "Recondition your present radio; or trade it in on a 1942 radio" and always we include the words "free estimates" and the telephone number.

Another card reproduced a sketch of the famed Sherlock Holmes, with the

wording "Radio troubles are no mystery to our service department." We also added another idea: "We budget plan new radio sales."

A different card read, "Whatever the symptoms, bare, noise, distance, crackling, distortion, interference, we can cure your radio ailments," with a sketch of an interne. We also featured the fact that we give a six months guarantee on all repair work.

Another card used, "When doing your Spring house cleaning let us recondition your radio," with a sketch of a woman house cleaning; another one of two women talking to each other, with the words, "Don't look now, but did you know that Glenn Radio gives six months guarantee on new radios," "Yes, and they give free estimates on repairs, too."

# At Simpson BOOTHS

## 421-423

RADIO PARTS  
TRADE SHOW  
Stevens Hotel,  
Chicago

June 10-11-12-13



**New MODEL 510 Signal Tracer** designed to cover every requirement of this new test procedure without the usual maze of knobs and gadgets. Three instruments in one: (1) Sensitive RF-IF Amplifier and Demodulator for all frequencies from 170 KC to 17 MC with its own meter calibrated in millivolts and volts with eight overlapping ranges. (2) Sensitive audio amplifier with its own meter and 8 overlapping ranges. (3) Large vacuum tube volt and ohmmeter with 6 voltage and 6 resistance ranges. Output jack for oscilloscope or phones. Power amplifier and speaker for audible monitoring.



**New MODEL 277 Roto-Ranger.** The exclusive and advanced Simpson Roto-Ranger idea has been given new wings in this new model with 23 separate scales that flash into view as selector switch is moved, simplifying reading, eliminating calculations—mistakes. High sensitivity, too. 20,000 ohms per volt D.C.; 1,000 ohms per volt A.C.



**New MODEL 410 AM and FM Signal Generator** for the service man who wants a single instrument producing accurate signals for any type broadcast receiver. A-M is on black scales; F-M on red. Covers all frequencies from 75 KC to 56 MC in generously overlapping ranges—all fundamentals.

HERE are a few brief facts about New Simpson Instruments that will make the Simpson exhibit one of the bright spots of the show. If you can't see them in person—

Write for new catalog  
**SIMPSON ELECTRIC CO.**  
5216-18 Kinzie St., Chicago, Ill.

**New MODEL 265 Electronic D.C. Volt-Ohmmeter and Rectifier Type A.C. Voltmeter.** A self-contained instrument powered by its own batteries—an ideal portable service unit. Covers not only radio servicing, but also laboratory and industrial testing.



## Zenith Outlets Get Advance 1942 Lines

First group of 1942 sets of Zenith Radio Corp., 6001 Dickens Ave., Chicago, has been announced by the firm, including 40 units ranging in price from \$12.95 to \$129.95. The announcement says that among dealers who already have the units in stock, the Consol-tone circuit, which provides aural audio compensation in the lower frequencies, is regarded as the top feature. They also applauded the Consol-tone dial, a new and patented high-visibility dial design in which the speaker grille is incorporated.

Zenith plans to show the higher priced jobs of the '42 line late this month or early in July. The firm has already introduced a new group of Universal portables. In radio-phonograph combinations, the company has four styles of table models, and three consoles; in this group the main features are automatic record changers, and the new "phon-glide" device which is an automatic and button-operated method for getting the record-playing mechanism into an accessible position. More combinations are coming later. For the farm market, Zenith has complete compact and consoles already available.

Edgar G. Herrmann, the new sales manager for Zenith, reports that "Introductions to distributors of our advance 1942 line, as well as our January 'Prosperity' line offered for winter selling, were handled in each

## Glamour-Tone Figures



Shown with a pair of new summer-time displays for Crosley's new portables, J. H. Rasmussen, left, and L. Martin Krautter, of Crosley Corp., Cincinnati.

territory under a new system entirely by our veteran force of experienced district sales managers, who deserve special credit for piling up record sales figures on both lines. Dealers are taking these new sets faster than we can supply them, as you can discover by checking with any Zenith distributor."

The Zenith president, E. F. McDonald, Jr., has announced the ap-

pointment of J. J. Nance as vice-president and director of sales for the company. Mr. Nance resigned his post as vice-president and general sales manager of Easy Washing Machine Co., where he has been for the last two years, to take the Zenith office. He had previously held key posts with Frigidaire, after having started his business career with National Cash Register Co.

Mr. Herrmann gets the promotion to the post of sales manager "in recognition of his capable services as advertising manager for Zenith since 1935."

## Ratner Leaves CBS Post

From Columbia Broadcasting System headquarters comes the news that Victor M. Ratner has resigned as CBS director of sales promotion. Mr. Ratner will join Lord & Thomas, the advertising agency, in an executive capacity, according to the announcement by Paul W. Kesten, CBS vice-president.

## Continental Moves

The Continental Sales Co., parts distributors of Newark, N. J., have moved their business from 109 Frelinghuysen Ave., to 195-197 Central Ave., in Newark. The firm now handles many major lines of parts, and is now adding new ones. Continental is also agent for Pilot radios in the state of New Jersey.

# Dealers!

**GET THE**  
*Big Profit*  
**with**  
*General*  
**TELEVISION**

**1000 HOUR (APPROX.)  
BATTERY LIFE THREE-  
WAY PORTALETTE**

**DEALERS! HERE IS YOUR ANSWER  
TO SUMMER PROFITS WITH  
PORTABLES**

There is something new in portables and General has it. Just a little larger than the average "Camera-personal" portable, General's New Portalette has greatly increased efficiency in power and performance. The tone quality is comparable to receivers twice the size. Portalette has no lids or doors to fuss with, no complicated gaudlets or antenna adjustments. When plugged into the electric outlet, it plays immediately—no waiting for tubes to heat. These are only a few of Portalette's amazing features.

See the sensationally new features in General's Amplified Electric Phonograph Record Players. The finest product ever developed by acoustical engineers! Incorporating features such as the New Magic Electric Tone Arm that actually sell merchandise. General gives you a new high quality phonograph performance at prices that make real profits for you. Here is your opportunity to cash in

with a real phonograph line right now! Don't miss seeing the complete General line of Radio and Phonographs at the Blackstone Hotel during the Radio Show.

# *General*

**TELEVISION AND RADIO CORP.**  
1940 NO. HOMAN AVE., CHICAGO, U.S.A.

# Save Time Get Better Results

**USE  
THORDARSON  
UNIVERSAL  
OUTPUT  
TRANSFORMERS**

for quick, easy and accurate replacement. Three types will cover all the radio receivers you normally service.

Primary and secondary taps are properly arranged to permit correct matching of tube loads and voice coils. Carefully engineered and manufactured for easy installation and dependable performance.

Ask your Thordarson distributor for the new Transformer Catalog No. 400.

# THORDARSON

**ELEC. MFG. CO.**  
500 W. Huron Street, Chicago, Ill.  
**TRANSFORMER SPECIALISTS SINCE 1895**

## New England Market Facts Outlined by The Reps

A new folder called "Vital Facts in Your New England Market" has been published by the New England chapter of "The Representatives" of Radio Parts Manufacturers. The booklet gives the market qualities of the six states of the area, including sales coverage, buying power, electrical equipment demands, etc. It is specially prepared for the manufacturers of electrical and electronic components and equipment, and further information comes from any of the seven members of the Reps' New England Chapter: Ralph H. Clawson, 117 Water St., Boston, Mass.; Tim Coakley, 11 Beacon St., Boston; Gerber Sales Co., 94 Portland St., Boston; W. K. Kelleigh, 1018 Commonwealth Ave., Boston; Ray Perron, 80 Davenport St., Taunton, Mass.; Harrison Reynolds, 34 Bay State Road, Belmont, Mass.; Henry P. Segel, 235 Pine St., Gardner, Mass.; Ernest K. Seyd, Andover, Conn.; and Paul R. Sturgeon, 25 Huntington Ave., Boston.

## Columbia Fixes MX Sets for Automatic Changers

Announcements from Columbia Recording Corp. are that all Masterworks "X" record sets will immediately be available in automatic sequences for drop type record changers. The move to modernize Columbia's two-record sets so that they may be conveniently played with the widely used drop type phono radios affects more than 170 of the best selling sets in the company's catalog.

CRC had previously made its big list of "M" sets available in automatic sequences, with good results in terms of extra sales. These were known as the "MM" sets; the new automatic two-record sets will be called the "MX" series, according to sales manager Paul Southard. They will be promoted in CRC's dramatic series of 4-color ads in national magazines, as well as on the air, and via mailers and hangers.

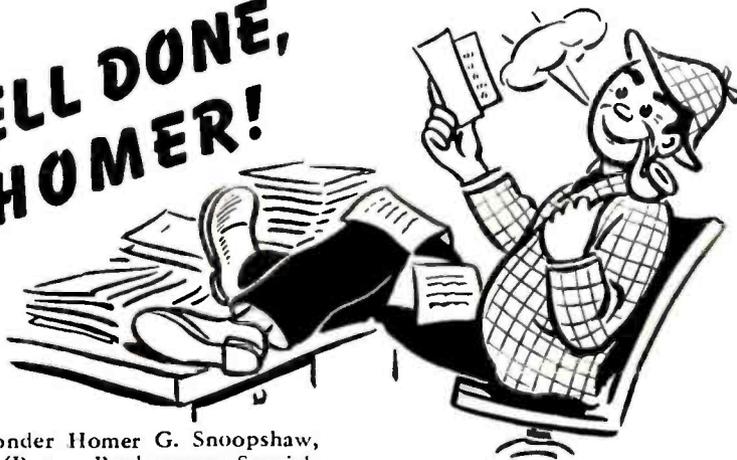
## Halinton for Du Mont in Minnesota

Harry Halinton is the new sales representative for the Minnesota area, for Allen B. Du Mont Laboratories, Inc., of Passaic, N. J. He has both manufactured and distributed electronic devices, and more recently has been a manufacturer's representative for well-known lines in his territory. Mr. Halinton will work out of his headquarters at Electronics Sales Co., 1807 E. Olive St., Milwaukee, Wis.

## Philco Battery Exec

Word has been received from Peter Kain, the Atlantic Division manager for Philco, that he will turn over that position on July 1st to Walter Eichelberger, formerly general manager of Philco Distributors, Inc., Detroit, Mich. Mr. Kain will then give full time to Philco batteries and allied defense activities, and will be located at Philco Corp., Storage Battery Division, 467 Calhoun St., Trenton, N. J.

# WELL DONE, HOMER!



No wonder Homer G. Snoopshaw, B.R.S. (Battery Replacement Specialist), wears such a broad grin! He's still getting congratulations on that slick new "Burgess Replacement Guide to Portable Radios" which he has compiled, including the new Burgess "Quick Reference Price List."

Dealers who have written for their free copy say they'd be lost without the Replacement Guide—it tells exactly *what battery fits what radio*, every time! And it lists the full Burgess line—the *complete* line that covers the field like a tent!

Get your free copy today! See your distributor, or write to Homer G. Snoopshaw, B.R.S., care of Burgess Battery Company, Freeport, Illinois.



*Homer recommends*

Burgess Number G4B50 for Zenith portable models 5G500, 5G501 and 5G504. Another unit that makes Burgess "The Complete Replacement Line."

**BURGESS BATTERY CO.**  
FREEPORT, ILLINOIS

# BURGESS THE Complete REPLACEMENT LINE

## FISHING'S GOOD AT NORTH ADAMS

... but we're not doing much of it this year

Sure, we like to fish—but these are times when fishing must take a back seat. With one big Sprague plant working exclusively on national defense orders and with the other turning out more Sprague Condensers, Koolohm Resistors and Test Equipment for the radio trade than ever before, we've got a man's size job to do—and we're doing it. Meanwhile, we take this means of assuring our radio friends that, while putting national defense wholeheartedly first, we are neither forgetting nor neglecting them.

# SPRAGUE

PRODUCTS COMPANY

North Adams, Mass.



ATOM  
CONDENSERS  
(Miniature dry  
electrolytics)

KOOLOHM  
INSULATED  
RESISTORS

TC PAPER  
TUBULARS

FIXED MICA CONDENSERS



**PRESENTING  
The New 1941 Line**

- ◀ Model IB8—The most compact low cost high efficiency, high acoustic power *Booster* Speaker for paging and intercommunicator use yet developed.
- ◀ Model MD8—An economy model medium power *Driver Unit* for all UNIVERSITY *Reflex* Speakers.
- ◀ Model WLC—A new *Dual Driver*, wide range, all metal waterproof, outdoor loud speaker. A new and complete line of *Super Power Bull Speakers* including:
  - ◀ Model 2RYR 360° Radial Reflex *Baby Bull* loud speaker for high power central installation.
  - ◀ Model 2YR *Baby Bull* reflex speaker for all high power sound installations.
  - ◀ Model 4XR *Standard Bull* Reflex Speaker for *Super Power* installations.
- The above are a few of the NEW items. These are in addition to:*
- UNIVERSITY'S Famous *General Purpose Line of High Efficiency*—waterproof and weatherproof *High Power outdoor and indoor loud speakers, including:*
  - ◀ Model CR *High Power High Efficiency Booster Speaker*
  - ◀ Model RLH 360° Radial Non Directional Reflex Speaker—For central installations
  - ◀ Model SMH—Reflex Horn compact yet capable of high power speech projection
  - ◀ Model PAH—Driver Unit—The Giant model of the UNIVERSITY family of Driver Units
  - ◀ Model PH Reflex Horn—a general purpose speaker for average use.
  - ◀ Model PLH De Luxe Driver Unit—Where absolute maximum power output is required.
  - ◀ Model LH Reflex Horn—For best results on speech and music.
  - ◀ Model SAH Driver Unit—Sealed in a spun aluminum can.
  - ◀ Model GH Reflex Horn—for reproducing symphonic music.

*See them in action at the Radio Parts Show.*

**UNIVERSITY LABORATORIES**  
195 Chrystie St., New York City

# SALES HELPS

## Nifty Promotion of GE Portables

A lively new idea in advertising radio is the plan of General Electric to use the cartoons of the famous New Yorker artist, Robert Day, in a big series of ads in national magazines. The ads feature the new GE self-charging portable radio, and will run in a group of outdoor magazines during summer months. This series is in addition to GE ads in *Life*, *Look* and *Sat Eve Post*.

A colorful string of window displays for dealers are also available, to those who want to cash in on the timely appeal of "the most practical of portables."

## Take the Panel Lamps Along



For a handy kit that a serviceman can conveniently carry with him on every service call, Sylvania has packed 60 panel lamps including 5 of the most popular types. The kit comes from Sylvania jobbers, and alert servicemen see extra profit opportunities in the device.

Jobbers can merchandise the kits to the trade with the aid of a counter card that slips over the open kit.

## Cramer Directs Sales of Du Mont Equipment

Leonard F. Cramer has been named sales manager of the instrument and the video equipment divisions of Allen B. Du Mont Labs., Inc., of Passaic, N. J. The instrument division handles the sale of standard and special cathode-ray oscillographs, tubes and associated equipment, and the new video equipment division is surveying, planning and building equipment for television broadcasting, including television cameras, studio equipment, remote pickup relay transmitters, film pickups, and complete transmitting facilities.

## Ten "Retail Pioneers" Named by Bendix

The first 10 men in the U. S. to sell 150 or more Bendix home laundries, have been named by the Bendix vice-president, J. S. Sayre, as the "ten real pioneers of the automatic home laundry industry." All are being honored with special insignias and gold watches,



One of the cartoons by Robert Day, promoting the GE portable.

for making the Strato-Flyer Ace Division of the Bendix Hi-Flyers Club.

The 10 retail pioneers are Alfred B. Goodwin, Island Appl. Co., Hempstead, L. I., N. Y.; Joseph T. Harding, Delaware Cty. Appl., Philadelphia, Pa.; Paul R. Kelly, Cedar Rapids, Iowa; Harry S. Lacey, Maxwell Hardware Co., Oakland, Calif.; Thomas J. Manley, Delaware Power & Lt., Wilmington, Dela.; Roy J. Moothart, W. D. Ryan Home Appl., Palo Alto, Calif.; A. W. Smith, Rhodes Bros., Tacoma, Wash.; Samuel Spitzberg, Barker Brothers, Los Angeles, Calif.; David E. Urner, Bakersfield, Calif., and N. S. Varin, Flushing, L. I., N. Y.

Bruno-New York, Inc., distributor for Bendix and RCA, is proud of the two winners in its area—Mr. Goodwin and Mr. Varin. Both of these aggressive dealers have received special telegrams from Mr. Sayre, and both have stated in interviews that their customers' enthusiasm for the Bendix product has helped them enjoy signal success with sales of automatic laundry.

## Recording Rack



New display rack, built so that dealers can get all their recording accessories onto a showcase—from National Recording Supply Co., Hollywood. The rack has space for two grades of discs, reserve stock, bottle displays for needles, lubricants, and complete supplies.

SEE SYLVANIA'S DISPLAY  
*National Radio Parts Show*

JUNE 10-13

**I**F YOU ATTEND the National Radio Parts Show in the Hotel Stevens, Chicago, June 10-13, you'll see the Sylvania radio tube line, including the new "Lock-In" tube, on display in the Sylvania booths 18-20. The entire brigade of hot Sylvania business getters, too, will be there for your inspection.

On hand to greet you will be Sylvania factory men who engineer Sylvania Tubes, editors of Sylvania News who interpret technical developments for you, and the men who are creating, planning and producing the sales and advertising material to help you sell.

Don't forget—Sylvania Booths 18-20—to your right at the foot of the stairs as you enter the Convention Hall.

*Sylvania Radio Tube Division*

**HYGRADE SYLVANIA CORPORATION**  
 EMPORIUM, PA.

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

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

... because it is giving real satisfaction in hundreds of thousands of homes today. It is the Fidelitone Floating Point long life needle.

**Fidelitone Floating Point Phonograph Needles**

are increasing needle sales for dealers everywhere . . . the smooth Platinum Metals point gives pleasing reproduction for 3 to 6 months' average use, with protection to records. Result . . . dealers are profiting on repeat sales to satisfied customers.

If you haven't discovered the profits in Fidelitone Floating Point needles as yet, ask your distributor or write the makers.

**PERMO PRODUCTS Corporation**  
 6415 RAVENSWOOD AVE.  
 Chicago, Ill.

*Manufacturing Metallurgists*

**Mr. Serviceman!**  
**Get your RSA Membership**



**FREE!**

Now Without One Cent of Cost to You, you can have a membership in the RSA, the only national organization that has the sponsorship of the RMA, the NAB, the Sales Managers Clubs, and the Trade Journals.

This includes the RSA Membership Certificate, the RSA Pocket Membership Card, the House Organ, access to the RSA Technical Helps Bureau, and participation in all the functions and benefits RSA offers!

Act now! Take advantage of this special offer!

**RADIO SERVICEMEN OF AMERICA, INC.**

**"Reliable Service Assured"**

304 S. DEARBORN ST. CHICAGO, ILLINOIS

*It's Simple! . . . Easy!* All you have to do is send in 5 memberships of your fellow Servicemen with a \$5.00 bill (that's \$1.00 for each) for 1941 National RSA Dues, and you get your membership Free of charge. Applicants in present chapter areas will be referred to the local chapter.

**RADIO SERVICEMEN OF AMERICA, INC.**  
 304 S. Dearborn Street, Chicago, Illinois.

- \$5.00 enclosed for 1941 National Dues for 5 memberships in RSA. Names and addresses attached herewith.
- \$1.00 enclosed for 1941 National RSA Dues for single membership.

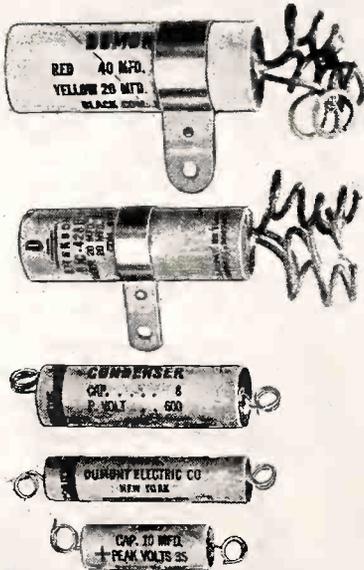
Name .....

Address .....

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

Radio Today—June, '41

# DUMONT PRECISION BUILT CONDENSERS



From 6 Volts to 485 Volts

**DEPENDABILITY  
QUALITY  
ECONOMY**

Fastest Selling Condensers  
to the Service Trade

FULLY GUARANTEED  
FOR 1 YEAR SERVICE

Used by U.S. Government  
YOUR GUARANTEE  
of Finest Quality

AT YOUR JOBBER OR WRITE TO

**Dumont Electric Co.**  
514-516 Broadway, New York  
MICA · PAPER · ELECTROLYTIC

## DISCS IN U.S. MORALE

(Continued from page 24)

the U.S. population is really in the mood for more records, the records manufacturers are happy to report plenty of supplies and "business as usual."

Popular interest continues to follow those records which have a patriotic flavor and which have been conveniently (for the dealer) featured as such by the manufacturers. These include many of the old songs, recorded with new trimmings, and some brand new ones with plenty of appeal. They lend themselves exceptionally well to timely displays featuring the red-white-and-blue trims.

A number of patriotic holidays are coming up, some of which will be new "weeks" and "days" and all of which will give retailers a chance to go to town on this type of record.

As for the general kinds of promotions which will help dealers get full benefit of the national mood, there are a number of timely ideas: (1) Snuggle up to the managers of the organizations which are holding meetings beginning and ending with the playing of patriotic music, (2) Encourage your servicemen to pass out those lively folders which carry lists of new record releases, (3) Be sure to tie up with the local theatre manager whenever he shows a movie that has a link to discs that you sell, and (4) Increase your efforts to get your records and your portable record-players into all the big "summer outing" displays in your neighborhood, if you can make a deal with fellow merchants who handle such things as deck chairs, golf equipment, boats, camping outfits, etc.

### RCA Jobber Holds Preview of Record Movie

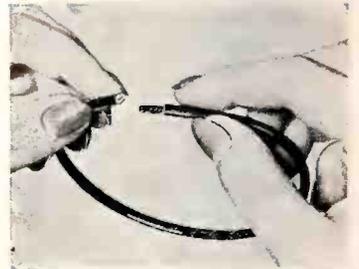
Some 500 record dealers of the New York area were guests of the RCA Victor jobber, Bruno-New York, Inc., last month when the prominent distributor invited them to a special preview of the Columbia picture, "Penny Serenade." The event was held at the Bel-

mont Theater in New York City, ahead of the movie's opening at the Radio City Music Hall.

Bruno-New York is helping its dealers to get full benefit of tie-ins with the picture, because the story of "Penny Serenade" is wholly concerned with what records can mean to the life of an individual. Also, Victor labels show up prominently throughout the performance. Irene Dunne and Cary Grant are the stars and the picture is expected to rate national acclaim.

RCA Victor jobbers throughout the country are provided with special displays, for dealers to use during local showings. The picture reaches the peak of its distribution in June and July, but its vogue actually runs from May to September.

### "WALSCO UNIBELT" New Adjustable Dial Belt



A great new time-saver for Radiomen. Belts come open; can be installed without taking apart dial mechanism. Can be cut to fit any radio. Stretching and slipping are also eliminated. Ask your Jobber for demonstration.

### WALSCO STAPLE DRIVER

Indispensable for every radio and P.A. man. Staples wires automatically—even in corners, behind pipes. Works also on brick and plaster walls. Staples for all wires up to 1/4" in diameter come in Ivory, Brown, and Blue.



### Other outstanding WALSCO Products:

Radio Cements, Contact Cleaners, Dial Cables, Cabinet Refinishing Kits and Materials. Write for FREE Catalog No. 42-C.

## WALSCO PRODUCTS

Mfd. by WALTER L. SCHOTT COMPANY  
5264 W. PICO BLVD. NEW YORK OFFICE  
LOS ANGELES, CALIF. 258 BROADWAY

### AUTO RADIO ACCESSORIES

REMOTE  
CONTROL CABLES

STAR AUTO  
ANTENNAS

TELEVISION  
ANTENNAS

F-M ANTENNAS

LINEN DIAL CORD

PHOSPHOR  
BRONZE  
DIAL CABLE

WOVEN FABRIC  
DIAL BELTS

JFD MANUFACTURING CO.

# JFD

Out in front—always!

Keeping pace with the ever-changing art of radio, JFD stays in the lead, year after year, with two vital services to jobbers, dealers and servicemen.  
1—Staple items in steady demand.  
2—Specialties representing the latest developments.

The 1941-42 season looms big in many ways. Visit our booth at the Show. See what's new and popular in Auto Radio Accessories, Radio Service Aids—or see your JFD Jobber. Latest Catalog just off the press—Write for your copy!

4111 Fort Hamilton Parkway

Stangard RADIO SERVICE AIDS

SCRATCH REMOVER

RADIO  
CEMENT

DIAL DRIVE  
RUBBERS, SPRINGS

WRINKLE VARNISH

AC-DC BALLAST TUBES

BROOKLYN, N. Y.

LINE CORDS

## Stokowski Tour to Stir Record Sales

In connection with the nationwide tour of Leopold Stokowski conducting the All American Youth Orchestra, Columbia Recording Corp. has announced through its advertising manager, Patrick Dolan, that a special cooperative advertising fund is available to dealers in towns where the orchestra plays. The big promotion also includes spot announcements on local stations in tour towns, and a Stokowski Tour Promotion Kit including posters, display cards, window displays, etc.

The orchestra started its tour May 11 in Atlantic City, and will wind up in Hollywood July 5th, after 46 concerts in U. S., Canada and Mexico. Columbia emphasizes that records of Stokowski and the Youth Orchestra are available only on CRC Masterworks, and has released three albums (Beethoven's Symphony No. 5 on M-451, Brahms Symphony No. 4 on M-452 and Stravinsky's Firebird Suite on M-446) made by the company, ahead of time, so that dealers may capitalize on the extra interest.

## Victor Starts New Album Series

A new series of popular albums, which will appear weekly and will be nationally advertised, has been started by RCA Victor. Late last month the first of these colorful sets appeared—No. P-64 by Joe Reichman, called "Piano Reveries." The first release contains four records and sells for \$2.50.

These new albums are specially suitable for display in window and counter, and according to Victor will contain "the finest in every type of popular music."

## Records from the Bible

A very useful set of records called "In the Beginning" comes from the Asch Recording Studios, 117 W. 46th St., New York City. The album contains six stories from the Old Testament, agreeably told on three records by narrator David Niles. The stories are from "In the Beginning" by

Scholem Asch, author of the best selling book, "The Nazarene," and will be especially appropriate for youngsters.

The words of the stories are commanding but simple and are backed by a special music score. The exact text of each narration is included in the album. The whole effect is one which makes these events of the Old Testament dramatic and understandable. The album lists at \$3.

## Recoton Needles in Big Ad Campaign

The biggest national advertising drive in its history has been undertaken by the Recoton Corp., 42 W. 15th St., New York City, on Recoton phonograph needles. Full page ads are appearing in a string of magazines, and smaller ads in a list of additional publications. The ads feature endorsements of famed radio and movie stars, including Jimmie Dorsey, Connie Boswell, Helen O'Connell, Bob Eberly, etc.

So that dealers and distributors may tie in with this drive, a series of colorful display cards and selling helps are being issued.

The new sales promotion manager at Recoton is Edward M. Bieber, whose appointment was announced by president F. Behrendt. Mr. Bieber is an established expert in radio and sound fields, and has an enviable record for merchandising skill.

## Presto Meets Aluminum Disc Problem

As the use of aluminum is being discontinued in the making of recording blanks, it has been announced by Presto Recording Corp., 242 W. 55th St., New York City, that it will now manufacture a new steel-base disc for home and school use. They'll come in 7", 8", 10", and 12" sizes, in unlimited quantities.

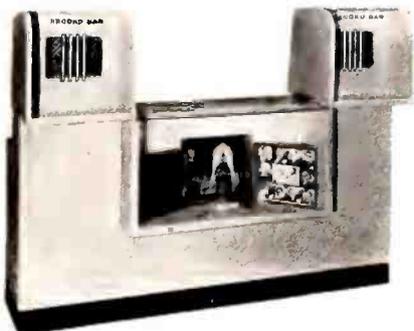
Presto is also marketing, for commercial users of recording discs, a new blank with a plate glass base, .104" thick, at the same price as aluminum. The firm also offers a recoating service to recording studios and radio stations, who have a supply of used aluminum-base discs on hand.



Only

# RECORD BAR\*

Gives You Both!



\*Reg. and Copyrighted U.S. Pat. Off. 1940

Whether your store is large or small—all your record selling problems are solved by the unique RECORD BAR. It's compact, it's roomy, it's attractive. RECORD BAR entices customers . . . enables you to sell them easier, faster by eliminating booth demonstrations.

The newest type high fidelity amplifier, featherlight pick-up, and sapphire needle used in RECORD BAR insure highest quality reproduction.

Write for Booklet Today!

**A. BITTER  
CONSTRUCTION CORP.**  
Brewster Bldg., Long Island City, N. Y.

# HOWARD Recording Discs

## Send Sales and Profits Surging--Stock Them Today!

Howard Recording Discs, the finest obtainable for semi-professional and home recording use, have established a nation-wide reputation for quiet, long-life, full-toned reproduction. Packed, 5 each, in attractive utility albums, Howard Metal Base Discs are winning and holding a larger volume of sales than ever before. And now, the new

Duro Board Base Discs just announced, with their superior quality in the lowest priced bracket, provide an unbeatable sales and profit opportunity. The attractive Howard counter display dispenser placed and kept within customer eye-range will assure your share of today's tremendous recording disc sales.

Flame Proof... Underwriters' Approved... Low Surface Noise... Longer Life

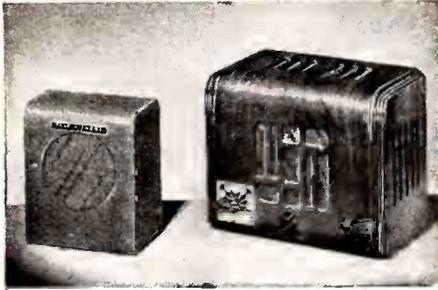
## HOWARD RADIO COMPANY

1731-35 Belmont Av., Chicago, Ill. - Cable Address: HOWARDCO, USA

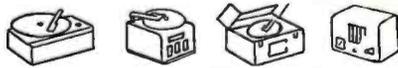
America's Oldest Radio Manufacturer



## THE "BEST SELLER" IN INTER-COMMUNICATION!



Here's TALK-A-PHONE'S sensational LP-5 Inter-communication System—the best-selling profit-builder in the Intercom field! Master Selective type—works with up to 5 sub-stations; master can call any single sub-station or all at once; sub-stations can call master at will—persons may speak as far as 50 feet from units; includes special "Silent" feature which permits master to be called, yet excludes noise pickup from sub-station. Operates on 110 volts AC or DC. Quality built, priced right to sell! Write for literature!



**Also—A Complete Phonograph Line!** TALK-A-PHONE also builds a Complete Phonograph line—Profit-Builders all! Wired and Wireless Players, Player-Amplifiers, Automatic Changer-Players—and America's finest Portable Home Recorder! Take on these profitable lines. Prices, discounts, literature sent on request.

Visit us at the Radio Show, Booth 319

**Talk-A-Phone Mfg. Co.**  
1219 W. VAN BUREN ST.—CHICAGO

*New*

# USALITE

TRADE MARK

"A" & "B" RADIO BATTERIES  
for ALL 1.4 volt  
PORTABLE RECEIVERS



● Top-quality, high efficiency batteries for EVERY PORTABLE RADIO NEED.  
WRITE FOR CATALOG, PRICES, BATTERY REPLACEMENT GUIDES TODAY

**U. S. ELECTRIC MFG. CORP.**  
222 W. 14th Street . . . New York  
323 W. Polk Street . . . Chicago

## Wisconsin Jobber Makes Record Plans



A. Van Antwerpen, right, head of Radio Specialty Co., Milwaukee, distributors for Columbia records, is shown with Paul Southard, CRC sales manager, during the prominent jobber's visit to Columbia plant at Bridgeport, Conn.

## New Quiz Board Plugs Radio

Complete with flashing lights, buzzers, chimes and a public address system, a "Radio Quiz Board" made its appearance at the Commonwealth Edison Electric Living Exposition in Chicago recently and attracted hundreds of people. The Board is an electric device which asks questions on radio subjects; six answers to each query are shown in the display and contestants must choose the right one in order to win a prize.

To select an answer, the participants merely throw a large switch under the one they choose. If correct, a green light flashes and a chime rings and the contestant gets a prize. If the answer is wrong, there's a red light and a buzzer.

The Board was built by the Zenith Radio Distributing Corp., Chicago, and many of the questions were framed to emphasize the features of Zenith sets. Other questions were general in nature and included such queries as: What is the speed of radio waves? What is a decibel? What is the approximate sound intensity of human speech?

## Sources of Radio Interference

A loose electric light-bulb, socket or connection, or a motor, appliance, faulty cord or connector-plug, or BX and pipes rubbing, may put the noise "on the line."

A leaky transformer, power lines discharging into trees, x-ray, welding, or diathermy machines, hi-line insulators flashing over, may set up radio

noises which come in to the set over the antenna.

Some tube, resistance, condenser, coil, transformer, choke, speaker, antenna, or some connection within the set may be responsible.

To eliminate any noise, you must first know where the noise comes from.

Disconnecting the aerial from the set will quickly tell whether or not the noise is coming in over the antenna.

If it is, then the antenna must be carefully placed in a position of minimum noise pick-up with a low-impedance transmission line, or shielded lead-in, or noise counter-poise, to deliver the cleanest possible signal to the set.

## AERIAL AND COUNTERPOISE

Some very persistent air-borne interference which defied usual methods of elimination, finally was licked by erecting a high aerial and a low counterpoise. The broadcast signal induced a higher signal voltage on the high aerial than on the counterpoise, while the noise appeared on both aerial and counterpoise at the same voltage. Being out of phase, they cancelled out across a transformer primary, and left a *clean signal voltage* in the secondary winding equal to the excess of the signal voltage on the aerial over the signal voltage on the counterpoise.

The dealer who first used this method of "licking the noise" in a particularly bad neighborhood, and who was able to guarantee "noise free reception," soon sold hundreds of new sets to the residents of this local area, and he always "got his price" too, to the consternation of his price cutting, but less radio-wise competitors.

# SERVICING

*shoots upward*

## AS SET OUTPUT DECLINES!

Maintenance of 54,000,000 sets—keeping these listening posts open—is the job of every man in radio. To keep abreast of the rising curve, RADIO TODAY will devote an increasing amount of its space to this now vital problem.

### PARTS MAKERS GETTING SET FOR RECORD FALL SEASON

With radio outputs lowered by material shortages and frozen designs, service has pulled on its seven league boots and quickly stepped into the breach. Even before dealers' stocks of new sets began to dwindle, servicemen and service departments were being groomed to sell maintenance as never before.

Old sets are being reconditioned. Trade-ins are being fixed up and resold. And soon, the silent radios in millions of homes will speak again.

Here is a harvest for the parts manufacturer who has distribution plus acceptance. Even then, he will need immediate and vigorous contact with the men who are actually doing the big maintenance job.

RADIO TODAY is the medium of that contact. Quick, complete and economical. Within its 22,000 selective circulation the buying power of the trade is centered.

July issue closes July 7.

**RADIO  
TODAY**

**CALDWELL-CLEMENTS**

480 Lexington Avenue • New York

JUNE, 1941



### Hi-Fidelity Steel Cutting Needle

List 25c

Will cut from 15 to 25 ten-inch records with a very minimum of surface noise, retaining the fidelity of the original composition. In constant use wherever tested. 100 individually enveloped needles to a carton (list \$25.00). Try it yourself!

**ALSO** Stellite and sapphire cutters, and a complete line of Playback Needles, each perfect for its own use. Our modern packing styles will greatly stimulate your business, and the quality of our needles will build good will for you.

Write for Samples and Prices

**DUOTONE COMPANY, Inc.**  
799 Broadway • New York City

### You Can Bet Your Life— on PINCOR DYNAMOTORS



In Dynamotor performance, the ultimate factor to consider is **DEPENDABILITY**. And for utmost dependability, PINCOR Dynamotors have long been the accepted standard. In aircraft communications, where lives may literally depend upon uninterrupted service, you can't afford to gamble. Specify PINCOR Dynamotors—and be sure! Available in capacities from 5 to 850 watts—all voltages. And investigate the new PINCOR Dual-Voltage Dynamotors—the newest thing in the field. Write or wire for details!

OTHER PINCOR PRODUCTS: ROTARY CONVERTERS, MOTOR-GENERATOR SETS, GENERATORS, GAS-ELECTRIC PLANTS, MOTORS. COMPLETE CATALOGUES AVAILABLE.

**PIONEER GEN-E-MOTOR**  
CHICAGO, ILLINOIS

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

## RADIO PUTS NATIONAL DEFENSE FIRST

(Continued from page 15)

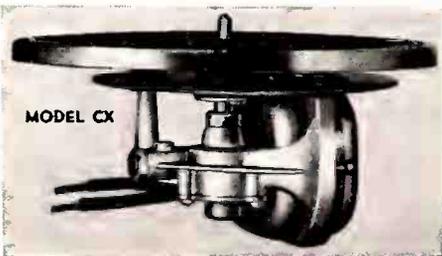
needs met, our obligation is to the distributor and dealer who so loyally have supported our products. Realizing our deep obligation of service, we have purposely refrained from creating a backlog of mail-order, chain and private-label business.

Today we have a Seller's market, but at some future day the tide will turn, and we will again be in a Buyer's market. As manufacturers, we intend to see that our faithful customers receive the best possible service during the trying days ahead.



**I**N your phonographs and combinations, make sure you have motors that do their part. Specify General Industries "Smooth-Power" Motors.

General Industries makes the most complete line of phonograph equipment obtainable from any one company—Electric and Spring Motors, Dual-Speed and Single-Speed Recorders, Automatic Record Changers, Combination Record-Changer-Recorders. Advanced in design and precision manufactured.



Model CX light-weight, fan-cooled motor. Self-starting, induction type. Popular for small models. Turntable included.



**NEW!** DUAL SPEED Home Recorder and Phonograph assembly. 78 or 33 $\frac{1}{2}$  RPM. Self-starting, dynamically balanced rim-drive motor. Weighted turntable. Beautiful walnut grain finish on base plate; streamlined plastic trim on pickup and cutter arms.

**The GENERAL INDUSTRIES CO.**

DEPT. 15 ELYRIA, OHIO

RADIO PARTS SHOW BOOTH 1027

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

## CROSELEY CORPORATION

R. C. Cosgrove, Vice-president and General Manager

In addition to the Army field ranges that we are now building, which order amounts to \$765,000, we are building a large number of refrigerators for Defense Housing. We are also manufacturing radio transmitting and receiving sets for many departments of the Government, as well as making parts for airplanes, gun mounts, and some other items of a confidential nature.

Right now we are developing, and negotiating quite a wide variety of Defense equipment. We are making every conceivable effort to use all of our facilities, and every available hour in productive work for our commercial and Defense needs. Thus we are rapidly using our productive capacity to good advantage.

## GENERAL ELECTRIC COMPANY

C. E. Wilson, President

We have been given an assignment by the Navy that requires a large number of highly trained engineers, for research and design of equipment urgently required by the Navy. These skilled engineers are available only in General Electric's radio receiver design engineering department.

By agreement with Secretary Knox, Admiral Stark and Admiral Bowen, the design of our household radio sets is now frozen for the duration of the emergency, and the entire engineering organization is immediately assigned to the task of speeding up the design and production of the Navy's newest requirements. If this is a sacrifice on the part of the General Electric Company, as generously stated by Secretary Knox, it is one that the company is indeed happy to make, in the circumstances.

## P. R. MALLORY & CO.

P. R. Mallory, President

Fortunately, last year our company completed a plant expansion program required to care for its constantly growing normal business. It has been possible to divert a large part of this space and equipment to essential war work and still maintain customary commercial deliveries. Our organization is proud of its defense assignment. It covers quite a wide diversity in both the electrical and metallurgi-

cal fields including aviation bomb-handling equipment as well as special bonded metal parts for aviation motors. Getting started was discouragingly slow. Current progress is very rapid. Present deliveries are substantial and next month they should be entirely satisfactory.

## RADIO CORP. OF AMERICA

David Sarnoff, President

If the real test of an institution is the service it can perform in an emergency, we can point with pride to the greatly increased activities we have undertaken in research, engineering, manufacturing, domestic and international broadcasting, transoceanic radiotelegraph service, and ship-to-shore communication. In each of these, RCA has enlisted in the first line of America's defense on land, on sea, and in the air.

In cooperation with the Government, plans were made in June, 1940, to engage in the manufacture of radio and electronic products for the Army and Navy on an extensive scale. We arranged to expand our manufacturing facilities so that we could fill the defense orders to be placed with us, while continuing to provide for the normal requirements of the public.

## SOLAR MFG. CORP.

W. C. Harter, General Sales Manager

Forty-eight per cent of our production of condensers is in the Defense Program and this percentage is increasing. These condensers, practically all of special types made to Signal Corps, Navy or CAA specifications, are urgently required in the production of radio and control equipment for aerial, naval and ground units of the Armed Service Branches of the Government. We consider it a patriotic duty to exert the utmost efforts in this production.

It is today evident that the production of electrical condensers throughout the balance of the year will be limited by the available supply of materials, especially aluminum. Recent rulings of OPM limit the purchase of aluminum for non-defense radio set uses to 30 per cent of the poundage purchased in corresponding months of 1940. If this limitation continues throughout the year, condensers will be available in decreasing quantities for regular production of new radio sets.

It is apparently the desire of the

see bogen

see bogen when you visit the radio trade show at the hotel stevens.

see the most complete line of amplifiers, Intercommunication and school systems; public address equipment and sound accessories at the show.

see bogen men—who know the equipment thoroughly—and who want to know you! come to the show, come to display 918—and then come up to our room in the hotel.

david bogen co., inc., 663 broadway, new york city



government to support the activities of radio amateurs. We expect to be able to supply adequate stocks of repair parts for their use, also in most part for the radio serviceman so that present sets can be maintained in operating condition in homes throughout the country.

Much as we would like to maintain normal production for the benefit of all classes of the trade, we feel that our defense efforts must come first. In common with others in industry we emphasize in our factory: "The Production Line is the First Line of Defense."

#### SPRAGUE COMPANIES

*Harry Kalker, Sales Manager*

Faced with a heavy influx of national defense orders, the Sprague companies have found a practical solution to the problem of giving defense orders wholehearted priority, while still not neglecting regular radio business.

Several years ago, Sprague acquired a big second factory in North Adams, a mile away from its original plant. With defense orders piling in, this second plant has been devoted almost exclusively to them. New machinery has been installed, workers carefully trained, and skilled technicians put in charge. We have met all delivery dates, and results have proved highly satisfactory.

We firmly believe that national defense needs come first, and we will always put them first. Due to our unique manufacturing set-up, however, we find that the one type of work need not interfere with the other, since each can be segregated to a large extent.

#### STEWART-WARNER CORP.

*L. L. Kelsey, Manager, Radio Division*

Aside from the effect which defense activity is having on the procurement of materials, our contribution is not affecting our normal production. We have found it possible to expand our activity sufficiently to undertake the manufacture of several types of instruments founded on radio principles—some for airplane use and other more complicated units for special Signal Corps work.

Other divisions of Stewart-Warner, beyond radio, are involved knee-deep in defense contracts but what-

ever the division, we are prepared to contribute all or any part of our facilities, as they may be needed, as our contribution toward the satisfactory fulfillment of the National Defense Program.

#### TRIPLETT ELECTRICAL INSTRUMENT CO.

*R. L. Triplett, President*

As a manufacturer of instruments and radio test equipment we are giving our fullest support to help make America ready in the National Defense Program. Many of our regular radio customers are today working closely with us in this endeavor. While civilian requirements necessarily must be secondary, we have for some time confined our attention to supplying old accounts only, and have greatly expanded our production facilities.

I am confident 1941 will be a good radio business year, even though the market is upset and jobbers requirements for many regular items are curtailed.

#### WEBSTER-CHICAGO CORP.

*D. MacGregor, General Manager*

Webster-Chicago is working with the Navy Department in the building of a quantity of tools, dies, and gauges of considerable importance in the National Defense program.

We are supplying, also, inter-communicating, public address, and other sound equipment to the Signal Corps, Coast Guard, and other Army units. This work is added to above-normal non-Defense civilian manufacture by means of second and third shift operations and increased efficiency. Our engineering and production personnel are responding to increased tempo with utmost cooperation.

#### WESTON ELECTRICAL INSTRUMENT CORP.

*Carlton Brown, Executive Vice-president*

It is very difficult to attempt to condense the comprehensive activities of our organization since instrumentation is a requisite of a great many branches of services of the government, such as, for example, the Army, the Signal Corps, the

Aviation and Naval services. As a matter of fact, the scope of our work brings us into contact in direct and indirect contractual capacities, with a very large percentage of those manufacturers who are contributing to the national defense program and it has become a fact that we have reluctantly been obliged to restrict our sales to our regular line of customers, even though we have been able to expand our productive facilities to an unanticipated degree.

I realize Radio Today's readers are mainly concerned with applications relating to radio, and from their own knowledge are aware of the extent of radio service throughout the entire realm of communications. We in turn serve most of those who are engaged in governmental radio work.

[This is for you]

# PERSONAL

Yes, this is our personal, and cordial invitation for you to see our new, spiffy, year-ahead line of Clarion Radios at the show. We're at the Blackstone Hotel. See location on directory. By the way, we've moved . . . moved to a big roomy, new plant we're proud of . . . and modestly proud too that good merchandise, square dealing and the loyal support of you, and you, and you made it possible. Thanks. We'll see you at the Blackstone. WARWICK MANUFACTURING CORP., 4640 W. Harrison St., Chicago.

[Thanks for reading]

## HAVE YOU EVER SEEN ALL THE CLIPS THAT MUELLER OFFERS?

Special Clips  
for  
Every Use



Solid Copper Clips



Insulated Clips



Send for Free Samples and Catalog 980

MUELLER ELECTRIC CO., 1573 East 31st St., CLEVELAND, O.

# Sterling A NEW LINE OF METERS

For Testing "A" and "B" Batteries of Pocket, Camera and Portable Radio Sets. Every Dealer and Serviceman Needs these meters NOW.

Old Type Testers Will Not Do The Work



Featured by Leading Jobbers No. 42A at \$3.60 tests all these Batteries. Write for Catalog No. 519-0. **STERLING MFG. CO** 9205 Detroit Avenue Cleveland, Ohio

## ATTENTION RADIO SERVICEMEN EXTRA PROFIT TO YOU!

RECOMMENDING NEW RADIOS TO YOUR CUSTOMERS CAN NOW BE DONE WITH REAL EXTRA PROFIT TO YOU. Give your customers Extra Value at the Right Price, and you'll be amazed at how easy it is to make MORE MONEY under our NEW EXTRA PROFIT SALES PLAN, requiring NO INVESTMENT, on your part at all. YOU DEAL DIRECTLY WITH THE MANUFACTURER . . . No Jobbers, No Dealers—NO MIDDLEMEN. Many servicemen have doubled their income.

Write for details TODAY! No Obligation. SAVE ON PARTS AND TUBES.

Every month, we have left over limited quantities of NATIONALLY ADVERTISED RADIO PARTS AND TUBES, from our radio production. These FIRST GRADE Nationally Advertised Parts and Tubes, made to our own rigid specification, are available to You, MUCH LESS THAN THE MARKET PRICE. Write for your copy of our Monthly Surplus Parts Sheet.

The expert advice of our Engineering Department is yours, FREE, for the asking.

**DON'T DELAY—WRITE TODAY FOR COMPLETE INFORMATION**

NORTH EASTERN RADIO CO.  
80 East 11th Street,  
New York, N. Y.

I certainly would like to know more about North Eastern's EXTRA PROFIT PLAN.

NAME.....  
ADDRESS.....  
CITY, STATE.....

## ELECTRONICS IN DEFENSE

(Continued from page 28)

search division of Remington Arms, has also been used to measure the "reaction time" of riflemen, as well as the time taken for the rifle mechanism to operate and the time for the bullet to reverse the gun's barrel, suggesting many other applications in industry.

### HUMAN REACTION-TIME

If a rifleman is all aimed and watching for a target to appear at a known point 100 ft. away—then from the time the target shows up until he is able to press the trigger, the relatively long interval of 160 milliseconds will have elapsed. For the trigger and firing mechanism to operate, requires 10 more milliseconds. Then 2 milliseconds will be occupied by the travel of the bullet down the barrel. And for the bullet to speed to the target, 100 ft. away will require 40 more milliseconds. Thus from the time the target appears, until the bullet strikes it, about 212 milliseconds or a quarter of a second is required—two-thirds of which time is taken by the relatively slow nervous impulses of the rifleman between seeing the target and pulling the trigger.

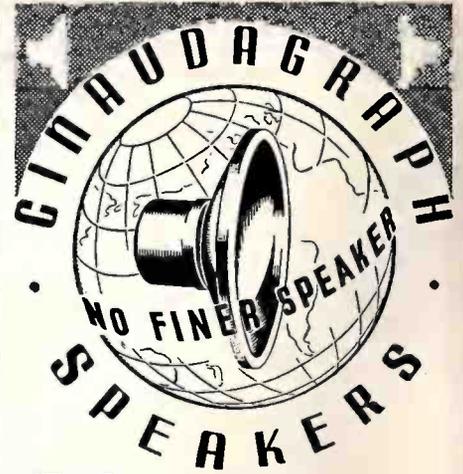
The electronic Chronoscope used in making these tests, is a convenient portable instrument, about the size of a table radio and containing half a dozen radio tubes. This device can also be used for the measurement of the operation time of telephone relays, the induction time in blasting caps, the speed of photo-flash lamps, the blow-out time of fuses, camera shutter speeds—in fact, any short time interval for which an electrical pulsation can be obtained at the beginning and end of the interval.

### EXPLOSION PRESSURES

At the same time the bullet speeds are being measured, a piezo-crystal unit can be connected with a pressure pin of known area, placed in the explosion chamber of the rifle, and in this way the momentary pressures of an exploding cartridge can be electronically measured. Thus, a .30 caliber cartridge is found to produce momentary pressures as high as 40,000 to 55,000 pounds per square inch, for a thousandth of a second—before the bullet moves down the barrel and relieves the pressure. So rapid are these pressure increases that if allowed to continue to build up for even a second pressures amounting to millions of pounds per square inch would be built up in the ordinary small caliber rifle.

### PE-CELL CAMERAS

The Remington research laboratory is also using electronic methods and photocells in some interesting work of photographing and studying the air-waves and air-ripples which accompany a speeding bullet or charge of buck-shot. The bullet to be photographed is fired across a beam of light shining on a photo-cell. The shadow of the bullet on the photo-cell serves to set off a flash of a vapor lamp which takes the picture of the bullet. The whole operation is so instantaneous that the bullet is caught on the photographic plate before it has had a chance to move from the original light beam.



## Tolerance

TAKES ON A NEW MEANING . . .

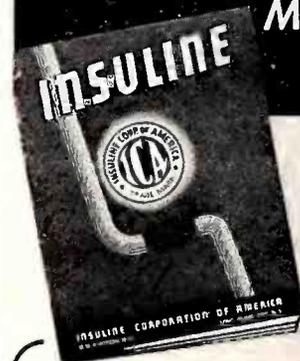
Until the present hectic days came into being we used the word tolerance only as it applied to precision measurements. Today . . . we speak of customer tolerance . . . as we watch our frantic efforts to keep abreast of the ever-increasing demand for a product that justly deserves the recommendation . . . "IN ALL THE WORLD—NO FINER SPEAKER." Anticipate your needs . . . see your Jobber at once . . . be tolerant of his efforts to give you the fastest possible service in these trying times.

See Us at the PARTS SHOW — CHICAGO JUNE 10-13 . . . BOOTHS 623-625

**CINAUDAGRAPH SPEAKERS, INC.**

921 W. VAN BUREN ST.  
CHICAGO, ILL.

## SAVE TIME and MONEY!



KEEP THIS ICA ACCESSORIES CATALOG HANDY!

SEND for Your Copy NOW!

## New ICA CATALOG

48 pages of necessary Parts, Accessories, and Tools for the Jobber, Service Man, Amateur, Sound Man and Manufacturer.

Every item made in our own factory; hence competitively priced.

Some of the items catalogued are:—

- Metal Cabinets, Chassis and Panels
- Plugs . . . Jacks . . . Neutralizing Tools
- Test Leads . . . Punches . . .
- Circle Cutter Tools
- Dials . . . Knobs . . . Switches
- Condensers . . . Chokes
- Radio Hardware and Essentials
- Auto Antennas and Accessories and other Radio Items



Visit us at  
BOOTH No. 724-6

**INSULINE CORP. OF AMERICA**  
30-30 NORTHERN BLVD.  
LONG ISLAND CITY, N. Y.

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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

## NEW BOOKLETS

The New Radio City Products 1941-42 catalog containing its new line of test equipment will be presented immediately after the Chicago trade show where the new line will be shown.

JFD's new line of auto radio antennas and accessories, FM, television and non-directional vertical home antennas are described in new 12 page booklet. JFD Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.

A copy of a new catalog of the Drake Mfg. Co., 1713 W. Hubbard St., Chicago, Ill., may be had upon request. It illustrates and describes dial and jewel pilot light assemblies and parts and gives information on voltage, lamps required, jewel colors, types of mounting, complete measurements and prices.

A new catalog showing the complete line of 1941 model Audiograph Sound Systems has just been issued by John Meck Industries, 1313 W. Randolph St., Chicago, Ill.

Leotone Radio Co., 63 Dey St., New York, N. Y. announces its new catalog on the most popular speaker cone replacements.

Emco Radio Products, 78 Reade St., New York, N. Y., has just put out a new sound equipment catalog, illustrating, describing and giving prices of its line.

ACA presents a new 8-page catalog describing its new line of Master Beam Power Amplifiers. It is available on request to Amplifier Co. of America, 17 W. 20 St., N. Y. C.

A new catalog has just been released by Vertrod Mfg. Co., 132 Nassau St., N. Y. C. for general distribution, describing a specialized list of 5 antennae.

DeJur-Amsco Corp., Shelton, Conn., announces a new catalog, No. I-21, giving specifications, diagrams and prices of its meters.

Elaborate booklet with 6 pages of illustrations in color on "Phonola" portable phonographs will be sent to radio men free. Those in Pittsburgh and East, should address Spector Sales Associates, 17 E. 42nd St., New York City. The Phonola line, made by Waters Conley Co., Rochester, Minn., includes a complete selection of portable units in electric or hand-wound models, wide variety of styles and prices.

New 48-page catalog pictures '41-'42 line of Super Stylined amplifiers and sound systems available from Lafayette Radio Corp., 100 6th Ave., New York, N. Y.

Bulletin No. 8 of Radio Warehouse Market, P. O. Box 3366, Akron, Ohio lists wide range of replacement radio parts and tubes. Copies free on request.

FOR THOSE WHO WANT THE BEST



## QUALITY IS NEVER AN ACCIDENT

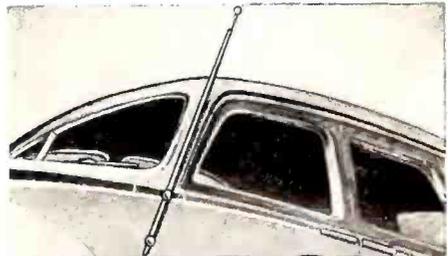
... It is always the result of firm intention, of sincere effort, of intelligent direction and skillful execution! QUALITY represents the wise choice of many alternatives and the cumulative experience of many craftsmen. It shows—after NECESSITY has been satisfied—the success of a determined purpose.

Applying this standard, it is not difficult to understand why "HYTRON" has come to be a synonym for "QUALITY" when it comes to transmitting tubes.

A continuous record of 20 years' experience in the exclusive manufacture of radio receiving tubes is no accident either. It proves that the determined purpose of the Founders to produce the best within human limitations, is recognized and appreciated!

## HYTRON CORP.

23 New Darby St., Salem, Mass.  
Manufacturers of Radio Tubes Since 1921



## BRACH Antennae

Automobile  
Home — All types  
F-M Systems  
Television  
Police • Marine  
Multiple Systems  
Complete Kits  
Accessories

Made by World's Oldest and Largest  
Manufacturers of Radio Aerial Systems

## L. S. BRACH MFG. CORP.

55 DICKERSON STREET  
NEWARK, N. J.



## JOBBER INVENTORIES

(Continued from page 36)

Resistors, Transformers, Ham Parts, Miscellaneous.

The foregoing headings are in three columns. To the left of each of these three columns are four narrower columns, headed: Back Order, Sold, Special and Ship.

Under "Sold" the branch manager enters the quantity of an item sold and gives the name and specs of the item under one of the ten headings listed above. There are exceptions to this: The quantities sold of slow-moving items which are not part of the regular shelf inventory, and therefore are not to be replaced, are entered under "Special."

### BACK-ORDER SYSTEM

Upon receipt of the daily tally sheet at Newark headquarters, it is sent to the stock clerk. In the stock room, the tally sheet is equivalent to a shipping order. The stock clerk pulls from stock the same quantity of an item as that which has been sold by the branch, and enters the quantity on the tally under "Ship." ("Special" items sold, of course, are exceptions.)

In this department another form enters into Lippman's inventory control. It is the "Back Order" slip, filled out in triplicate by the stock clerk. On this are itemized regular parts which are not in the Newark stock. Space is provided for date, manufacturer's number, part number,

signature of the person recording the "B. O.," signature of the person filling the "B. O." and date on which it is filled. The pink triplicate is sent to the branch with that day's shipment of merchandise, the white original is filed upstairs in the Newark office and the blue duplicate is kept in the receiving department pending receipt of the merchandise from the manufacturer.

When the day's shipment is assembled, it is wrapped with a packing ticket which itemized all but those items covered by B. O. slips. Thus, the confusion of duplicate listings for a single item is avoided.

Shipments are checked by the branch manager when received. Merchandise not covered by the shipping ticket is checked against his B. O. slips. The pink slip is returned from the branch to the Newark store when the B. O. is filled. In the Newark office it is filed with the white and blue copies, signifying that the transaction is completed.

### FOUR FORMS

In all, a total of four forms enter into Aaron Lippman's perpetual inventory control. Individual sales slips are consulted for filling the daily tally sheet. Packing slips and B. O. slips are checked against merchandise received. Yet control is complete, effective, economical, efficient. Items are painlessly added to or removed from regular inventory.

The thoroughness of his control system has enabled Aaron Lippman

to cut his number of yearly physical inventories from two to one per store. A close physical check is maintained, however, by the inexpensive process of "spot checking." Once a week, ten or fifteen items are counted in each branch. In this way a complete physical inventory is taken, piecemeal, about four times a year. As a result, "shrinkage" is almost at the vanishing point. Discrepancies between actual and paper inventories are negligible. . . . And that is all that some jobbers hope to know of heaven until they pass beyond the Heavieside Layer!

## REA Changes Plans on Refrigerator Deal

The plans of the Rural Electrification Administration to market two specially priced farm refrigerators through its REA-financed cooperative utilities, has been abandoned for the time being. Stewart Warner Corp., which had been the successful bidder in the production of the units, withdrew its bid because of "difficulties encountered in coordinating its ordinary distribution practices with the plan arranged for distributing the proposed REA Co-op model."

REA had planned to sell through its Co-ops, a 6 cu. ft. box for \$90, as reported in RADIO TODAY for May. But since Stewart Warner withdrew its bid, REA administrator Harry Slattery says that "In view of the fact that the current refrigerator season is already well advanced, it appears inexpedient at the present time to attempt further to effect general arrangements for making refrigeration facilities available to the cooperative members on terms justified by the mass market, but to leave such arrangement to each particular cooperative."

## Werner Plastics to Cope with Aluminum Shortage

Of interest to radio men who are concerned over the shortage of aluminum, is the announcement by R. D. Werner Co., Inc., 380 Second Ave., New York City, that the firm has developed new plastic products to cope with the scarcity of this metal. The Werner company is a specialist in extruded plastics, and introduces the new products under the trade names "Plastikmould" and "Plastiktrim."

These come in shapes and sizes similar to those supplied in aluminum and have a wide range of colors. The plastics are also made up in rods, tubes and other commercial items both flexible and rigid. Production of the new lines is in charge of P. C. Goodspeed, long-time expert in plastics.

## Bennett Is Columbia Distrib.

Appointment of the Bennett Radio Co., Inc., 211 N. Fourth St., Columbus, Ohio, as distributor of Columbia records in Columbus and surrounding territory has been revealed by Paul Southard, sales manager of Columbia Recording Corp.

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WITH NEW  
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AND WITH RADIO SETS.



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**A GREATER NAME IN SOUND**

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RAULAND—an honored name in radio research and engineering for more than twenty years, brings to WEBSTER-RAULAND a wealth of engineering resources and manufacturing ingenuity which will be reflected in the marked superiority of WEBSTER-RAULAND PRODUCTS.

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**A** GREATER NAME in Sound has been born. It is a new name only insofar as it symbolizes a move of major significance to everyone in Sound. Actually, it is the union of the resources of two great names in the field of Sound and Electronics, joined together to bring new advantages and new benefits to you who are in the Sound field.

Briefly, the Sound Divisions of *Webster-Chicago* and of the *Rauland Corporation* are now one. To greater WEBSTER-RAULAND, *Webster-Chicago* contributes its magnificent manufacturing facilities and its fine craftsmanship. The *Rauland Corporation*, rich in engineering resources, brings to WEBSTER-RAULAND a wealth of scientific radio ingenuity and a production skill which will be reflected in technical improvements to guarantee the superiority of WEBSTER-RAULAND PRODUCTS.

What does this vital move mean to you in the Sound field?

To you, the loyal and aggressive distributing organization of *Webster-Chicago*, it offers the greatest combination of resources in Sound. You will go forward now with WEBSTER-RAULAND, under the same able leadership, in the same legitimate, profit-protected channels, backed by newer, finer, best-selling products that will set the pace in the field.

To you, the specialist in Sound, WEBSTER-RAULAND offers

products with the kind of saleability, quality, appeal and performance you need to build a profitable Sound business.

To the ultimate user, WEBSTER-RAULAND Sound products assure vastly improved performance, longer life and unequalled value.

Yes, a greater name in Sound is born! WEBSTER-RAULAND will live up to its promise . . .

*Ellis Rauland*

PRESIDENT

# **WEBSTER-RAULAND**

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You are cordially invited to visit our Exhibit at the Radio Trade Show, June 10, 11, 12 and 13. Booth 112, 114 and Room 501.

Here's why this "B" battery for portables  
**OUTSELLS ALL OTHERS COMBINED!**



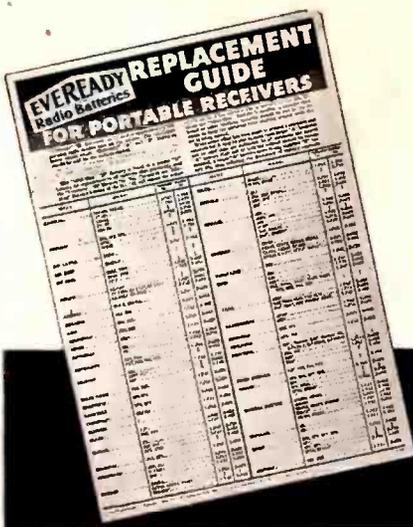
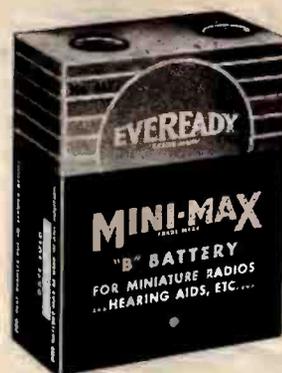
1. "Eveready" "Mini-Max" Radio "B" Battery No. 482 fits practically all makes of the portable sets now in use!

2. It lasts approximately twice as long (size for size) as batteries of ordinary round-cell design!

3. It costs no more than ordinary batteries for portable sets!

Here's the battery for "personal" or "camera-type" radios!

"Eveready" "Mini-Max" Radio "B" Battery No. 467 is the battery around which "personal" or "camera-type" portables were designed. 67½ volts in a space 3⅝" x 2 11/16" x 1 5/16". More and more customers will ask for it.



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