

V. 6 # 7

RADIO *and Television* TODAY

LIBRARY OF CONGRESS
JUL 30 1940
PERIODICAL DIVISION



World News pushes radio
sales to new highs!

JULY

***FP** (*Fabricated Plate*)

TRADE MARK REG. U. S. PAT. OFF.

CONDENSERS

made by

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

With over 5,000,000 FP Condensers in use as original equipment . . . the field returns on 1,000,000 . . . purchased by representative manufacturers were accurately checked. The answer has made radio history. Out of 1,000,000 FP Condensers made by Mallory only 512 were returned as defective. That's just 5/100th of 1%!

As a radio service engineer, this is news that you can't afford to overlook. FP Replacement Condensers, made by Mallory, are identical in every specification and quality to those used in original equipment—and made by Mallory. They offer you a replacement opportunity that to all practical purposes eliminates the possibility of troublesome call-backs.

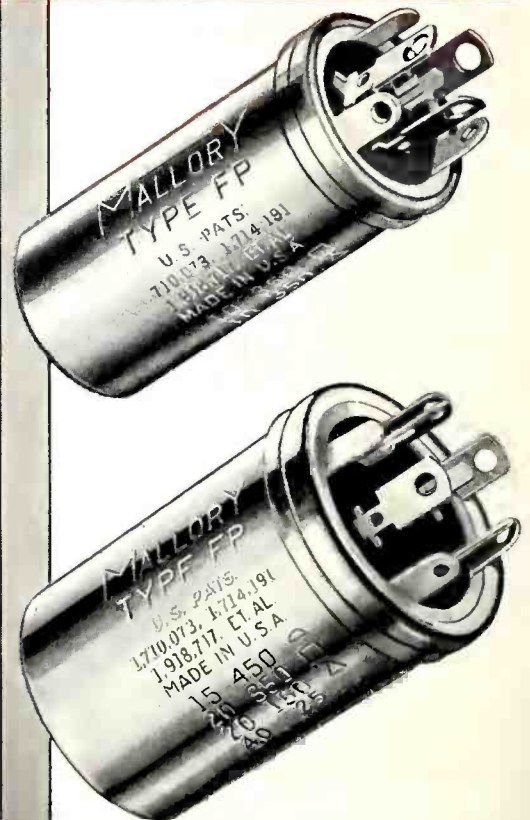
But there's this to remember. The outstanding success of FP Condensers has caused them to be imitated. But the imitation is only skin deep. So don't make the mistake of expecting Fabricated Plate performance from a condenser that merely *looks* like a genuine FP Condenser.

In the sets you service . . . you'll recognize genuine FP Condensers by the name MALLORY or by the figure (1) enclosed in a circle.

For all your other condenser replacement needs Mallory's full line offers similar opportunities for full profit and complete customer satisfaction. Get details on the entire line from your Mallory Distributor today.

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

**Put the Come-back Odds
2000 to 1
in Your
Favor**



**Not etched construction*

Use

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

Include

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

Admiral

PRESENTS THE MAGNA-MUSE

The price trend in radio buying is definitely upwards . . . people have more money to spend . . . the bigger console models are going to enjoy a far bigger play this fall.

CUSTOM-BILT PERIOD STYLE RADIO-PHONOGRAPH

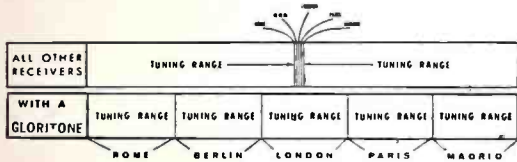
Cash in with this superb musical instrument . . . custom-bilt for those who have a critical ear for fine tone quality, a discerning eye for authentic period styling and a pocket-book that can stand the gaff.

WITH RECORDION HOME RECORD MAKER

Radio's newest, most dramatic thrill achieves perfection in the finest of home recording instruments. A distinct triumph for Admiral engineering genius.



AND MAGNA-BAND STATION SEPARATOR



Gives 20 times more space between dial calibrations. Makes tuning of foreign stations easier than bringing in locals. Another Admiral scoop!

ADMIRAL MAGNA-MUSE

Model 59-A11 Radio Phonograph

\$169⁹⁵

Model R59-B11 Radio Phonograph
with Recordion

\$225⁰⁰

Chassis specifications: 11 tubes plus tuning eye, AC superhet; Magna-Band tuning, covering five separate bands; Directional Super Aeroscope; Static shield; R. F. stage; 12 inch electro dynamic symphonic speaker; "Sofglo" dial; Automatic record-changer plays fourteen 10 inch or ten 12 inch records.



← Model 58-A11
Radio Phonograph

\$149⁹⁵

Model R58-B11 Radio Phono-
graph with Recordion

\$179⁹⁵

Chassis specifications: 11 tubes plus tuning eye, AC superhet; Magna-Band tuning, covering five bands; Directional Super Aeroscope; Static shield; Automatic R.F. stage; 12 inch electro-dynamic symphonic speaker; "Sofglo" dial; Automatic changer plays fourteen 10 inch or ten 12 inch records.

All prices slightly higher in West and South
Write today for descriptive literature

CONTINENTAL RADIO & TELEVISION CORP.

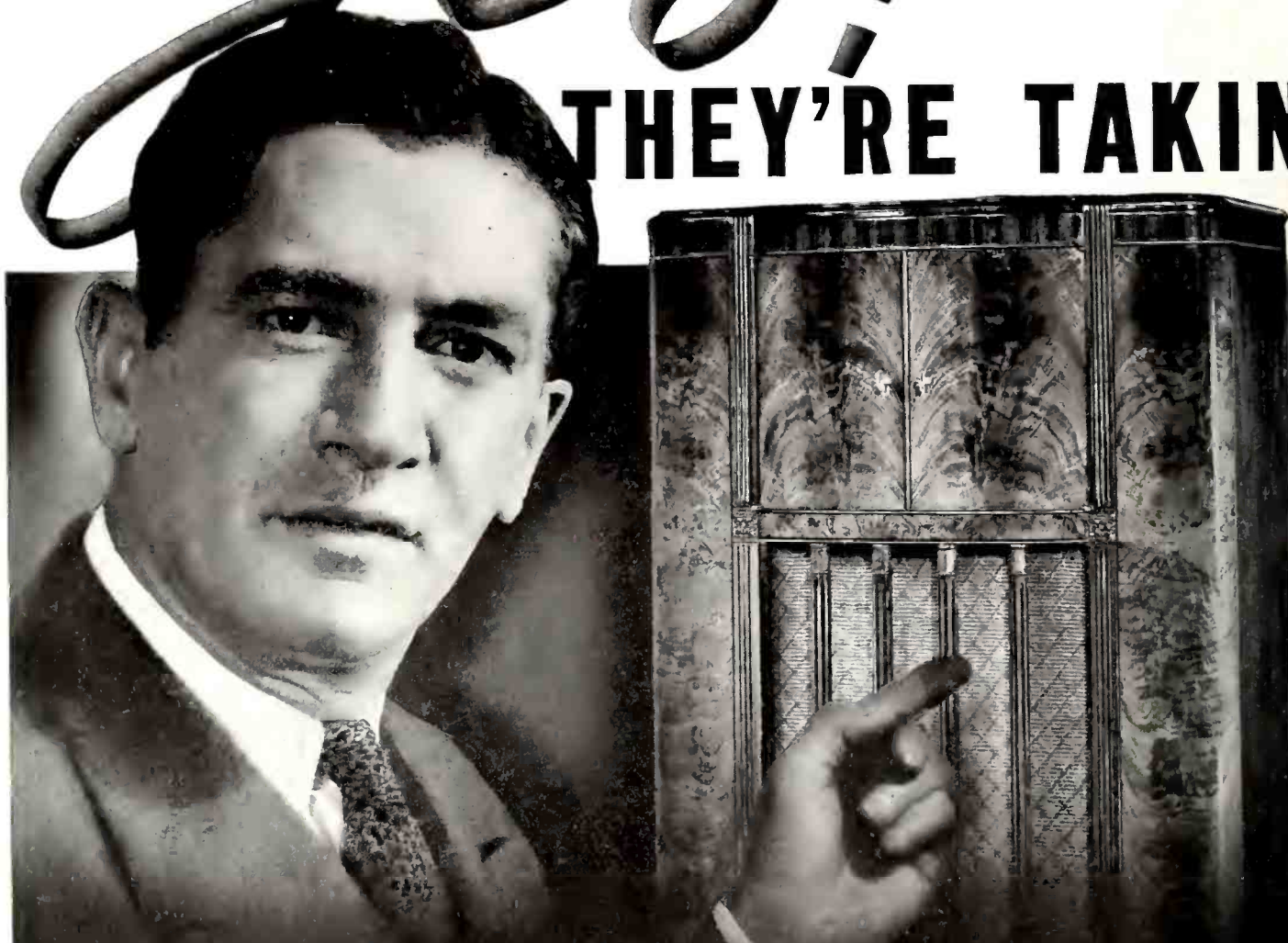
3800 West Cortland Street, Chicago, Ill.

EXPORT OFFICE: 116 BROAD STREET, N. Y.



Yes!

THEY'RE TAKING



**Only Stromberg-Carlson Dealers
Can Provide All These Features:**

FM

**KNOB-CONTROLLED
SHIELDED LOOP**

**FEATHER-LIGHT PICK-UP
10 TIMES RECORD LIFE**

**STURDIER CABINETS
PLASTIC-BOUND PLYWOOD**

LABYRINTH

**BUILT-IN
SHORT WAVE AERIAL**

**LONG LIFE SAPPHIRE-
NO NEEDLES TO CHANGE**

**3-GANG
SELECTIVITY**

**CARPINCHOE
SPEAKER**

**BUILT-IN
FM AERIAL**

**AUTHENTIC
PERIOD
CABINETS**

**PUSH BUTTON TUNING -
BOTH FM and AM**



No. 5-H Table Radio No. 515-M Console No. 585-M Console No. 535-PS Radio-Phonograph No. 535-PG Radio-Phonograph No. 535-PL Radio-Phonograph

THE ONLY COMPLETE FM LINE...BACKED BY OVER A YEAR'S FIELD EXPERIENCE

THE COUNTRY BY STORM!

Signed orders at Distributor Showings are **300%** ahead of last year

Labyrinth

RADIOS AND RADIO-PHONOGRAPHS WITH

FM

BY STROMBERG-CARLSON

Never before has a line of radios "clicked" so overwhelmingly as the new Stromberg-Carlsons for 1941! Distributors' orders are already three times greater than last year—with more arriving daily. And no wonder! For only Stromberg-Carlson offers a complete line of radios and radio-phonographs that include Frequency Modulation . . . backed by over a year's field experience.

But that's not all. In addition, Stromberg-Carlson brings you the exclusive Labyrinth and Carpinchoe Speaker System that captures, as nothing else can, the utmost of *Staticless Radio's* extended musical range.

Get your share of the profitable, new FM business right from the start with the line that's right from the start . . . Stromberg-Carlson. See your distributor today—or write direct to STROMBERG-CARLSON TELEPHONE MFG. CO., ROCHESTER, N. Y.

NO STATIC

NO INTERFERENCE

MORE BASS

MORE TREBLE

There is nothing finer than a

Stromberg-Carlson

RADIO & TELEVISION TODAY, July, 1940, Vol. VI, No. 7 published monthly by Caldwell-Clements, Inc., 480 Lexington Ave., New York, N. Y. M. Clements, President; O. H. Caldwell, Treasurer. Subscription price U. S. and Latin-American countries, \$1 for 2 years; Canada: \$1.25 for 2 years. All others, \$2 for 2 years. Single copy, 15c. Reentered as second class matter April 29, 1939, at the post office at New York, N. Y., under act of March 3, 1879. Originally entered as second class July 24, 1936. Printed in U.S.A. Member of A. B. C. Copyright 1940 by Caldwell-Clements, Inc.

Yes!

THEY'RE TAKING THE COUNTRY BY STORM!



Only Stromberg-Carlson Dealers
Can Provide All These Features:

FM	KNOB-CONTROLLED SHIELDED LOOP	FEATHER-LIGHT PICK-UP 10 TIMES RECORD LIFE	STURDIER CABINETS PLASTIC-BOUND PLYWOOD
LABYRINTH	BUILT-IN SHORT WAVE AERIAL	LONG LIFE SAPPHIRE—NO NEEDLES TO CHANGE	3-GANG SELECTIVITY
CARPINCHOE SPEAKER	BUILT-IN FM AERIAL	AUTHENTIC PERIOD CABINETS	PUSH BUTTON TUNING BOTH FM and AM



THE ONLY COMPLETE FM LINE...BACKED BY OVER A YEAR'S FIELD EXPERIENCE

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All Stromberg-Carlson FM Receivers are licensed under Armstrong Wide-Swing Frequency Modulation patents.

NO STATIC
NO INTERFERENCE
MORE BASS
MORE TREBLE

There is nothing finer than a

Stromberg-Carlson

**A NEW
ALL-TIME
HIGH**

41,923

**NEW 1941 SETS
SHIPPED IN 1 DAY!**

53 CARLOADS... positive proof that Emerson for 1941 has what every dealer needs for big business.

Emerson

40%

**MINIMUM DISCOUNT
ON ALL MODELS**

(except two crowd-stopping price leaders)

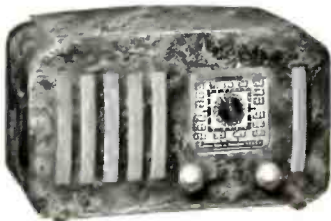
Prices slightly higher in South and West



34 Table Models . . \$9.95 — \$59.95



MODEL 336. Superheterodyne. Super-Loop. Beam Power Output. Dynamic Speaker. Automatic Volume Control \$9.95

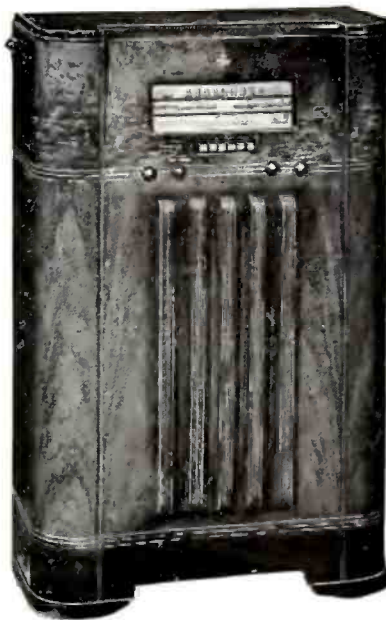


MODEL 375. Beautifully designed. Available in Mexican, Brazilian, Red or Blue Onyx Plastic Cabinets. Super-Loop \$17.95

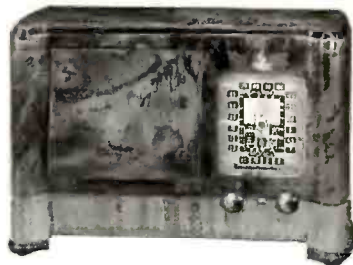


MODEL 343. Super-Loop. Day and Night Foreign-American Short Wave Bands. Tone Control. Beam Power Output. 6½" Dynamic Speaker \$19.95

3 Console Radios . . \$49.95 — \$99.95



MODEL 368. Super-Loop. Foreign-American Short Wave. Automatic Tuning. Beam Power 5-Watts Output. Tone Control. 12" Speaker. Hand-Rubbed Walnut . . \$49.95



Model 352. AMERICAN and FOREIGN. De Luxe Cabinet of Selected Hand-Rubbed Walnut. 6½" Speaker \$32.95

2 High-Fidelity Radios . . \$59.95 — \$199.95



Model 365. HIGH FIDELITY . . . 20 WATTS OUTPUT. 8 tubes plus Electron Ray Tuning. AC Superheterodyne with 8" heavy duty Electrodynamic Speaker, Super-Loop. 3 gang condenser. Tone and Volume Control Indicators on Dial. Super-sensitive Connection for External Antenna. De Luxe Walnut Cabinet. The finest in tone reproduction . . \$59.95



EMERSON QUALITY TUBES. Factory tested. Mechanically and electrically perfect. Designed to improve radio reception from basic standpoints of sensitivity, selectivity and tone.

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

for 1941

WITH *Miracle Tone*

77 GREAT MODELS

The greatest line-up in radio history . . . DEALER advantages never before offered . . . the biggest national and cooperative campaign ever—EMERSON is YOUR best proposition for 1940-41! Get ALL of the facts from your EMERSON distributor now.



Model 372. HIGH FIDELITY Automatic Phonoradio. 20 Watts Output. 8-tube AC—plus Electron Ray Tuning. 12" heavy duty Speaker. Georgian Period Cabinet. \$199.95

NEW 1941 FEATURE!



No Outside Wires—Plug In And Play

14 "3-Way" Portables.. \$19.95—\$39.95
2 Personal Portables .. \$19.95



Model 380— "PERSONAL" PORTABLE . . . Pocket - size—weighs less than 5 pounds. Amazing power and sensitivity. Unique power hook-up and "B" Battery Saver Switch increases life three-fold. 4 Tubes. 4" Speaker. \$19.95 complete.



Model 385. "3-WAY" PORTABLE— plays on own power and AC or DC. 6 Tubes. 6½" Speaker. Smartly styled Aerocloth Cabinet. \$29.95 complete.

3 Console Phonoradios . . \$99.95—\$199.95
2 Record Players . . \$19.95—\$29.95



Model 370. AUTO-MATIC PHONORADIO. 12 Watts Output. Super-Loop. 8 Tubes plus Electron Ray. Tuning Range 13 to 555 meters. Automatic Tuning. Hand-Rubbed Walnut. \$129.95



Model 382. PORTABLE PHONORADIO. Super-Loop. Beam Power Output. Self-Starting Constant Speed Motor. Plays 12" records with lid closed \$29.95

12 Table Phonoradios . . \$24.95—\$59.95
3 Recording Phonoradios \$69.95—\$149.95



Model 384. PHONORADIO RECORDER. 6 Tube AC plus Electron Ray Level Indicator. Beam Power 5 Watts Output. Super-Loop. 6½" Speaker. Plays all size records \$69.95 complete.



Model 383. PHONORADIO. Super-Loop. Beam Power Output. 8" P.M. Speaker. De Luxe Walnut Cabinet. Plays 12" records with lid closed \$49.95

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41,923

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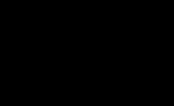
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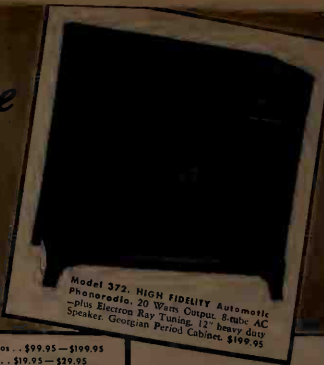
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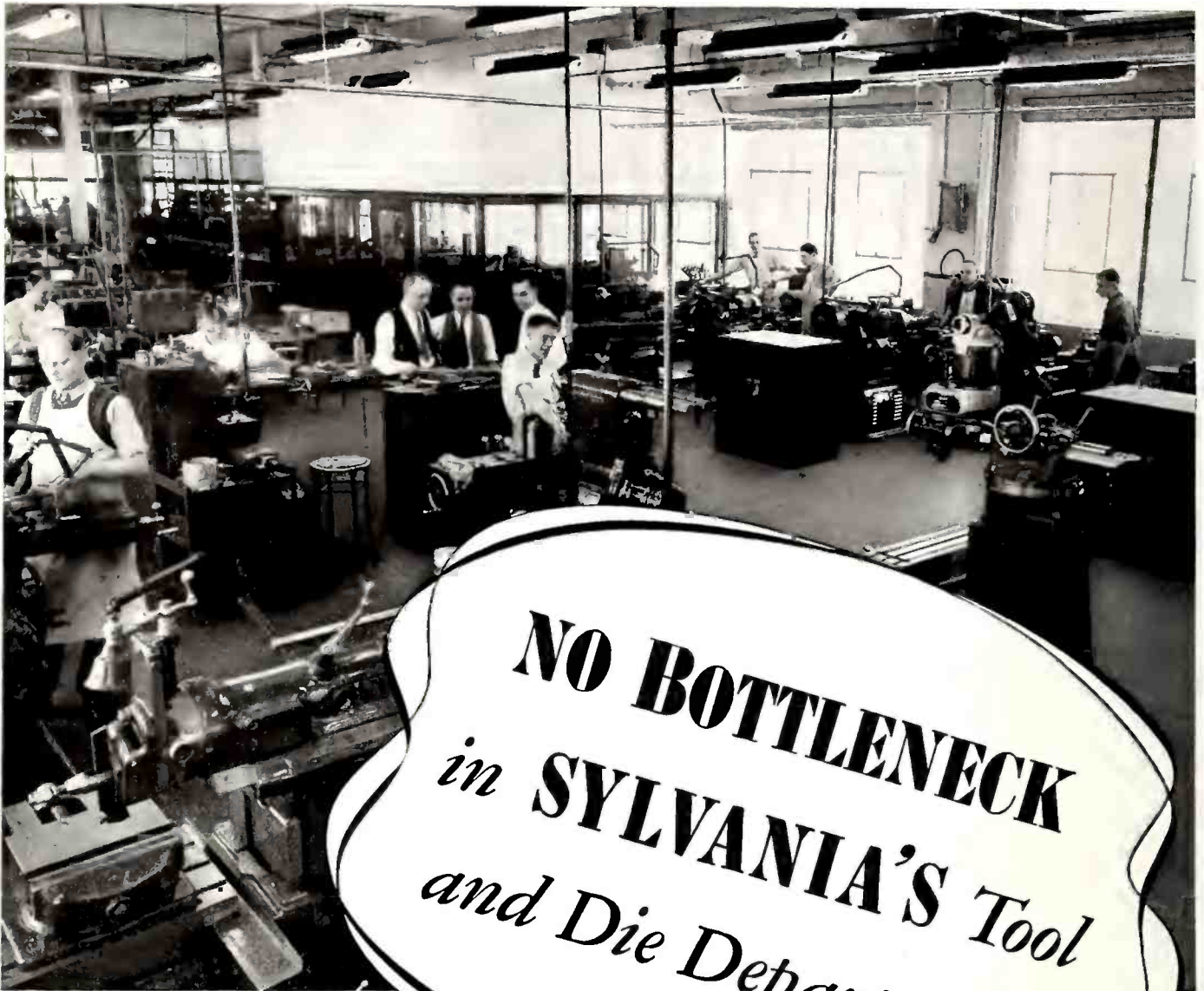


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EMERSON RADIO AND PHONOGRAPH CORPORATION • 111 Eighth Avenue, New York, N. Y.



NO BOTTLENECK
in **SYLVANIA'S Tool**
and Die Department

We make our own precision tools—to make Sylvania Radio Tubes the finest in the world

FOR SHEER PRECISION, work in the Sylvania Tool and Die Department rivals fine watch-making. Thousands of hours of highly skilled craftsmanship go into converting bars of brass and steel, worth relatively a few dollars, into screws, jigs, wheels and tools, some of which, used in the production of certain individual types, are valued at \$20,000!

The Sylvania Tool and Die Department sets

the pace for quality—machining, forming and buffing the tools and dies that guide the busy fingers of workmen on the production floor. Such careful control over every operation, machine and tool is but one of the many ways Sylvania guards and maintains quality . . . *and makes satisfied customers for you!*

HYGRADE SYLVANIA CORPORATION
EMPORIUM, PENNSYLVANIA

S Y L V A N I A

SET-TESTED



RADIO TUBES

ALSO MAKERS OF HYGRADE LAMP BULBS AND

MIRALUME FLUORESCENT LIGHT FIXTURES

Frequency Modulation



EXTENDED RANGE—HIGH FIDELITY

THERE is now available a complete family of special Jensen products for Frequency Modulation and Television receivers—as well as for monitoring and studio work. ¶ Illustrated below is the beautiful new Walnut "CA" type *Bass Reflex* cabinet—available in two sizes. One houses the new 12-inch PM extended range speaker. The other utilizes the new dual-unit 15-inch PM speaker complete with filter network. ¶ Below is also illustrated the "M" type *Bass Reflex* reproducer finished in brown lacquer—available with either the 8", 12" or 15" dual-unit extended range speaker. They are all extremely modestly priced. The three speakers are, of course, obtainable without the enclosures. The 15-inch dual-unit in Permanent Magnet design complete with filter network is only \$46.50 LIST. The 8" and 12" speakers show an extended high frequency response up to 10,000 cycles. The 15-inch dual-unit model is extended to 14,000 cps. ¶ Jensen Radio Mfg. Co., 6601 S. Laramie, Chicago.

Jensen
Bass Reflex
REPRODUCERS



For your Big-set — Big-volume
— Big-profit business —

The Finest Consoles in RCA Victor History!



RCA VICTOR PRESIDENTIAL MODEL 110K

Amazing new "Overseas Dial" with 31-meter spread band . . . 10 RCA Victor Preferred Type Tubes . . . Stabilized Electric Tuning (6 stations) . . . American and Foreign Reception—3 bands . . . Radio-Frequency Amplification . . . Built-in Magic Loop Antenna—Separate Built-in Antenna for Short Waves . . . Parallel Push-Pull Audio System—12" Electro-Dynamic Speaker.

Push these quality consoles—

Watch 'em pull people in!



RCA VICTOR MODEL 19K

9 RCA Victor Preferred Type Tubes . . . Stabilized Electric Tuning (6 stations) . . . American and Foreign Reception—3 bands . . . Built-in Magic Loop Antenna—Separate Built-in Antenna for Short Waves . . . Radio-Frequency Amplification . . . Push-Pull Audio System. 12" Electro-Dynamic Speaker.

Both instruments designed for use with Victrola, Television or Frequency Modulation Attachments!

If your customers go for beauty plus value—you've got a great year ahead! For in these brilliant new 1941 RCA Victor console radios, you've got the fastest-selling profit-getters that ever gladdened a dealer's heart!

We spent thousands of hours to make them *planned super-values!* RCA Victor research men and engineers incorporated in them brilliant new features for finer performance and richer tone. RCA Victor craftsmen created and discarded scores of designs before selecting the superb cabinet that set new standards of beauty.

The results are the finest "sales naturals" you've ever offered the public. Get behind them and push—and get in business for your wealth!

P.S. Remember, these are but *two* of the profit-pullers in the great 1941 RCA Victor line! Better check into the "Little

Nipper" sales picture, too—it's the brightest spot in years!

For finer radio performance
RCA Victor Preferred Type Tubes

RCA Victor

RCA MANUFACTURING COMPANY, INC., CAMDEN, NEW JERSEY
A SERVICE OF THE RADIO CORPORATION OF AMERICA

\$600.00
TEST INSTRUMENTS
USE ONE TUBE...
A RAYTHEON



Among the world's most scientific, highly developed precision instruments are the TAG Celectray Pyrometers for indicating, recording and controlling temperatures.

So accurate and sensitive in operation are these instruments that some of them sell for as much as \$600. In comparison with this price, the cost of the single tube used is trivial. Yet this one tube is vital to the accurate performance of the instrument. It must be as soundly engineered and as dependable in its function as the instrument itself. It must be rugged enough to stand up under 24-hour service, day in and day out. With these factors essential, it is not surprising that Celectray engineers should specify RAYTHEONS.

It is another example where nothing but the best will do. It is a RAYTHEON because RAYTHEONS are scientifically designed and constructed by engineers who specialize on tubes alone . . . engineers who are constantly

looking ahead, anticipating, developing! When a tube need occurs, new or old, there's always a RAYTHEON ready for it.

That is why thousands of servicemen who are real money makers depend on RAYTHEONS for all their tube requirements. They have found that the big service contracts are landed by men who use only the best of materials . . . and RAYTHEONS *cost no more!*

Your RAYTHEON Distributor has an unusual tube deal for you. See him without delay.



MAKES THEM ALL

NEWTON, MASS. • NEW YORK • CHICAGO • SAN FRANCISCO

ATLANTA

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

JULY, 1940

GENE KRUPA • COUNT BASIE • GENE AUTRY
 DICK JURGENS

Cash in

on the greatest array of talent
 on any **35¢ RECORD**

OKEH is the new name for Vocalion Records. Columbia Recording Corporation announces the return of one of the grand old names of the record industry, when with Release No. 155 the name "Vocalion" is changed to "Okeh."

For a time, releases of many Okeh artists will be found on both Okeh and Vocalion labels. Okeh catalogue numbers will be the same as Vocalion. All the greatest artists until now on Vocalion, plus many new ones, will be on the new Okeh Records.

Instead of Vocalion
 ... just say **OKEH**



• FRANKIE MASTERS

• TOMMY TUCKER

GINNY SIMMS

B CALLOWAY

• TINY HILL

JACK LEONARD

HENRY RUSSELL

JOHN KIRBY

HERBECK

• CAB

RAY

AL

AL DONAHUE

HORACE HENDERSON

AND MANY OTHERS •

COLUMBIA RECORDS
*cordially invites you
 to visit*

Suite 533-4-5-6,
 Stevens Hotel, Chicago
 Music Trades Show

COLUMBIA RECORDING CORPORATION

A SUBSIDIARY OF COLUMBIA BROADCASTING SYSTEM, INC. • BRIDGEPORT • NEW YORK • HOLLYWOOD

RADIO *and Television* TODAY

THE NETWORKS—BACKBONE OF AMERICAN RADIO

The broadcasting networks are the very backbone of American radio.

It has been the splendid programs and features put on by the "chains" which more than anything else have made American radio outstanding, as compared with radio anywhere on the face of the globe.

It has been the network programs, above anything else, which have built up the 50,000,000 "listening posts" now possessed in the United States, when all its home radios, extra radios, automobile radios, and portables are added together.

The networks, it is true, have developed into a dominant position in American broadcasting. But they have given a splendid account of their stewardship. Their program standards have continued unrelentingly high. Upon themselves they have imposed the single requirement of giving the American public **the best to be had**, whether in music, drama, education, or news service.



With such a brilliant record of service marking the 11 to 14 years of network broadcasting, it seems unfortunate that government criticism should now be directed at these public benefactors. Especially regrettable is such an attack coming at this time when the networks are performing with the maximum of usefulness and distinction, of all their long and valuable career before the American public—a time, too, when they can render their greatest patriotic service to the nation.

Let those who would amend the present system propose some other plan which will bring us Toscanini, N. Y. Philharmonic, great dramatic stars, world notables, and costly European bulletins, so far obtained only under network operation.



The listening public, the radio industry, and every radio distributor, dealer and serviceman all owe a tremendous debt to the networks.

The owners of fifty million radios, the thousands of men who sold them and the thousands of technicians who keep these sets in operating condition, will resent any government action which weakens the usefulness of the "chains."

Listeners and radio men alike will oppose any steps which tend to lower the present high standard of network service.

The networks' battle is the battle also of every radio man who has shared in radio's astounding growth.



EDITOR, Orestes H. Caldwell;
PUBLISHER, M. Clements;
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St., Chicago, Ill.; CALD-
WELL-CLEMENTS, INC., 480
Lexington Ave., NEW YORK,
N. Y. Telephone Plaza 3-1340.
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Audit Bureau Circulations.
Vol. 6, No. 7, July, 1940.



"Miss Chicago" herewith pins some recognition on Sayre Ramsdell of Philco, at the firm's convention at the Edgewater Beach Hotel in Chicago.

Small Portables Catch Public Fancy

The small 4-lb. "personal radio" introduced by RCA-Victor into the NY market as July opened, has aroused wide buying enthusiasm among New Yorkers and at some stores queues formed waiting for the handy little battery receivers, no larger than a folding camera. A single flashlight cell, purchasable anywhere, operates the four tubes for 4 or 5 hours. Nine or ten of these cells are replaced before the 67-volt B battery needs renewing. Chicago is to be the next city supplied. Meanwhile small portables by Motorola, Sonora, Philco and Emerson, of comparable size, are similarly in demand by radio-news fans who want to keep in hourly touch with the broadcasters.

At the Chicago radio show, Arthur Haugh, former president RMA, (now residing in Glendale, Cal.) exhibited a 26-ounce pocket radio, the size of a prayer book, but capable of considerable pick-up and volume. This little set, called the "Brownie," is to be manufactured at Buffalo, N. Y., but will be licensed to other producers, it was announced.

"Radio Magic" Mondays 7:15 p.m.

"Radio Magic" the weekly NBC Blue Network program conducted by Editor Caldwell of RADIO TODAY, to inform the radio audience on latest uses of radio, radio tubes, and radio devices, has been assigned to new time at 7:15 p.m. Monday evenings, EDST (6:15 p.m. CDST) on NBC Blue-net stations.

Coming topics are "Counting Radio Listeners," July 22; "Sound in the Theatre" July 29; "Guarding Antennas Against Lightning" Aug. 5; "Round-the-World Echoes," Aug. 12; "Radio Tube's Big Brothers," Aug. 19; "Radio on the Farm," Aug. 26.

Television Marks Time

Expected FCC approval for commercial operation of television has failed to materialize. But meanwhile the Commission has granted a large number of experimental licenses, designed to scatter television experimentation over the entire country, and to keep any considerable number of licenses out of the hands of any one interest, it is explained at Washington.

Televising of the Republican convention—in the Philadelphia area by Philco, and in the New York area by NBC via the telephone company's co-axial cable—showed what the new art can accomplish. Except for this

RADIO AS IT IS TODAY

Portables and Compacts Lead Summer Sales

While the national business index continues to climb, under the influence of rearmament, retail radio sales still continue at summer levels. Some dealers find this year's July volume exceeding by a few per cent that of last year,—sales being mostly in portables and small sets.

With intense public interest in European news and in the Presidential election, and with jobs and money

more plentiful than for years past, a busy Fall season is looked for, with radio starting to move rapidly on the heels of Labor Day,—this year Sept. 2, earlier than usual.

Radio a Feature of Musical Meet

Over 3,000 guests are expected to show up for the annual convention of the National Association of Music Merchants at the Hotel Stevens in Chicago, July 30th to Aug. 1st. Practically two dozen radio manufacturers will be there, for the big room show will occupy Stevens floors from the second to the seventh.

Open meetings, prominent speakers, and a lively entertainment schedule are planned for the big event. Col. Frank Knox is slated to appear. Guests will include musical and radio men from all parts of the U.S., Canada, and Hawaii, according to news from W. A. Mennie, executive secretary of N.A.M.M., 45 W. 45th St., New York City.

Radio exhibitors include Ansley, Brunswick, Columbia Recording, Decca Records, Farnsworth, Howard, Magnavox, Motorola, Philco, Presto, RCA Victor, Sonora, Stewart Warner, Stromberg Carlson, Wilcox Gay, Zenith and others.

A Grand Award that Emerson makes annually for best sales record is presented by President Ben Abrams, center, to Max and Ben Bloom of Superior Auto Accessories Co., Pittsburgh. One event at big Emerson jobber convention in NY.





RMA has named James S. Knowlson as its president. He's the Stewart Warner president and board chairman.

temporary high-spot, television promotion has slowed up on the Eastern seaboard, although New York programs are continuing. Shut-down of transmitter during August may be necessary to cut over equipment to the new No. 1 channel assigned by FCC.

Industry and trade comment is that while television will not be a factor in 1940, it may start up vigorously with the coming of January, 1941, after Christmas radio volume is out of the way.

The story of "all-purpose" radios is told in Kansas City by Lloyd Spencer, Stromberg-Carlson general sales manager, left, at convention there. Jenkins Music Co. officials are, left to right, F. A. Briggs, Paul Jenkins, Fred Jenkins, K. Gillespie.



FM Gets Go-ahead; Carries Major NY Programs

The FCC has given full go-ahead to frequency-modulation stations in addition to reassigning the first television channel to FM use. Complete rules have been drawn up for FM operation, and new application forms are in preparation, which station applicants will be required to fill out anew. It is expected that several hundred applications will shortly be made for FM operation, and that the total may reach 1000 FM broadcasters. New receiving sets will be adapted to cover the full FM band, and early FM models will be rebuilt for the newly-awarded facilities, which go into official use Jan. 1.

ON THE AIR

Meanwhile in the New York area, all principal network programs are now on FM during many hours each week. CBS programs have long been transmitted by Major Armstrong's Alpine, N. J. 40,000-watt station. A 1-kw NBC transmitter on the Empire State tower is now sending out alternate Red and Blue network programs on week-days. WHN and WQXR have FM outlets, and WOR is completing a new 1-kw FM transmitter on a Manhattan skyscraper. Fortunately these facilities got into operation during the static season, when FM can demonstrate one of its chief merits, freedom from interference.



Up-and-coming plans for Arvin radio sales are announced by Noblitt-Sparks vice - president G. W. "Tommy" Thompson. See p. 52.



Executives here are Farnsworth president E. A. Nicholas, right, and C. B. Warren, Warren-Norge, NYC. At Farnsworth sales conference in Chicago.

New Sales Peaks

"There will be a greater interest in radio than for a long time and people will have the money to buy better receivers," declares Lee McCanne, Stromberg Carlson official, in describing the trade's prospects as a result of world conditions, the government's preparedness program and the political programs just ahead.

A note of strong optimism in Stromberg's own sales comes in the report that unit sales for the first third of 1940 were 33 per cent over the same months of '39. Dollar volume was almost double for that period; this spectacular gain was attributed mainly to Stromberg's introduction in January of the "all-purpose" radios with the FM band.

"As many as a thousand FM stations may be broadcasting commercially within a year... we look forward to even more sales acceleration for dealers," said the Stromberg executive.



SELL THE THRILL OF "EUROPE DIRECT!"

The war in Europe has had a deep effect on American radio—sales, programs, and designs.

Last August when the war clouds hung low over Europe, servicemen experienced a sudden *demand* for the rehabilitation of sets out of order or that had long been considered "good enough."

And then in September, when the war broke, and the public desire for war news was met by American broadcasting in an unparalleled manner,

the demand for new radios suddenly mushroomed.

More than 10,000,000 radios were sold last year, and one manufacturer says that half of these were sold in October, November and December alone.

Thus the war has contributed a public interest, resulting in a demand which accounted for more than half the sales, of the greatest number of radios ever sold in a year.

True, the demand has been more

for compacts than for consoles, but profits *can be made* selling compacts too.

Although war interest remains a potent factor, most of the spontaneous *demand* has now been satisfied.

Those who expect this demand to continue are due for a real disappointment.

Interest is there—demand has now about run its course.

Now as merchants, we must capitalize on the interest, and *create* new

demands by our own efforts.

Looking at the radio picture for the rest of 1940, with the war, changing public viewpoints, and our own political situation as considered background, the view is an inspiring one.

Last year, as the result of public demand, every community bought a certain number of radio sets.

If dealers had added to their "order-taking" the support of *enthusiastic* sales promotion, *honest and consistent* selling effort, and *sincere* service follow-up of their own old customers, sales would have been *much* greater.

Given this kind of dealer operation, we can increase sales 20 per cent this year!

And the share of the chains and mail-order houses can be less than in 1939, too.

Many dealers have lost their "drive."

They let fear—engendered by the war's uncertainty—possess them.

Many, too, have become so price-conscious that they are now price fearful—do not even try to do a selling job on the better sets.

But look at the facts, and see these fears of fancy vanish.

TALK GOOD BUSINESS

First, many are fearful because of the uncertainty of the war's outcome.

But nothing is more uncertain than life itself.

Second, many say "business is not good."

MEET THE NEW CONDITIONS—

Tell customers about all-wave sets and commercial amateur radios.

Show them how to tune in Europe direct.

Demonstrate recorders and their new uses.

Recommend a "war-news compact" for each member of the family, and for Father's office.

Show old customers the new portables and camera-size models.

Two-thirds of your customers have no car radios—equip their autos, too.

But there is no more certain way to *make* business bad, than by acting, and talking, "bad business."

There is no more devitalizing human emotion than fear—and we have nothing to fear *more* than fear itself.

We have now greater forces to arouse and hold public interest in radio than ever before.

The war—the Presidential election campaigns—

Sell the public a ringside seat at "history in the making."

And that means sell them—by window displays, by advertising, by demonstration, by personal solicitation and direct contact selling.

We have more things to sell than

ever before, and dynamic selling can move greater quantities than ever before.

Short-wave sets—to get the day's news of history-making events, direct from the war capitals of the world.

Short-wave reception has advanced greatly in the last few years, and this superiority of the new sets can be demonstrated and sold.

Compacts—for bedroom, dining room, den, game room, guest room, kitchen, maid's rom, porch and office can be sold to keep everyone in touch with the stirring events of the day.

SELL—SELL—SELL!

But don't wait for the "spirit to move" your customers. Go out and energetically create the urge to buy—sell the *need*, as well as the product.

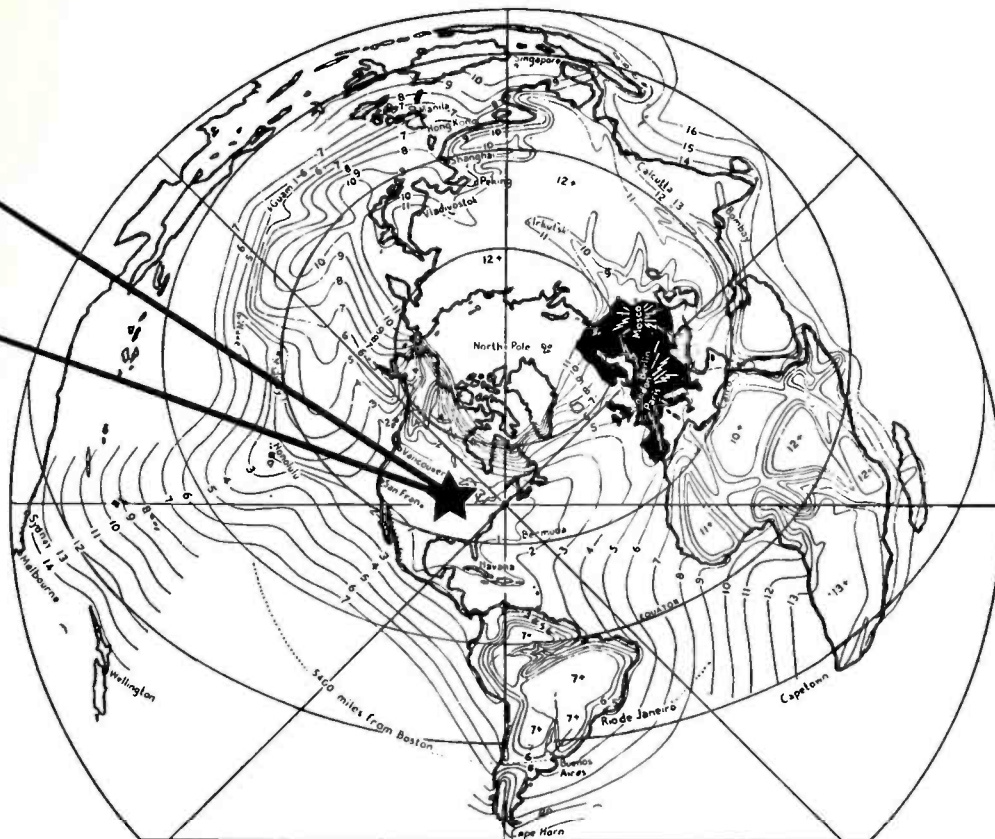
Dealers who are *doing this*, report the best sales results they have ever had.

Battery portables—for the traveler, picnicker, and vacationist, for those who relax at beach or mountain cabin for the canoeist, the sailor, the fisherman, and the sports enthusiast.

Battery portables, the size of a camera, are now available, and soon the "pocket-set" will be here—to open new sales opportunities to those who will carry the story of their need, and usefulness, to a public whose interest is now at peak levels.

Recorders, to make a permanent record of family voices, home music or the far-reaching events of the day.

Priceless would be one's own record-



Flashing between continents with the speed of light, radio dramatically links the U. S. family with first-hand reports of war. This directional map shows travel time from U. S., in days.



Neatly geared to the times is radio stock of this prominent NY dealer. Proprietor Cervantes links "War News" to world map and to "commercial" short-wave sets.

ing of great speeches of war policy.

And, too, analyses of the day's news by some of our commentators, eyewitness descriptions of history-making events, are worthy of recording and preservation.

Of course, there are always the "sound snapshots" of children's voices and of home music-makers.

These are the services, the *results*, which *when really sold*, can carry a surprising number of the new models into the homes of waiting customers.

Tell them,—sell them,—they are new,—different, better, than the old and well-known story of radio during the last five years.

And there are consoles and combinations, and records, for those who appreciate the good music which is on the air, or prefer to relax to the "music they want, when they want it." It takes more selling effort to move the big jobs—but the longer profit is worth it.

DOING THE JOB

This year, the performance, tone quality, and dollar value of the new models have been stepped up as never before.

Thirty million radio sets are in need of replacement, and millions of Americans are *willing* and *able* to buy these new radios.

Such is the picture for the radio dealer this year.

Some dealers will sit back as they always do, wait for a tide of customers to swamp them, and cry "business is bad" when it just doesn't happen to them.

But thousands of smart dealers are capitalizing and cashing in, on their

selling opportunities which were never better.

These dealers are dramatizing radio again, tying in with the national advertising of the manufacturers, arranging attention-compelling window displays, telling everyone they can about values, the merits, the need for, these new sets.

They are using windows, billboards, newspapers, programs, direct mail, phone, personal contacts to tell their story to everyone, old customers and new alike.

They are dusting off their old merchandising tricks of years ago to focus *more attention on new radio—and their store*. They are breathing life, action, sales, into their radio business by replacing lethargy and fear, with enthusiasm, opportunism, and honest selling effort.

This can be the greatest year in radio, *but only if we unite* to make it so.

Conditions are "set" for it. Consumer interest, the product, the price, the market is here. Final results will depend on how well the industry, manufacturers and dealers alike, shake off fear, inaction and order-taking habits.

No great tide of public buying of radio will engulf us, but an honest consistent, dynamic merchandising job may surprise us all, as it has those who have tried it recently.

HOW TO PICK UP "SHORT-WAVE"

Few people out of the millions who now own radios with short-wave bands, know how much of interest can be tapped by listening in to foreign stations direct. Few make use of these short-wave bands, or know

that the secret of successful tuning in the short-wave spectrum is to *turn the tuning dial very slowly* while the volume control is turned high. The listener must then listen intently, and if he comes upon a program, tune squarely in its center for best reception. Tuning here is a matter of the most careful fingering, as the width of a hair may tune in or out an important foreign broadcast. Dealers and servicemen should show set-owners how to tune in short-wave stations, so that they may enjoy greater satisfaction and use from their all-wave radios.

Following are the European news broadcasts now heard best in the United States during regular evening hours. The time given is Eastern Daylight Saving Time, such as is used in most cities and states of the East, and is easily corrected for other sections of the country.

SCHEDULES OF FOREIGN STATIONS

London (19 and 31 meter bands) 9:15 a.m. 12 noon. 4:50, 5:45, 7:30, 8:30, 9 and 10:30 p.m.

Berlin (19, 25 and 31 meter bands) 7:15 and 9:15 p.m. 1 a.m.

Rome (25 meters) 7:17 and 11 p.m. 1 a.m.

Moscow (15 meters) 8 and 9 p.m.

Hungary (32 meters) 8 p.m.

Radio men and listeners who want a complete schedule of listening hours of all stations all over the world, will find an invaluable tabulation in Haynes' Radio Log, copies of which are distributed by several manufacturers and by a number of dealers, distributors, and dealers' organizations. Besides listing all U.S. broadcast stations by frequencies, this Haynes' Log tabulates the frequencies and wavelengths of all short-wave stations heard in the U.S. and cites the hours of the day or night when they are picked up to best advantage. Copies of the Log form a valuable guide for the short-wave listener, and provide a useful souvenir for the radio dealer to present to selected prospects and customers. Single copies are 15 cents each (lower prices in quantities) from Mr. Haynes at 161 W. Harrison St., Chicago.

EDUCATION ON SW BANDS

Listeners with short-wave sets who experience bad static on regular broadcast bands, or who like to listen to programs of more serious or informational value than local broadcasts, will enjoy tuning in on Station WRUL, Boston, which operates on 6.04, 11.79 and 15.13 megacycles. This station conducted by the World Wide Broadcasting Foundation, of which Walter S. Lemmon, radio pioneer, is founder, provides a program of broad educational value fostering international goodwill, and presents many leading specialists in science, literature, drama and music. The Foundation's headquarters are at the University Club, Boston, Mass.

"WHEREVER THEY ARE!"



Radio to the greenwood goes—Philco's new strap-around portable.

Below, movie clown Hugh Herbert and Motorola bike radio innovation.

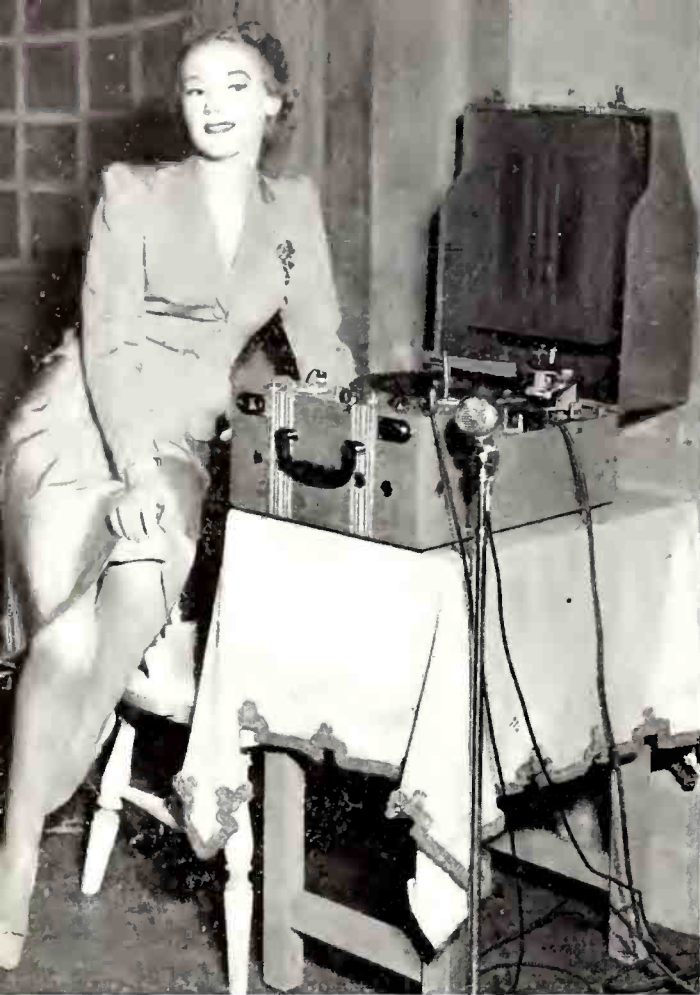


Dick Todd, Dinah Shore and all of Fifth Ave. like RCA's "Personal".

Below, NYC's Mayor LaGuardia with special Pilot set designed by J. R. Poppele, chief engineer of WOR. Automatically switched on when drawer is pulled out.



Right, it looks tailored too—Emerson's Model 379 properly shouldered.



Theatrical miss made happy by a Presto recorder Model K. It's Mary Westcott of "Too Many Girls."



The youngster's growth is here being recorded audibly via the new Philco tilt-front recorder. One good reason why families buy 'em.



Just the thing to sell the apartmenteers—a Wilcox-Gay phono-recorder for \$89.95.

One of the most-discussed spots in any of the new lines is the place where home-recorders stand.

There they are, dripping with technical features and cabinet luxury. Alert dealers recognize their appeal. The next thing is to get them across to the public.

Many retailers have already started on this job, and if you ask them what they've learned, you may listen for a solid hour. Merchandising in this field is brisk, novel and full of surprises. But we're working with stuff that is not sold for chicken feed, and in a market that is gloriously unsaturated. The new home discmakers are chock full of demonstration possibilities and they are traffic builders.

Some of the actual sales methods being used in this branch of the radio business are reported herewith. It's a story written while dealers talk.

FOR A STARTER

At Kerew, Inc., Hackensack, N. J., where the sales effort on home recorders is well under way, the experts believe that for the average size dealer, the most practical way to start promotion of these instruments is to stage demonstrations at local clubs, in theater lobbies, and of course in the store. It has been proved at this store that wherever demonstrations have been

made, the recorders have turned out to be a star attraction. This dealer says that the minute people are allowed to hear their own voices played back, they are instantly interested.

Kerew declares that in the case of recorders, all promotion and advertising should minimize the matter of price, and accent the abilities of the instruments. This idea is based partly on the fact that the surprising "talents" of the new models are not generally known, and partly on the fact that these units have such a many-sided appeal that many folks are automatically interested in spite of the cost.

REPEATED PROFITS

This merchant says that the recorder business is very similar to the camera business. People want the events of their lives recorded on records as well as on film—the subjects for recording are just as varied and fully as personal. Everybody takes pride in his ability to seize on interesting subjects—to collect and exhibit the things that interest them—to get tangible evidence of personal skill and resourcefulness.

Just as the camera fans use roll after roll of film for these reasons, the recorder fans will flock to the radio stores for blanks, needles and various

PROFIT IN RECORDERS

MAKERS OF RECORDERS AND BLANKS

R--RECORDERS

AIR KING PRODUCTS CO., INC., 1523 63 St., Brooklyn, N. Y.	R
ALLIED RECORDING PRODUCTS CO., 21-09 43 Ave., L. I. City, N. Y.	R
ANDREA RADIO CORP., 48-20 48th Ave., Woodside, L. I., N. Y.	R
AUDIO DEVICES, INC., 1600 Broadway, New York City	R
AUTOMATIC RADIO CO., 122 Brookline Ave., Boston	R
BELL SOUND SYSTEMS, 1183 Essex Ave., Columbus, Ohio	R
BELMONT RADIO CORP., 1257 Fullerton Ave., Chicago	R
DAVID BOGEN CO., INC., 663 Broadway, New York	R
CONTINENTAL RADIO CORP., 3800 Cortland St., Chicago	R
CROSLY CORP., 1329 Arlington St., Cincinnati, Ohio	R
DEWALD RADIO MFG. CORP., 436 Lafayette St., New York	R
DUPLEX RECORDING DEVICES CO., 514 W. 36 St., New York	R
ELECTRICAL INDUSTRIES MFG. CO., Red Bank, N. J.	R
ELECTROVOX CO., 424 Madison Ave., New York	R
EMELOID MFG. CO., 287 Laurel Ave., Arlington, N. J.	R
EMERSON RADIO & PHONOGRAPH CORP., 111 8th Ave., New York	R
FADA RADIO & ELEC. CO., 30-20 Thomson Ave., L. I. City, N. Y.	R
FAIRCHILD AVIATION CORP., 88-06 Van Wyck Blvd., Jamaica, L. I.	R
FARNSWORTH TELEV. & RADIO CORP., Ft. Wayne, Ind.	R
FEDERAL RECORDER CO., INC., 50 W. 57 St., New York	R
GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn.	R
GENERAL INDUSTRIES CO., 3537 Taylor St., Elyria, Ohio	R
GRAY MFG. CO., 16 Arbor St., Hartford, Conn.	R
HOME RECORDING CO., 11 W. 17 St., New York	R
HOMOCORD MFG. CO., INC., 457 W. 45 St., New York	R
HOWARD RADIO CO., 1735 Belmont Ave., Chicago	R
JOHN MECK INDUSTRIES, 1313 W. Randolph St., Chicago	R

B--RECORDING BLANKS

MELLOPHONE CORP., 65 Atlantic Ave., Rochester, N. Y.	R
MILES REPRODUCER CO., INC., 812 Broadway, New York	B
MIRROR RECORD CORP., 58 W. 25 St., New York	B
MOTOROLA-GALVIN MFG. CORP., 4545 Augusta Blvd., Chicago	B
MUSICRAFT RECORDS, INC., 10 W. 47 St., New York	B
PEERLESS ALBUM CO., 38 W. 21 St., New York	B
PHILCO RADIO & TELEV. CORP., Philadelphia, Pa.	R
PRESTO RECORDING CORP., 242 W. 55 St., New York	R
RADIOTONE, INC., 7356 Melrose Ave., Hollywood, Calif.	R
RADIO WIRE TELEVISION, INC., 100 Sixth Ave., New York	R
RANGERTONE, INC., 201 Verona Ave., Newark, N. J.	B
RCA MFG. CO., Front & Cooper Sts., Camden, N. J.	R
THE RECORDISC CORP., 395 Broadway, New York	B
RECOTON CORP., 178 Prince St., New York	B
REK-O-KUT CORP., 173 Lafayette St., New York	R
J. P. SEEBURG CORP., 1510 N. Dayton St., Chicago	R
SELECTAR MFG. CORP., 30 W. 15 St., New York	R
SENTINEL RADIO CORP., 2020 Ridge Ave., Evanston, Ill.	R
SOUND APPARATUS CO., 150 W. 46 St., New York	R
SOUND DEVICES CO., 160 E. 116 St., New York	B
SPEAK-O-PHONE RECORDING CO., 23 W. 60 St., New York	B
STANGART PRODS. CO., 4111 Ft. Hamilton Pkwy., Brooklyn	B
STEWART WARNER CORP., 1826 Diversey Pkwy., Chicago	R
UNIVERSAL MICROPHONE CO., Inglewood, Calif.	B
THE WEBSTER CO., 5622 Bloomingdale Ave., Chicago	R
WESTERN SOUND & ELEC., 311 W. Kilbourn Ave., Milwaukee	R
WILCOX-GAY CORP., Charlotte, Mich.	B

accessories. This attitude has been valuable to the Kerew organization, because it shows that the recorder possibilities are unlimited, and it indicates that anything worth taking a picture of, is worth recording.

An important part of the sales effort here is proper education of the customer in the use of recorders. Instruction booklets from the manufacturer are emphasized, and all steps are taken to make the operation of the instruments efficient and simple.

Incidentally, this retailer says that manufacturers should add headphone jacks to the recorders. He says that the sales job would be easier if monitoring could be made more efficient, and suggests that headphones be sold separately.

A good-natured dealer in southern Illinois has sailed into one particular branch of the home recording business, with results that are as amusing as they are profitable. He goes heavy on the humorous part of it, and mainly helps his customers to have more fun with recorders.

He sends out free records, as an advertising stunt, which have good jokes on them. He encourages his customers to use the comic scripts which are furnished by manufacturers, and to play them for their friends. He gets permission to make records at parties while the guests don't know it. He collects the remarks of favorite radio comedians off the air. He encourages the home movie fans to make comic
(Continued on page 33)



Above, a Crosley cuts some gay music.

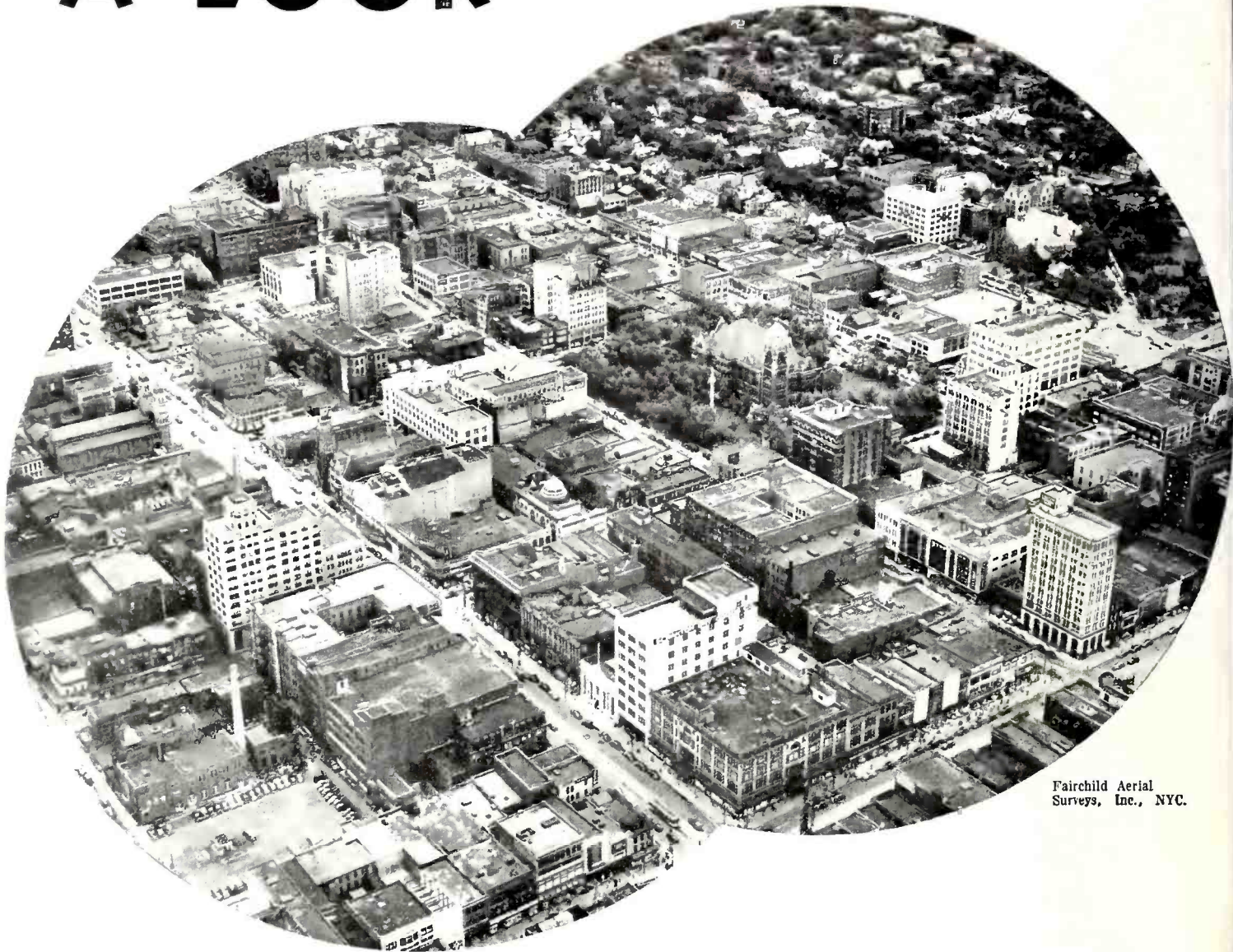
Below, the nifty Motorola Lowboy 93F1.

Combined talents of record player and recorder are featured in GE's new JM-7.

Portable recorder 384 that's packaged handsomely by Emerson.



A LOOK



Fairchild Aerial
Surveys, Inc., NYC.

AT SERVICING

Now that the fine points of the 1940-41 radio merchandise have burst into full view, the radio sales experts will have a query or two. Like these:

"What is the most important trend today in the servicing of these products?"

"What kind of a radio store will get the biggest volume in sales and service?"

"What characteristics distinguish the 'key' outlet from the thousands of stores listed in the well-padded radio directories?"

The only way to answer these questions with final authority is to select a number of trade areas and personally investigate the radio activity there. It amounts to interviewing every last radio man in the territory, but it's worth it. To establish the identity of the successful radio deal-

Third of a series of market studies shows how a group of leading outlets win volume honors in a Pennsylvania town.

ers in these areas, and to note the details of their methods, is an enormously interesting project, and a project which serves as a kind of a pacesetter. Naturally, the genuinely successful retailer is the one who is courted by manufacturers, copied by neighbors, and generally applauded by the industry.

RADIO'S SALES FACTS

Some of the conclusions which are made as a result of investigations of 1940 radio markets could hardly be arrived at by a general study of modern business trends. Chief among these is the trend toward the combination

of sales and service, and the spectacular way in which many servicemen are doing a sales job.

Certainly radio would follow other trades which have long since known that sales effort and service work complement each other in the most obvious and comfortable way. This is a fundamental fact which occurs wherever you find the flow of merchandise.

However, when you get down to a sharp, exacting study of the relationship that exists between sales and service today in the radio business, you will likely come up with some arresting facts. Indeed you'll have enough data to completely nullify the

opinion of some die-hard trade observers that there is today a division line of some importance between these two branches of the trade. This opinion, which belongs to an outmoded conception of radio distribution becomes more and more significant as the new facts pile up. The fresh figures are not needed to prove that sales and service are successfully married, but additional data may be necessary to emphasize how more and more of the key dealers are running their own service departments, and how greater numbers of the top servicemen are making radio sales.

DETAILS ARE READY

None of this is intended to discredit the small outlet, or to play down the few straight service specialists which are going great guns. Radio houses of the smallest proportions have a place in any distribution system which tries to be complete, and certainly the most modest of the operations have good opportunities to grow.

By now, RADIO TODAY has a battery of investigators deep into new survey work on "who gets the volume in set sales and service?" The special radio census conducted by the magazine started in Dayton, Ohio, where the main conclusions were that 79 per cent of the Dayton service volume was going to dealer-service outlets, and 87 per cent of total set sales was being garnered by 16 large outlets.

The conclusion that the radio volume was actually concentrated in a handful of key dealers who have their own service department, was further

supported in the next town where the RADIO TODAY surveyors went. In Springfield, Mass., it was found that 88 per cent of the service is done by dealer-service outlets, and that 90 per cent of the selling is done by 11 key establishments.

CONCENTRATED VOLUME

The newest of the city-wide surveys was made in Scranton, Pa., a town of about 145,000 population which is described as the "Anthracite Capital of the World." When the figure-getters started in the Pennsylvania city, the official radio store list included 65 names. Thoroughgoing interviews were made of all the radio traffic in the town, and it was found that the bulk of the business was being done by exactly 14 key dealers.

In this group of stores which lead the radio selling in Scranton, it was revealed that 86 per cent have their own service departments. Service volume and service facilities are so greatly concentrated in this group that if you consider all dealers, the per cent having their own service departments falls to 56.

RANKING OUTLETS

"Who gets the volume" was further answered by figures which show that 77 per cent of the service was being done by dealer-service outlets, and that 84 per cent of set sales were being made by 14 key stores.

Investigators noticed that wherever service was being done at a flourishing rate, that radio sets were being stocked

and sold. Complete stocks of appliances were also being shown and merchandised. And just as sure as you went through the door of one of the top stores, one of the signs would say "Sales and Service." The fact is, the by-all-odds leading dealer in the town has an ad in the phone book which features a "12-Point Radio Repair Special." And one of the top service outfits makes a point out of the word "Sales" in its advertising on the same page.

NEW FRONTIERS

In Scranton, the representatives of RADIO TODAY were met with considerable talk about new home recorders, frequency modulation and television. It was found that mechanically-minded radio men were being asked about these new developments when they were called into homes to fix radio sets. Thus the servicemen were whetting the sales appetite for new radio merchandise, and becoming sales advisors. They were in an ideal position to suggest a personal radio, a combination, a portable, a home recorder, or an auto radio.

Also, salesmen on the floor, in their talk to customers who were curious about these new developments, would get around to the matter of installation and declare that "our serviceman will relieve all your worries about the new instrument."

THINGS AHEAD

These incidents appeared to be significant, because they foretell how the coming radio products will, from their very nature, weld an ever stronger link between sales and service.

These findings also point to an era of opportunity for the serviceman. His position in the trade will always be of real importance because of his constant contacts with the homes where radio sets need to be repaired. If he takes his proper cue from the most successful outlets which alertly tie their sales and service more closely together, he has a chance to develop the dimensions of his business to highly profitable proportions.

In fact, the specific findings of the market studies declare loudly that any radio man has excellent prospects for profit, if he will keep an eye on the tightening bond between radio sales and service, and if he will apply this trend to the new merchandise now coming his way.

N SCRANTON

The original list of retail sales and/or service outlets in this city included 65 names from directories, manufacturers' and jobbers' lists, etc.

A total of 12 of these were found to be inactive, out of business, listed under other names, radio discontinued, etc.

Actually the number of active radio retail outlets of all types was 53, of which 41 were dealers.

The total number of dealers with their own service departments, and servicemen stocking sets finally added up to 23.

The count on the number of servicemen employed by dealers and dealer-service stores was 30, while the total of independent servicemen operating full or part time was 11. Two parts jobbers, were doing extensive service work.

86% of key dealers have own service departments	14% do not
77% of total service is done by dealer-service outlets	23% by independent servicemen
84% of set sales are made by 14 key outlets	16% by 27 others

A LOOK



Fairchild Aerial
Scranton, Pa., N.Y.C.

AT SERVICING IN SCRANTON

Now that the fine points of the 1940-41 radio merchandise have burst into full view, the radio sales experts will have a query or two. Like these: "What is the most important trend today in the servicing of these products?"

"What kind of a radio store will get the highest volume in sales and service?"

"What characteristics distinguish the 'key' outlet from the thousands of stores listed in the well-padded radio directories?"

The only way to answer these questions with final authority is to select a number of trade areas and personally investigate the radio activity there. It amounts to interviewing every last radio man in the territory, but it's worth it. To establish the identity of the successful radio deal-

Third of a series of market studies shows how a group of leading outlets win volume honors in a Pennsylvania town

ers in these areas, and to note the details of their methods, is an enormously interesting project, and a project which serves as a kind of a peacemaker. Naturally, the genuinely successful retailer is the one who is courted by manufacturers, copied by neighbors, and generally applauded by the industry.

RADIO'S SALES FACTS

Some of the conclusions which are made as a result of investigations of 1940 radio markets could hardly be arrived at by a general study of modern business trends. Obief among these is the trend toward the combination

of sales and service, and the spectacular way in which many servicemen are doing a sales job.

Certainly radio would follow other trades which have long since known that sales effort and service work complement each other in the most obvious and comfortable way. This is a fundamental fact which occurs whenever you find the flow of merchandise.

However, when you get down to a sharp, exacting study of the relationship that exists between sales and service today in the radio business, you will likely come up with some arresting facts. Indeed you'll have enough data to completely nullify the

opinion of some die-hard trade observers that there is today a division of some importance between these two branches of the trade. This opinion, which belongs to an out-moded conception of radio distribution becomes more and more significant as the new facts pile up. The fact is that sales and service are successfully married, but additional data may be necessary to emphasize how more and more of the key dealers are running their own service departments, and how greater numbers of the top servicemen are making radio sales.

DETAILS ARE READY

None of this is intended to discredit the small outlet, or to play down the few straight retailers which are going great guns. Radio houses of the smallest proportions have a place in any distribution system which tries to be complete, and certainly the most modest of the operations have good opportunities to grow.

By now, RADIO TODAY has a battery of investigators deep into new survey work on "who gets the volume in set sales and service?" The special radio census conducted by the magazine started in Dayton, Ohio, where the main conclusions were that 79 per cent of the Dayton service volume was going to dealer-service outlets, and 87 per cent of total set sales was being garnered by 16 large outlets.

The conclusion that the radio volume was actually concentrated in a handful of key dealers who have their own service department, was further-

supported in the next town where the Radio Today surveys went. In Springfield, Mass., it was found that 88 per cent of the service is done by dealer-service outlets, and that 90 per cent of the selling is done by 11 key establishments.

CONCENTRATED VOLUME

The newest of the city-wide surveys was made in Scranton, Pa., a town of about 145,000 population which is described as the "Athletic Capital of the World." When the figure-getters started in the Pennsylvania city, the official radio store list included 65 names. Thoroughgoing interviews were made of all the radio traffic in the town, and it was found that the bulk of the business was being done by exactly 14 key dealers.

In this group of stores which lead the radio selling in Scranton, it was revealed that 86 per cent have their own service departments. Service volume and service facilities are so greatly concentrated in this group that if you consider all dealers, the per cent having their own service departments falls to 56.

RANKING OUTLETS

"Who gets the volume?" was further answered by figures which show that 77 per cent of the service was being done by dealer-service outlets, and that 84 per cent of set sales were being made by 14 key stores.

Investigators noticed that wherever service was being done at a flourishing rate, that radio sets were being stocked

and sold. Complete stocks of appliances were also being shown and reclassified. And just as sure as you were through the door of one of the top stores, one of the men would say "Sales and Service." The fact is, the five-holds leading dealer in the town has an ad in the phone book which features a "12-Hour Radio Repair Special." And one of the top service outfits makes a point out of the word "Sales" in its advertising on the same page.

NEW FRONTIERS

In Scranton, the representatives of Radio Today were met with considerable ask about new home recorders, frequency modulation and television. It was found that mechanically-minded radio men were being asked about these new developments when they were called into homes to fix radio sets. Thus the servicemen were whetting the sales appetite for new radio merchandise, and becoming sales advisors. They were in an ideal position to suggest a personal radio, a combination, a portable, a home recorder, or an auto radio.

Also, salesmen on the floor, in their talk to customers who were curious about these new developments, would get around to the matter of installation and declare that "our serviceman will relieve all your worries about the new instrument."

THINGS AHEAD

These incidents appeared to be significant, because they foretell how the coming radio products will, from their very nature, weld an ever stronger link between sales and service.

These findings also point to an era of opportunity for the serviceman. His position in the trade will always be of real importance because of his constant contact with the homes where radio sets need to be repaired. If he takes his proper cue from the most successful outlets which alertly tie their sales and service more closely together, he has a chance to develop the dimensions of his business to highly profitable proportions.

In fact, the specific findings of the market set studies declare loudly that any radio man has excellent prospects for profit, if he will keep an eye on the tight-lipped bonding between radio sales and service, and if he will apply this trend to the new merchandise now coming his way.

The original list of retail sales and/or service outlets in this city included 65 names from directories, manufacturers' and jobbers' lists, etc.

A total of 19 of these were found to be inactive, out of business, listed under other names, radio discontinued, etc.

Actually the number of active radio retail outlets of all types was 53, of which 41 were dealers.

The total number of dealers with their own service departments, and servicemen stocking sets finally added up to 23.

The count on the number of servicemen employed by dealers and dealer-service stores was 30, while the total of independent servicemen operating full or part time was 11. Two part jobsmen, were doing extensive service work.

86%	of key dealers have own service departments	14%	do not
77%	of total service is done by dealer-service outlets	23%	by independent servicemen
84%	of set sales are made by 14 key outlets	16%	by 27 others

GREAT SETS

New lines to attract flocks of buyers



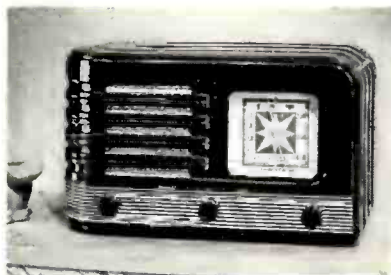
Westinghouse model, WR-388, fits any setting. A 3-band console radio with 12-in. electro-dynamic speaker, priced at \$69.95.

The young lady demonstrates the "roll out" feature of the phonograph compartment in GE's new mahogany console combination, model J-809.



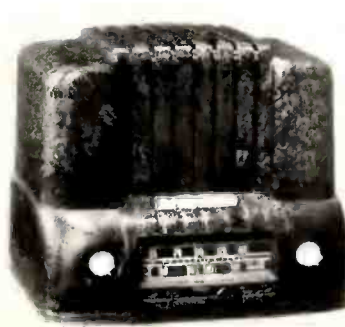
Stewart-Warner 5R7

★ S-W table radio equipped with 5 tubes, superhet circuit, AC-DC operation. Built-in loop antenna, 4 in. electro-dynamic speaker, manual tuning. Walnut cabinet. Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago, Ill.—RADIO TODAY.



Stromberg-Carlson 500-H

★ Rich blue plastic, AC-DC table model with horizontal white stripes. Standard broadcast, built-in loop, A.V.C. and dynamic speaker. Stromberg-Carlson Tel. Mfg. Co., 100 Carlson Rd., Rochester, N. Y.—RADIO TODAY.



DeWald "Organ-Tone"

★ Model 548, 1 of 3 styles, in walnut or ivory plastic. Built-in Looptenna. 5 tubes, large electro-dynamic speaker. 3 styles range in price from \$15.95 to \$21.95. Model shown, \$19.95. DeWald Radio Mfg. Corp., 436 Lafayette St., New York, N. Y.—RADIO TODAY.



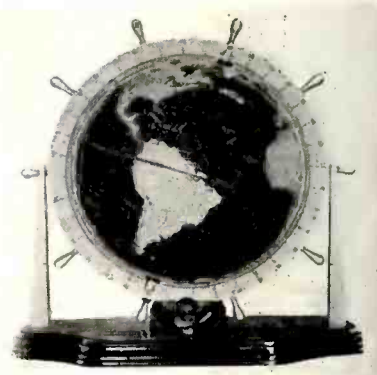
Emerson table radio

★ An 8-tube, AC superheterodyne table model is Emerson's No. 365. Features inclosed super-loop, 8 in. electro dynamic speaker, 3 gang condenser. \$59.95. Emerson Radio & Phono. Corp., 111 Eighth Ave., New York, N. Y.—RADIO TODAY.



Motorola record changer

★ New automatic record changer is available in model 23RC wireless player Rim drive changer plays eight 10" or seven 12" records. Crystal pickup, reject button, simplified construction. Also available in walnut hinged-top cabinet. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.—RADIO TODAY.



Navigator globe-radio

★ A multi-colored globe mounted within brass mariner's wheel on a walnut base, houses a 5-tube superhet radio. Stands 15½ in. high. Spherically baffled dynamic speaker, built-in loop, AC-DC. \$29.95. Mitchell Mfg. Co., 1550 N. Dayton St., Chicago, Ill.—RADIO TODAY.

RADIO TODAY



WAY OUT IN FRONT!

For the Fifth Consecutive Year!

Look to G-E for The Latest in Radio!

General Electric was the *first* to introduce

- ELECTRIC TOUCH TUNING 1937
- BUILT-IN BEAM-A-SCOPE 1938
- DYNAPOWER SPEAKER AND FM RECEIVERS 1939
- DUAL DYNAPOWER SPEAKERS 1940.

And NOW comes the new FREQUENCY MODULATION KEY ON STANDARD RECEIVERS AND AN ADVANCED TYPE OF HOME RECORDING AT LOW COST

Once again—General Electric leads the radio industry in the introduction of new features!

For 1941—General Electric offers two new and sensational features: a *Frequency Modulation Key* and an advanced type of *Home Recording* at low cost.

And once again—General Electric leads the "value" parade with a brilliant new line of G-E Golden Tone Radios!

See these amazing new models. Stop! Listen! Compare! Then you'll agree—*G-E's the Buy for '40!*

INVESTIGATE! Write or phone your G-E Radio Distributor—*today.*

*G-E FREQUENCY MODULATION KEY



FREQUENCY MODULATION
Television
Audio
Phonograph

This Frequency Modulation Key automatically permits the owner of a G-E Radio to enjoy Frequency Modulation Broadcasts through the radio loud-speaker when used in conjunction with the G-E Frequency Modulation Translator—Model JFM-90.

The G-E Frequency Modulation Key has other advantages. It may also be used as a Television Audio or Phonograph Key.

*G-E HOME RECORDING RECORD PLAYER

This new unit operates both as a Recorder and a Record Player. It permits your customers to make their own voice recordings, to record radio programs, and then to play them back over the radio loud-speaker.

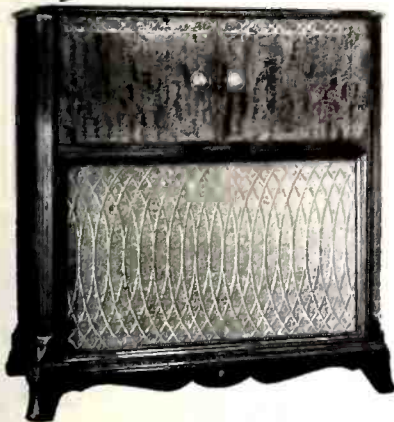
MODEL JM-7 (illustrated) Consists of complete portable recording and play-back equipment. Can be used in conjunction with any Radio equipped with a Phonograph Key or "jack." Fitted in an attractive Hand Luggage Case.



SUPERB STYLING!

BRILLIANT PERFORMANCE!

AMAZING VALUES!



MODEL J-718—A beautifully designed Radio-Phonograph Combination equipped with Automatic Record Changer. Plays 10- and 12-inch Records.



MODEL J-62—Something different! A Cabinet of Rich Mahogany Veneers that follows the lines of an Eighteenth Century Jewel Case. Equipped with Dual Beam-a-Scopes for finer foreign and domestic reception. A similar model (J-620) is available in genuine blond mahogany.

RADIO AND TELEVISION DEPARTMENT
BRIDGEPORT, CONN.



MODEL J-805—A sensational Console finished in Two-toned American Walnut and Stripe Sapeli Wood Veneers. Equipped with the new Frequency Modulation Key—Dual Beam-a-Scopes and a 14-inch Dynapower Speaker.

GENERAL ELECTRIC

SALES APPEAL

Self-selling features put new models in the front line



No longer is it necessary to remove lamp or other decoration with the new Philco tilt-front photo-electric radio phono before using the phono mechanism.



Ansley Dynaphones

★ Two new models, Essex, a console & Chelsea (illus.), automatic armchair combo. with gliding top available in wood, leather or silver mirror. Both have 8 tubes, 12 in. speakers, single record mechanism and crystal pickup (\$129.50) or automatic record changer (\$159.50). Garnet mahogany, 18th Century cabinet. Ansley Radio Corp., 4377 Bronx Blvd., New York, N. Y.—RADIO TODAY.



Farnsworth chairside

★ Farnsworth walnut radio-phonograph, BK-73, has speaker grille at front, record album compartment accessible from both sides. 7 tube, AC superhet radio with Built-in Tenna and 10 in. electro dynamic speaker. Automatically plays fourteen 10 in., or ten 12 in. records. Farnsworth Telev. & Radio Corp., 3700 Pontiac St., Fort Wayne, Ind.—RADIO TODAY.



Mellaphone recorder

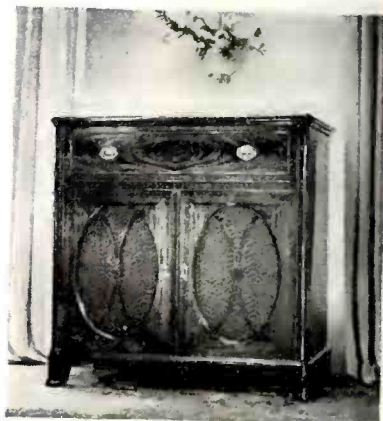
★ Recorder connecting easily to any radio, records and plays 12 in. records. Built-in pre-amplifier. Records from mike, radio or phono records. Separate playback pickup, high-fidelity phono, home broadcaster. Baked brown durable wrinkle finish. Mellaphone Corp., 65 Atlantic Ave., Rochester, N. Y.—RADIO TODAY.

This classic walnut veneer cabinet houses RCA model 19K, 9-tube superhet receiver with a 12 in. electro-dynamic speaker.



Brunswick Regency commode

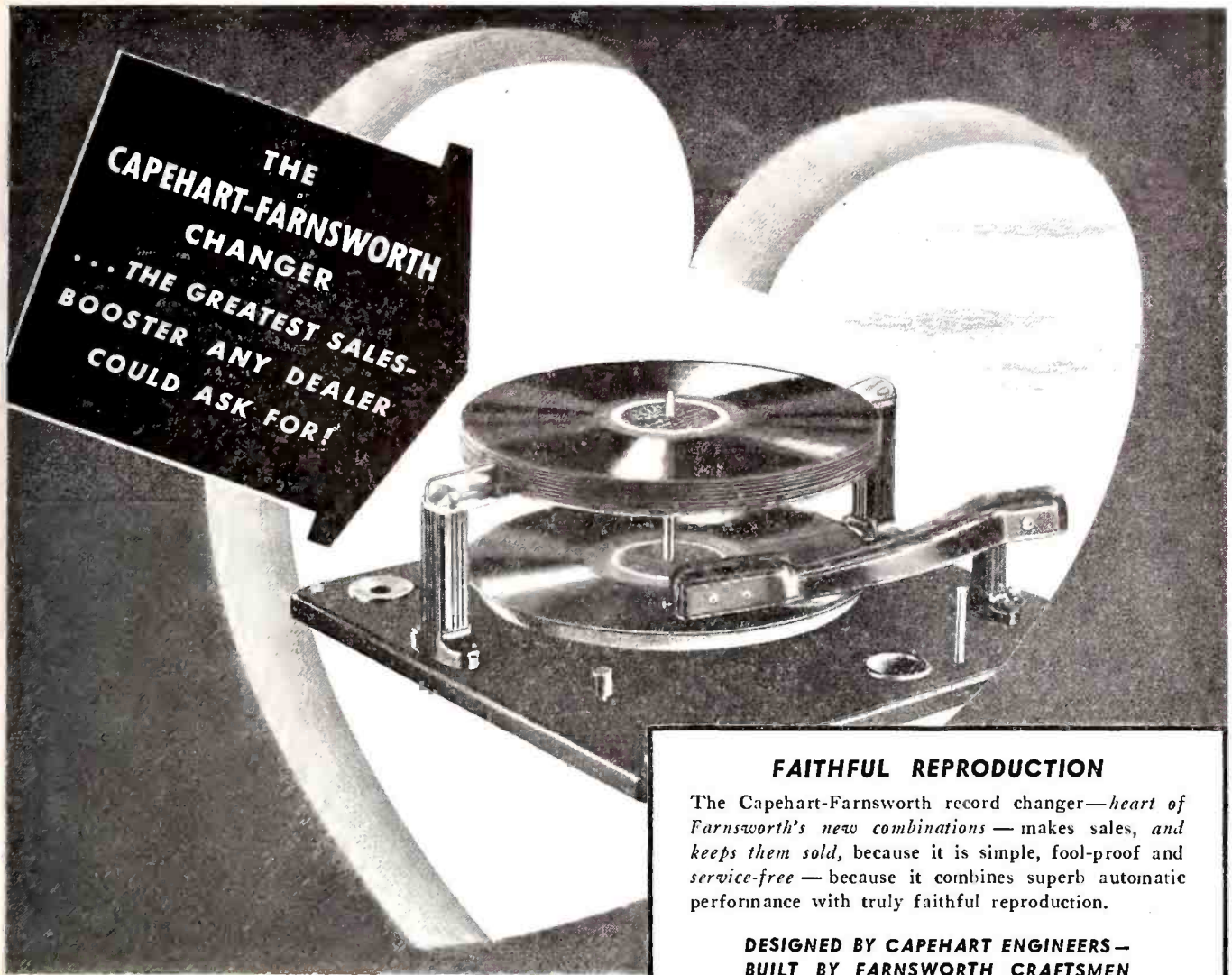
★ "Brighton," No. 276, a radio Panatrope combination has roll-out phonograph feature, built-in album compartment. Plays 10 & 12 in. records. 11 tubes, oversize speaker, 2 built-in aeriels. Mersman Bros. Corp., 206 Lexington Ave., New York, N. Y.—RADIO TODAY.



Stromberg-Carlson combo.

★ Stromberg-Carlson, 535-PL automatic radio-phonograph with Labyrinth and special FM Carpinchoe speaker. Wide-swing FM, standard broadcast and short wave reception. Plays and shifts 10 and 12 in. records. Built-in knob-controlled shielded loop. Hepplewhite, mahogany or walnut cabinet. Stromberg-Carlson Tel. Mfg. Co., 100 Carlson Rd., Rochester, N. Y.—RADIO TODAY.





**THE
CAPEHART-FARNSWORTH
CHANGER**
... THE GREATEST SALES-
BOOSTER ANY DEALER
COULD ASK FOR!

FAITHFUL REPRODUCTION

The Capehart-Farnsworth record changer—*heart of Farnsworth's new combinations*—makes sales, and keeps them sold, because it is simple, fool-proof and service-free—because it combines superb automatic performance with truly faithful reproduction.

**DESIGNED BY CAPEHART ENGINEERS—
BUILT BY FARNSWORTH CRAFTSMEN**

SIMPLIFIED CONTROL—Plays up to 14 records automatically. Handles any standard-size record. Easy to load and unload. Only one adjusting lever. No knives to chip or jam records—even warped records. Its simple, fool-proof mechanism and free-floating tone arm end service problems, and assure much longer record life.

Farnsworth

THE LINE THAT HAS EVERYTHING!

1 A BROAD, COMPLETE LINE—Combinations. Consoles. Table models. Record players. Home recorders. No Farnsworth dealer need ever lose a sale—there's a Farnsworth model for every conceivable desire and purse, and each cabinet style stands out as a *distinctive* model—individual in both design and features.

2 COMPETITIVE PRICES—Every model is priced so competitively that sales need never be lost because of price. Farnsworth discounts are based on the knowledge that dealers must make a *good profit*—including trade-in sales.

3 HOT SELLING FEATURES—Cabinets styled to the taste of today. COLORTONE, "Ampli-filter," "Tenna-Rotor" . . .

"Hi-Spot" Dial . . . "Tip-Top Tuning" . . . and many other features give Farnsworth dealers a competitive edge that closes more sales.

4 BACKED BY POWERFUL ADVERTISING—A continuous schedule of sales-creating advertisements in *The Saturday Evening Post*, *Life* and *Collier's*. Plus a **NATIONAL SPOT-RADIO BROADCAST CAMPAIGN**. Plus a powerful program of merchandising helps.

YES SIR . . . Farnsworth gives you **EVERYTHING** to go to town. Don't delay. See your Farnsworth distributor **NOW** and get the money-making facts. Farnsworth Television & Radio Corporation, Fort Wayne, Indiana.

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

PHILCO for 1941 *Greatest Achievement*

New Kind of Overseas Wave-Band

Gets Europe 500% Stronger and Clearer . . . 5 Times Easier to Tune!

Philco makes radio history while world history is made! Brand new inventions give you the finest tone and performance . . . the greatest radio values Philco has ever produced. More tubes for the money; bigger, finer speakers; the biggest variety of exquisite cabinet designs in Philco history.

In these stirring times, Philco presents a New Kind of Overseas Wave-Band that brings in Europe 5 times stronger and clearer, makes it 5 times easier to tune than ever before. It's brand new . . . sensational . . . nothing like it has ever been known in radio. A Philco engineering triumph! *Only Philco has it!*

Brand New Radio Circuit. Dreamed of but never before achieved by radio science. Made possible by the amazing new XXL Converter Tube invented by Philco. Reduces noise by 5 to 1, reduces "cross talk" by 20 to 1 and increases sensitivity by more than 2 to 1. *Only Philco has it!*

Built-In American and Overseas

Aerial System. As much as six times larger in area; four times thicker wire. Gives far greater sensitivity on short-wave and standard reception. No aerial, no ground needed . . . just plug in anywhere and play. *Only Philco has it!*

New Conveniences in Tuning and

Operation . . . A single Push-Button for "ON" and "OFF" . . . Illuminated Shifting Arrow for Band Indication . . . Built to Receive Television Sound and FM, *the Wireless Way.* *Only Philco has it!*

Yes, everyone who has seen it agrees—it's the hottest line in Philco history, the chief source of 1941 profits for the radio dealers of America. 11 straight years of leadership have passed . . . 1941 is the twelfth!



Philco All Year 'Round for Profits All

Philco brings you the new developments in its History!

The first basic improvement in
sound reproduction since
Edison invented the phonograph!

**Records Reproduced
on a BEAM OF LIGHT!**

For the first time in history, thanks to the genius of Philco engineers, the *photo-electric cell* is used in phonograph reproduction. The sensational Philco Photo-Electric Radio-Phonograph reproduces records on a *beam of light* . . . through the reflections of a floating jewel on a photo-electric cell . . . bringing amazing new benefits to the radio buying public!

No Needles to Change! The floating jewel lasts 8 to 10 years giving you 30,000 to 40,000 record playings!

Records Last 10 Times Longer. Play valuable records as much as 700 times each without fear that they'll lose their beauty!

Glorious New Purity of Tone . . . full record beauty. Needle talk and surface noise no longer mar tone purity.

... Only Philco Has It!

In addition, Philco presents many other new and exclusive improvements that the radio-phonograph buyer will *demand* in 1941.

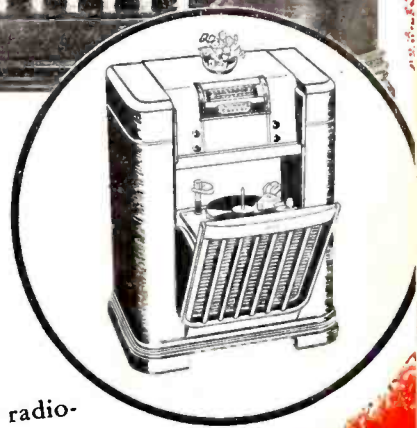
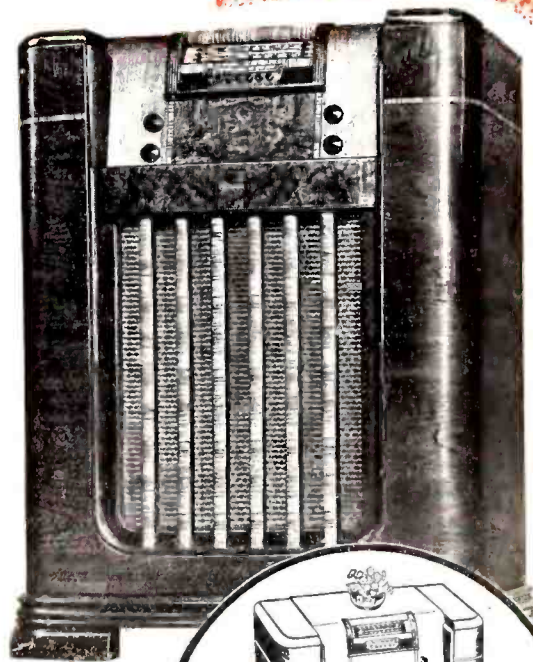
New Tilt-Front Cabinet

Brings new beauty and conveniences. No lid, no need to remove ornaments to reach the phonograph, no dark awkward compartment. New principle tilts phonograph forward, in full view and easy to use. *Only Philco has it!*

New Home Recording

Not an assembled, amateur device but a *professional* Home Recording Unit developed by Philco engineers for home use. Offered as optional equipment at reasonable extra cost. A new, easier, more profitable way to sell home recording.

Cash In with Philco . . . the most profitable All Year 'Round Franchise in the Appliance Field!



'ear 'Round

HOME RADIO • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO TUBES
PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

PHILCO for 1941 brings you the Greatest Achievements in Its History!

New Kind of Overseas Wave-Band Gets Europe 500% Stronger and Clearer . . . 5 Times Easier to Tune!

Philco makes radio history while world history is made! Brand new inventions give you the finest tone and performance . . . the greatest radio values for the money; bigger, finer speakers; the biggest variety of exquisite cabinet designs in Philco history.

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The first basic improvement in sound reproduction since Edison invented the phonograph!

Records Reproduced on a BEAM OF LIGHT!

For the first time in history, thanks to the genius of Philco engineers, the photo-electric cell is used in phonograph reproduction. The sensational Philco Photo-Electric Radio-Phonograph reproduces records on a beam of light . . . through the reflections of a floating jewel on a photo-electric cell . . . bringing amazing new benefits to the radio buying public!

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Cash In with Philco . . . the most profitable All Year 'Round Franchise in the Appliance Field!



Philco All Year 'Round for Profits All Year 'Round

HOME RADIO PARTS • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO TUBE REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

ROUSING RECORDS

Dealers and manufacturers join in a timely promotion of patriotic titles and stirring music

"Six months ago we stocked them to sell on occasion; now they are a necessity."

These are the words of one record dealer who doesn't mind expressing himself on the subject of "patriotic discs." He was talking about such new recordings as "Ballad for Americans" and "God Bless America," as well as several new records of old favorite red-white-and-blue songs.

This group of records has taken on a special sales importance ever since the war lords of Europe turned the attention of this country toward the matter of national security. The record manufacturers are ready with a series of new ones—stimulating music that is all set to flow over the counters of U.S. record retailers.

They make a colorful display and they are being popularized by the radio. They are accompanied by appropriate sales promotion, and they are tunes which will not lose their value in a short time.

TO THE FRONT

The record dealer quoted above is Jack Winer, Dynamic Radio Co., 1895 Broadway, New York City, who also says that patriotic records alone new account for about 20 per cent of his disc sales. Mr. Winer had the new recordings displayed in his window for 10 days or so, even before the July 4th holiday interest became a factor.

This merchant points out that there's a lot of genuinely good music in the new records about America, in addition to the fact that the appeal of the records is very timely. Mr. Winer and his record sales force have found it a good practice to suggest these records to regular customers who come in to buy other discs.

It appears that people of foreign extraction are excellent customers for these discs. In days like these, they are specially anxious to identify themselves as loyal Americans, and most of them are record fans anyway.

FOR MUSICAL PROGRAMS

At the Commodore Music Shop, 144 E. 42nd St., New York City, it has been found that most of the programs of recorded music being presented publicly or privately these days open and close with patriotic music. Commodore has supplied many records for yacht clubs and race tracks.

Salesmen at this shop declare that the American theme in recorded mu-

Wax Worth Watching

TOMMY DORSEY and his orchestra playing Hear My Song Violetta with VR by Frank Sinatra—Victor 26616.

TEDDY GRACE with orchestra singing Let There Be Love—Decca 3202.

KAY KYSER and his orchestra playing Her Name Was Rosita with VC by Gluny Simms and Harry Babbitt—Columbia 35483.

THE FOUR MARSHALLS singing The Old Grey Goose Is Dead, vocal quartet with orchestra—Vocalion 5546.

KATE SMITH singing Make-Believe Island (Imagination on the other side)—Columbia 35486.

TOMMY REYNOLDS and his orchestra playing On a Simmery Summery Day with VC by Sally Richards—Vocalion 5569.

TOMMY DORSEY and his orchestra playing Hong Kong Blues with VR by "Skeets" Herfurt—Victor 26636.

LANG THOMPSON and his orchestra playing Just the Kind of a Girl, with vocal by Peggy Nolan, Thompson and ensemble—Varsity 8329.

THE FOUR KING SISTERS singing Java Jive, vocation with orchestra—Bluebird B10746.

GLENN GARR and his orchestra playing Down by the Ohio with VC by Three Stylists—Decca 3236.

ANN TELL with Lani McIntire and his Hawaiians singing Evening in the Islands—Decca 3229.

VAN ALEXANDER and his orchestra playing Six Lessons from Madame La Zonga with vocal by Phyllis Kenny—Decca 8312.

sic is equally popular with serious-minded listeners and popular music fans. The highly acceptable way in which broadcasters have presented these songs over the air has helped a great deal, and has given many people the idea that these stirring tunes now belong in their collection of records.

An example of the new patriotic numbers is the enormously popular "Ballad for Americans" recorded by Paul Robeson for Victor. This disc

is the most-requested one among all the numbers available to the thousands of visitors to Victor's exhibit at the New York World's Fair.

GOOD TITLES

Victor has also released a new album, "Cavalcade of U.S. Presidents"—four records engraved with representative speeches of every president since 1901.

The "Ballad" has just been recorded also by the United States Record Corp. under the Varsity label, with Charles Welch and The American Singers. It's included in a set of three records packed in a colorful envelope, which includes "On Freedom's Shore" and "We Sing America."

GOING GREAT GUNS

Another very popular platter is Kate Smith's record of "God Bless America" on Victor. The song has been well received by millions of radio listeners, and the record is well established among good sellers.

Decca has a long list of national and patriotic records by Frank Luther, Zora Layman and The Century Quartet; also discs by The American Legion Band of Hollywood. In the group also are rousing ones by Dick Powell, as well as the "God Bless America" by Bing Crosby.

These are just a few of the assortment offered by Victor, Columbia, United States, and Decca—each of these manufacturers is energetically filling the new need for national music.

(See page 48 for more news on records)



The Signals Flashed...
FULL SPEED AHEAD!

Our industry met last month for the serious business of viewing the 1941 models. And those are tense moments for the manufacturer whose craftsmen have labored long and hard to adapt their product to the public trend.

You dealers, distributors and salesmen reflect this trend. **YOU'RE THE DOCTOR!** Your attitude towards the new lines signals the sales-power for the months ahead.

That Wilcox-Gay got the "nod" would be putting it mildly. It was a more enthusiastic gesture than a nod and it sent our representatives back to the factory with a stack of signed orders unprecedented in our history.

THANKS . . . for your unquestioned confidence in our RECORDIO. Every effort at Wilcox-Gay is bent to the task of meeting this challenge. The watchword at Wilcox-Gay is . . . **FULL SPEED AHEAD!**

10 NEW RECORDIO MODELS FOR 1941
NEW ADVANCED FEATURES . . . BEAUTIFUL CABINETS

WILCOX-GAY CORPORATION
MANUFACTURERS OF RECORDIO

CHARLOTTE • MICHIGAN

SENSATIONAL!
WILCOX-GAY'S
Dual Speed Recordings

SOUND AT

Summer and Fall seasons always find a widespread activity in state and county fairs. The large crowds, and inherent high noise-level of prize live stock call for one or more good sound systems.

Several possibilities for the sound man offer themselves. If the fair is a regularly recurring feature, and permanent buildings are used, a good sound installation should be sold to the managing committee. With full sound facilities, large indoor arenas are more attractive to other users during other times in the year. Where less permanent housing is used, a complete rental system should be maintained and the idea that it is "tailored for the job" should be impressed on fair officials.

FAIR OPPORTUNITIES

Along with the main PA system, be it an installation or rental job, the smart sound dealer will also have several 5 to 10-watt complete systems that may be used by special exhibitors, small concessions, etc. The more compact and convenient these systems are, the faster they will rent.

A large scale sound installation that is typical of the problems found in fair jobs is that of the Coliseum of the Indiana State Fair, Indianapolis. While this installation is much larger and somewhat more complex than the average job, it has many features that might be well used in less elaborate systems.

This Indiana Live Stock Pavilion was planned and built with a very definite purpose in view; and that was to give the people of the state the finest building of its kind possible, both architecturally and functionally. The subject of equipment was considered to be of paramount importance, so, when the problem of sound reinforcement arose, the State Board of Agriculture conferred with recognized authorities on the subject who prepared specifications which assured the Board that the sound system would be the finest obtainable.

Eugene Van Sickle, President of the Van Sickle Radio Supply Company, Indianapolis distributor for Operadio Mfg. Co., St. Charles, Ill., saw the importance of such an installation and immediately started work with the company engineers.

MANY ACTIVITIES

A building of this type always presents a difficult problem to the sound engineer and in this case the ordinary problems usually encountered were complicated by the size of the building—seating capacity, 9,000—and the classes of activities to be covered ranging from live-stock judging, rodeos, hockey games and other types of indoor activities, up to and including symphony concerts. But, when the in-

stallation was completed and final sound-pressure measurements conducted throughout the building, it was found, to the gratification of the owners, that the results obtained actually exceeded the extremely rigid specifications.

A special rack and panel assembly was designed to meet the very special requirements and was installed in the control room adjacent to the arena. The equipment in this assembly is mounted on four standard sized racks and consists of eight pre-amplifiers, patch panels, six-position mixer with master volume control, public-address driver amplifier, broadcast line amplifier, monitor amplifier, seven 50-watt power amplifiers, cross-over filter panels, power supply panels and necessary associated control panels. Driver, line and monitor amplifiers incorporate compression, expansion and dialog equalization. All of the above equipment is designed to conform with the highest broadcast standards.

THREE-WAY REMOTE

Low impedance Western Electric cardioid-type microphones of the latest design were furnished; and thirty-two microphone input positions were provided throughout the arena, any six of which may be selected and mixed simultaneously. A remote control console was also furnished which permits control and mixing from any one of

four pre-determined locations in the audience section. A portable automatic phonograph unit may be used in the control room or at any microphone position to provide transcribed programs.

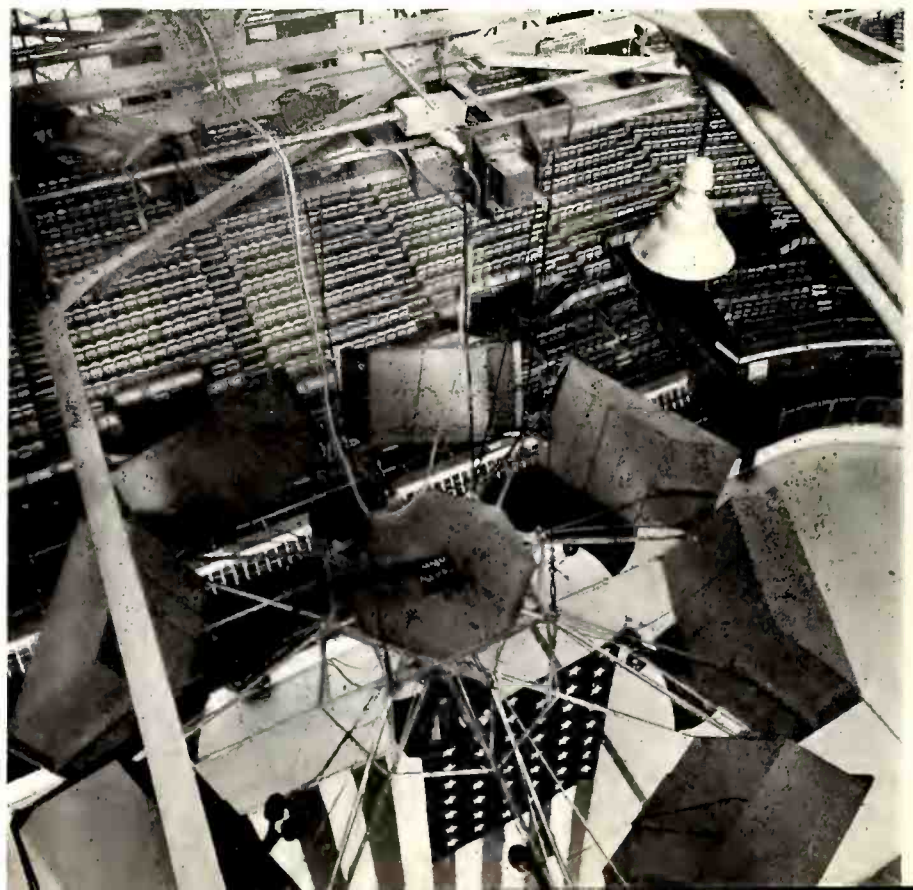
SIX CHANNELS USED

The speaker equipment consists of eight low-frequency folded horns each containing two 15-in. heavy duty 25-watt permanent magnet speakers in combination with seven high-frequency cellular horns each driven by two heavy duty 25-watt permanent magnet units. All of the above mentioned speaker equipment is mounted on an octagonal gondola twenty feet in diameter. The entire assembly may be raised, lowered and moved from one end of the building to the other by means of a motor-driven carriage running on a track installed directly under the building roof.

The unique features of the Indianapolis Coliseum sound installation are apparent from the block diagram. Thirty-two mike output positions have been provided around the arena. These jacks are connected to duplicate jacks on the control panel where any six of the mike outlets may be selected and fed into the six channels by means of patching plugs and cords.

After the six mike circuits are selected, each channel goes through a pre-amplifier and patching jacks into a group of six selector switches. These

Looking down through speaker gondola which is suspended from track in center of Indianapolis Coliseum. Eight low frequency folded horn speakers are driven by 16 25-watt PM units. Seven high frequency speakers are mounted under L.F. units.



selector switches choose any or all of the six channels which are to go through the remote control console. The remote controller consists of six mixing controls and a pre-amplifier with its power supply. This console may be operated at any of three positions in the Coliseum.

If the remote controller is not used, any or all of the six channels go into the main mixing panel in the control room. The mixed output from these controls goes through the booster pre-amplifier, master volume control (1), and cut-out jacks to the master selector switch. Control may be taken away at any time from the remote console because of the location of the selector switches at the main panel.

TRANSFER KEYS

The output of the mixed channels from either the main control panel or the remote console goes into a Master Selector switch which picks out the position at which the remote unit is operating, or the main panel mixers. The signal leaving the master selector switch goes through two master volume controls, 2 and 3, and into two driver amplifiers. One amplifier, the PA driver, operates the power amplifiers feeding the speakers. The Broadcast amplifier may also be used to drive the main PA system, but at the same time it may be used to put the program into the telephone line for radio broadcasting.

The four selector keys, A, B, C and D, function as follows:

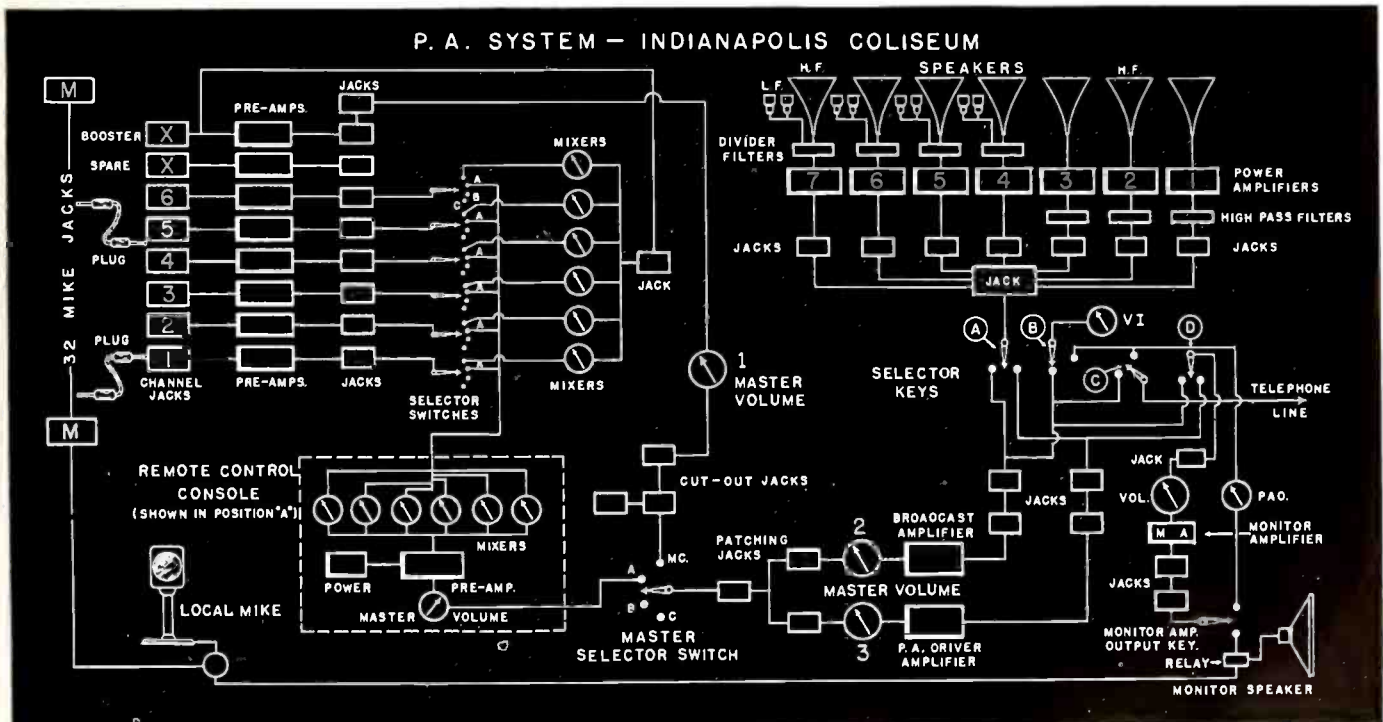
Key A chooses the driver amplifier to

(Continued on page 39)



Here is the operating position of the Coliseum PA system. Rack-mounted Operadio equipment has patching and gain control panels on left, amplifiers on right. Portable record changer shown in lower left corner.

Block layout of equipment shows dual driver amplifiers, and remote control console which may be operated from any of three positions in the Coliseum. Relay operated monitor speaker is silent when local announcement mike, shown in picture above, is used. Each of the seven power amplifiers delivers 50 watts.



P. A. PRODUCTS

New equipment for election campaigns

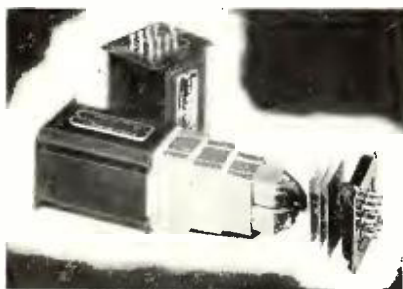


Utah Baflex

★ Bass reflex reproducer for high quality monitoring, PA, FM receivers, etc., has frequency response range to 9500 cps. Cabinet finished in satin bronze, will not vibrate. Utah Radio Products Co., 820 Orleans St., Chicago, Ill.—**RADIO TODAY.**

UTC transformers

★ Three new mike cable transformers MC-1, 2, 3 may be connected into line anywhere within 25 feet of amplifier match low imp. line to grid. Model MC-3 connects crystal mike to 50/200 ohm line. Line of bakelite cased plug-in transformers in 15 models for compact audio uses in standard and high fidelity service. United Transformer Corp., 150 Varick St., New York, N. Y.—**RADIO TODAY.**



Kenyon audio units

★ Two new transformers in the telescopic shielded humbucking line are P204 low impedance tapped primary and 50,000 ohm secondary. List \$20. P205 has same primary but pp 100,000 ohm secondary. List \$21. Flat from 30 to 20,000 cycles. Kenyon Transformer Co., Inc., 840 Barry St., New York, N. Y.—**RADIO TODAY.**

Western Electric pick-up

★ Model 9A reproducer operates from either lateral or vertical "hill and dale" recordings. The 9A is essentially flat up to 10,000 cycles

for both types. The unit is magnetic and change from one type cut to the other is by electrical switching. Western Electric Co., 195 Broadway, New York, N. Y.—**RADIO TODAY.**



Thordarson transformer

★ Compact mike transformer mounts on input connector of amplifier to couple low impedance line to grid. Available in 30/50 ohm and 200/500 ohm primaries. Magnetic shielding. List \$14.50. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.—**RADIO TODAY.**



Meck mobile PA

★ Model AMR-25C amplifier operates from 6V. DC or 110V. AC, delivers 25 watts from either built-in phono or mike service. Standby switch cuts off plate current leaving filaments hot. John Meck Industries, 1313 W. Randolph St., Chicago, Ill.—**RADIO TODAY.**

Columbia needles

★ New types of phono needles, Masterworks steel, chromium, American steel, and Nu-tone brass, all feature quality reproduction. Masterworks needle for finest reproduction of classics priced 30 for 15¢. Chromium plated needles are shadow graphed for accuracy. Columbia Recording Corp., 1473 Barnum Ave., Bridgeport, Conn.—**RADIO TODAY.**



Clarion PA system

★ Model CS-45 sound system has 31-watt amplifier, dual 12-inch speakers, built-in phono, remote control, V.I. meter, bass and treble equalizers. Four inputs, inverse feedback, and frequency response of 40 to 12,000 cps. Complete with mike, baffles, cables, etc., list, \$195.91. Transformer Corp. of America, 69 Wooster St., New York, N. Y.—**RADIO TODAY.**



RCA 50-watt amplifier

★ New amplifier model MI-12214 has reverse feedback circuit for low distortion, two mike and two phono inputs, automatic base compensation, and flat frequency response from 50 to 10M cycles. Output impedances from 4 to 250 ohms. Finished in two-tone gray. RCA Mfg. Co., Camden, N. J.—**RADIO TODAY.**

Charles Jack amp. cabinet

★ Upright metal cabinet for amplifiers, controls and chime equipment has modern chrome fittings. Comes in several colors. Recessed front panels, and locking door. Drawer panel conceals record player. Charles Jack Mfg. Co., 27 E. Philadelphia St., York, Pa.—**RADIO TODAY.**



Masco phono-top PA

★ Mobile 24-watt sound system for 6V. DC or 110V. AC operation has input for two mikes, and built-in phono. Electronic mixing. Complete with mike, speakers, cables, \$168. Mark Simpson Dist. Co., 16 Hudson St., New York, N. Y.—**RADIO TODAY.**

RETAIL PROFITS IN RECORDERS

(Continued from page 19)

films and to get some humor into the sound effects!

All this gets plenty of laughs into his sales job. And it nets him both chuckles and coins from his customers.

MORE IDEAS

Local contests, staged by dealers and jobbers for their communities, are an important element in the general promotion of recorders and their uses. Themes of the competitions may vary greatly, according to the interests of the area, but the following ideas have been suggested as good bets:

1. A "Jingle" contest, in which the original rhymes are submitted on records. Rules and merchandise prizes may be announced via window displays, direct mail, newspaper ads, etc.

2. "Best Impersonation" competitions held in cooperation with local theaters. Prizes are shown in lobbies, while contestants make recorded imitations of the current movie stars.

3. Scripts of short plays may be distributed for a "Drama" contest. This idea has the advantage of attracting groups of performers instead of single ones. Local stations may cooperate by broadcasting the entries.

4. "Voice Guessing" may be used by a dealer who has recorded the voices of a number of today's celebrities. Patrons may be awarded merchandise prizes if they can identify the speakers or singers.

5. A contest for the best instrumental solos made on home recorders will encourage all the student musicians in town. Local musical leaders may be used as judges, amid wide publicity.

Record Blanks in New Promotion

Wilcox-Gay announcements now point out that "... recording blanks are now a consumable consumer item, comparable with gasoline for your car, film for your camera, tobacco for your pipe." Accordingly, the merchandising of the company's Recordio discs now enter a new phase of merchandising, appropriate to the "big business" aspects of home recording and home recording discs.

Wilcox-Gay has announced that disc distributor franchises will not be confined to Wilcox-Gay Recordio distributors but will be extended to such other wholesalers as the sales department may feel necessary in order to secure the widest point of sales distribution.

A number of disc merchandisers are ready for dealer use, featuring the blank advertised as Underwriters labeled, permanent, excellent fidelity, practical and low cost.

Give your customers a chance to make GOOD HOME RECORDINGS

... and they'll give you a lasting repeat business that will show you big PROFITS for years to come ...

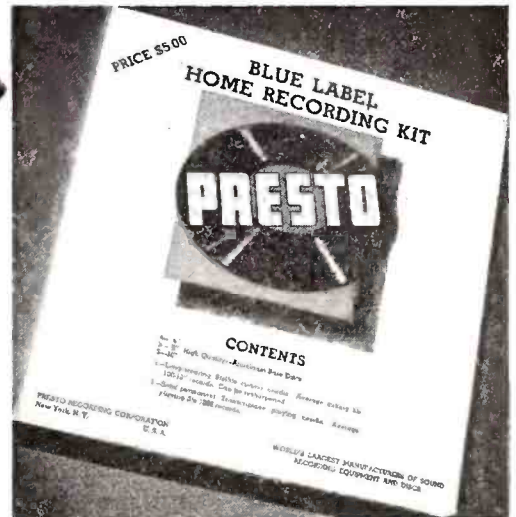
START THEM OFF RIGHT WITH THIS PRESTO HOME RECORDING KIT

Containing ...

(A) 9 PRESTO BLUE LABEL DISCS, the same high quality discs that Presto has furnished to leading recording studios and broadcasting stations for the last five years ... except thinner, less expensive for the home user.

(B) 1 Presto Stellite long wearing alloy cutting needle, cuts as quietly as sapphire but more durable, outlasts 20 steel cutting needles, can be resharpened.

(C) 1 Presto Transcriptone semi-permanent playing needle, causes least wear on home recordings or commercial records, average playing life 1,000 records.



RETAIL PRICE COMPLETE KIT \$5.00

USE THIS HANDY PRESTO COUNTER DISPLAY



Holds complete dealer stock, contains 90 Blue Label Discs and 220 cutting and playing needles in proper assortment for quick turnover.

RETAIL PRICE \$56.00

GET THESE MERCHANDISING AIDS FREE WITH EACH COUNTER DISPLAY



2 Orange and Blue 17" x 22" window posters. 200 Disc order cards imprinted with your mail address. 3 Mats for newspaper advertising.

A COMPLETE MERCHANDISING PLAN READY TO GO TO WORK FOR YOU—ASK YOUR JOBBER OR WRITE TO—

PRESTO RECORDING CORPORATION
242 West 55th Street, New York, N. Y.
World's Largest Manufacturers of Instantaneous Sound Recording Equipment



AUTO RADIO SERVICE

Methods and ideas used to speed up jobs in busy car-radio repair shop visited by Radio Today



2. Antenna terminal adapters make neater job and save time of cutting off and resoldering different type connector. Right angle bend keeps sharp kinks out of cable.

1. Under hood clip-type aerial is positioned as high as possible on cowl. Too low a mounting reduces pick-up by additional capacity to body. Note protecting cover on fender.



3. Every job involves its own contortion act. Here the T-bolts were put through bulkhead and nuts partly threaded on. Chassis was then hooked over the bolt heads. Bolts then pulled up in position and nuts spun tight, not "worked" on.



4. Dead sets are pulled out of car after preliminary check shows antenna and power to set OK. Service bench outlets provide speaker and battery connections for test.



5. Tube rack board holds supply of types used in auto sets for quick tests by substitution, also takes care of tubes tester shows "good." These are not used as final replacements.



6. Set operates on test bench long enough to show up any drift, or suspected part failure. Preliminary alignment is made on the bench, but some sets require additional adjustment of RF padders after set has been put into the car.



7. Connecting cables should be firmly seated, and grounding tabs adjusted for firm contact to set. This is common point of motor noise pick-up, especially in remote control cables. The numbered photos were taken at MacAdams Equip. Co., 507 W. 56th St., New York City.

ALIGNING FM SETS

Adjusting limiter, discriminator, and IF circuits. Equipment and procedure used.

The use of amplitude limiting and frequency discriminating circuits in frequency modulations receivers introduce a different alignment procedure to the serviceman. High frequencies and the wide band IF also bring a new note in general servicing.

The functions of the limiter and discriminator were discussed in May issue of *RADIO TODAY*, Servicing FM Sets. Just how these circuits are adjusted for peak performance is brought out in the following information from Charles E. Angle, Service Manager for Stromberg-Carlson Mfg. Co.

WHAT YOU NEED

The first question asked is, "What equipment will I need?" The following list is suggested as being best suited to do the job.

1. A good signal generator with variable output voltage and a frequency range of 100 kilocycles to 50 megacycles.
2. A wide band signal generator with a sweep circuit of plus or minus 200 kilocycles. These will, undoubtedly, be available shortly.
3. Cathode ray oscillograph.
4. Output meter.
5. Center "0" microammeter and "0" to 200 microammeter.
6. A.C. and D.C. voltmeters with range scales of "0" to 1,000 volts or more and a sensitivity of at least 1,000 ohms per volt.
7. Ohmmeter capable of indicating resistance to at least 10 megohms.

The meters listed do not necessarily have to be individual units. Many manufacturers of test equipment combine these functions into one combination unit which is very satisfactory.

Remember that FM circuits operate at high frequencies and the part values and locations are very important. In fact, because of the high frequencies and particularly the 2.1 megacycle I.F., regeneration is very likely to occur.

WATCH REPLACEMENTS

This regeneration may be caused by any one of a number of conditions. If it is necessary at any time to replace a part, extreme care should be taken to install the replacement in exactly the same position as the part which was removed. When locating or correcting trouble, the wiring of the chassis should not be disturbed. The plate, screen, grid and cathode of all tubes used in FM receivers must be bypassed to a ground point directly at the socket, as a long ground lead is a common cause of regeneration in these circuits.

The limiter is the last I.F. stage in an FM receiver and acts as an amplifier which is very easily overloaded. The primary purpose of this circuit is to limit any amplitude variations in the I.F. circuit ahead of the discriminator. The discriminator, which acts as a detector, converts the frequency deviations into amplitude variations.

ALIGNMENT METHOD

Trouble in either of these circuits can be located with the usual methods, but realignment must be carried out in a new and different way. It is essential that the manufacturer's procedure be followed exactly. In fact, since alignment of frequency modulation receivers is carefully made at the factory with special equipment designed for

this purpose, ordinarily no realignment is necessary.

Each I.F. and R.F. stage in frequency modulation receivers should be adjusted independently and no overall adjustments should be made. If the receiver is not in proper alignment after adjustments are made, start over again.

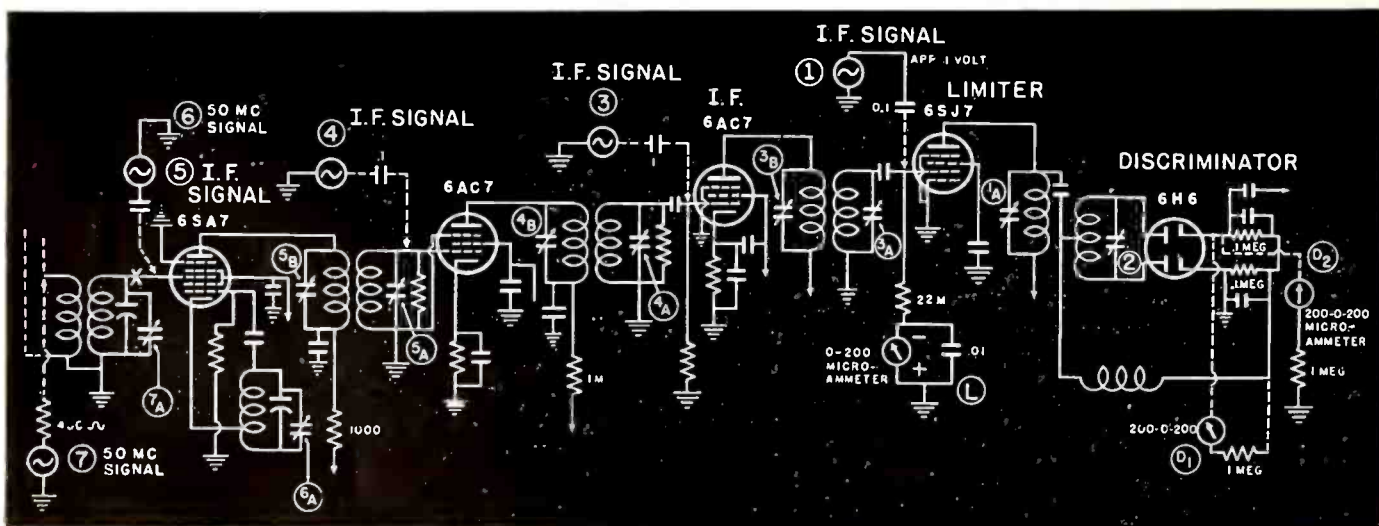
The alignment procedure is best shown graphically as per the partial schematic of an FM set. The steps in the alignment procedure are numbered in order, while the three indicating instruments are identified as L, D₁ and D₂.

LIMITER GRID

The first step is to connect the signal generator through a 0.1 mfd. capacitor to the grid of the limiter tube. The discriminator transformer is adjusted by observing the voltage across the load resistors in cathode circuits of the 6H6. A 200-0-200 microammeter is connected in series with a 1 meg. resistor across half of the diode load as shown for D₁. An I.F. signal of approximately 1 volt is necessary to operate the limiter which means that most signal generators have to run with the attenuator "wide open." The signal is unmodulated. The primary padder 1a is then adjusted for a maximum indication on the meter D₁. The microammeter is then connected across the whole load as shown at D₂. With the signal generator remaining as before, padder 2 is tuned until the meter reads "0."

A 0-200 microammeter is next connected between ground and the grid

(Continued on page 41)



Partial circuit of FM set showing connections and sequence of aligning operations. Meter connections D₁ are for adjustment of padder 1a and D₂ for padder 2. Signal generator is connected through 0.1 mfd. capacitor. Alignment method for RF end of set will vary with different models. Use strong signals to operate limiter.

FOR NEW TEST REQUIREMENTS OF

Frequency Modulation

1. F.M. assigned channels 40 to 44 mc.
— band width 100-200 kc.
2. F.M. intermediate frequencies 2 to 5 mc.
— each stage aligned at exactly the same point.
3. Checking limiter and discriminator circuits.

HERE ARE THE ANSWERS:

1. The WESTON Model 787 is the only service Oscillator which reads 40 kc. per division at 40 mc. This precise tuning is absolutely essential to test the band width of F.M. receivers. Each instrument is individually hand calibrated at 2 mc. intervals. (The broad frequency coverage of Model 787...from 22 to 150 mc. fundamental frequencies...safeguards against obsolescence in the event of changes in assigned channels.)
2. The WESTON Model 776 Oscillator supplies an absolutely stable signal source. Laboratory tests have shown that the frequency drift is less than .05% at 5 mc. for an operation period of several hours. This stability is the result of newly improved control circuits. With Model 776, too, an individually hand calibrated scale insures dependable accuracy over its entire frequency range of from 50 kc. to 33 mc., fundamental frequencies.
3. Because of frequency limitations of present visual aligning equipment, current measurements down to 1 microampere offer the only means of checking I.F. alignments, cut-off point on limiter tube, and adjustment of discriminators. WESTON Model 772 Super-Sensitive Analyzer offers all ranges necessary to make these sensitive measurements; plus additional ranges for all customary voltage, current and resistance measurement needs.

Full particulars on the above instruments are available in bulletin form, and will gladly be sent on request. Weston Electrical Instrument Corporation, 597 Frelinghuysen Avenue, Newark, New Jersey.



WESTON Model 787
U.H.F. Oscillator



WESTON Model 776
direct-reading Oscillator



WESTON Model 772
Super-Sensitive Analyzer

WESTON Instruments

SERVICING CIRCUITS

Portable Works on Flash-L't Cells or Car Battery

A new battery portable now on the market uses five or ten No. 2 flash light cells in series-parallel for both the filament and "B" supply. The set may also be operated from an AC or DC line of 117 volts, or a car battery.

The battery operation is the same as an automobile set. A vibrator and transformer deliver the pulsating current to a 35Z5 half-wave rectifier. The tube filaments are operated in series across the 7.5 volts from the dry cells.

A triple purpose tube is used as the 1F amplifier, second detector, and first audio. The only stage controlled by AVC is the 1A7 mixer.

The three switches S_1 , S_2 , and S_3 are ganged together. The first position operates the set from its internal dry cells. Proceeding clockwise, step number 2 allows the set to operate from an automobile storage battery; number three is the AC/DC line power step, while number 4 is "off" step.

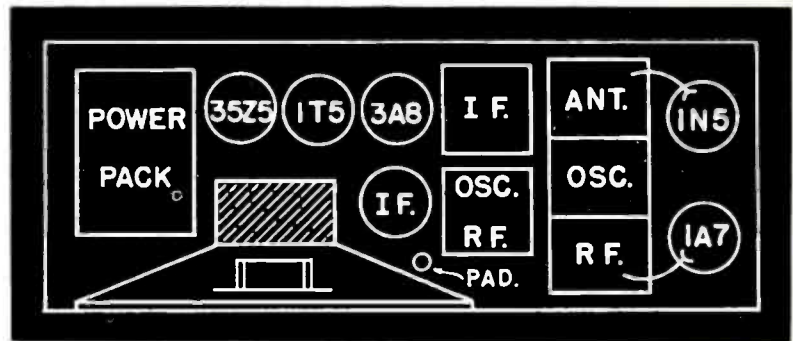
The 1F frequency is 182 kilocycles. Aligning may be done by feeding the signal through .01 capacitor into grid cap of 1A7 mixer. With the output meter connected across the voice coil, and as weak a test signal as possible, the 1F trimmers are adjusted for peak output, starting with the last transformer and working toward the signal.

The series oscillator trimmer is located just back of the speaker as shown in the plan diagram of the top of chassis. Feed a 600 kc signal into set with radiating loop made of a few turns of wire, 4 or 5 inches in diameter and adjust trimmer for maximum output with tuning condenser set for 600 kc. Rock condenser until peak is at 600 kc. position on dial.

Tubes should *not* be changed while the set is turned on. The 50 mfd. 25-volt capacitor is connected to the 1T5 filament lead that goes through 2000 ohm resistor to cathode of 35Z5. If a tube is removed from the set, this condenser will try to charge to full rectified voltage. Since it is rated at 25 volts, it will probably be blown out.

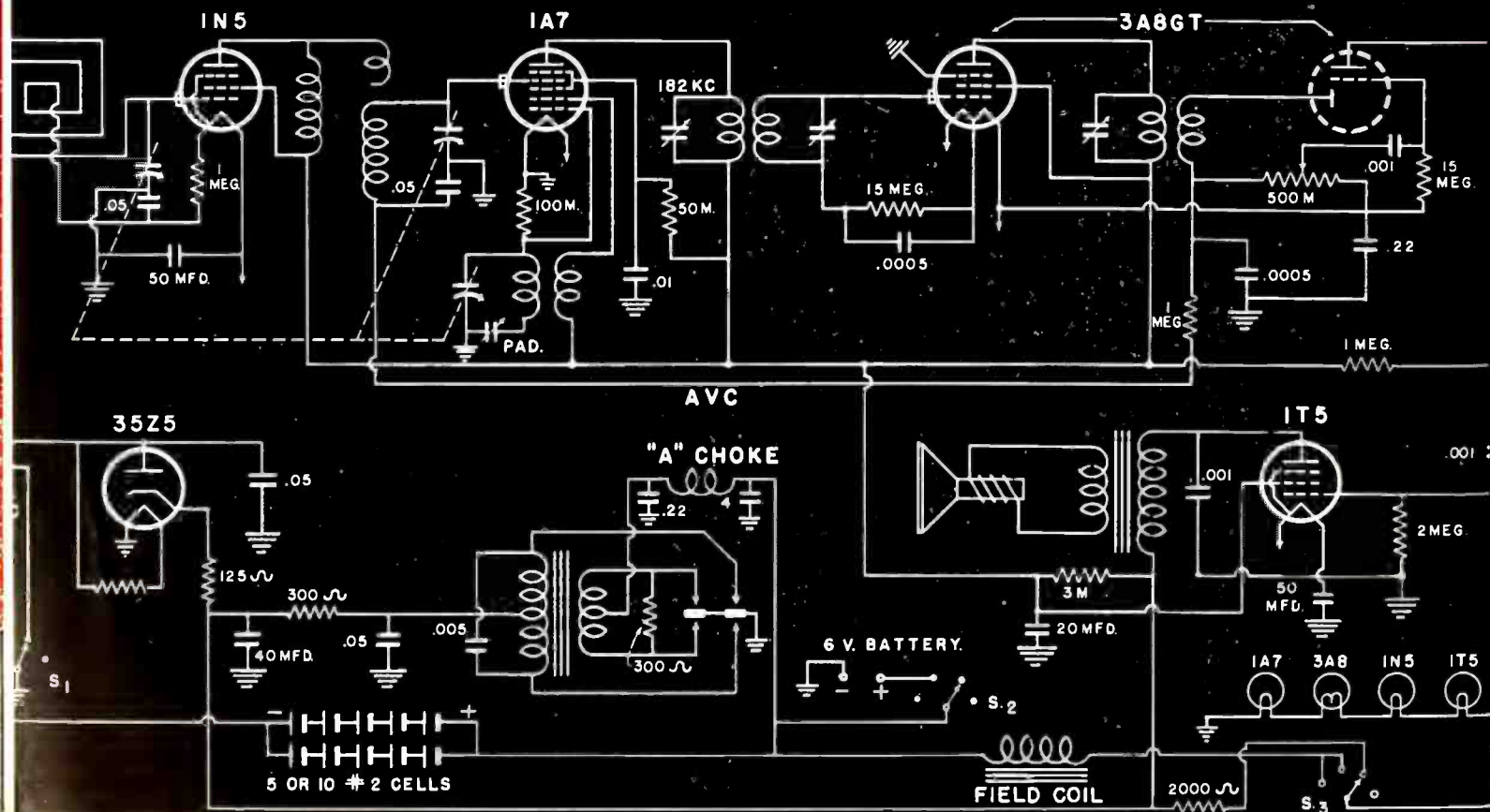
Rider's Volume XI Out

Complete servicing data on receivers up to May 1940 are included in the familiar manual published by John Rider, 404 Fourth Ave., New York, N. Y. The 1652 pages in No. 11 are arranged as last year's book to include only the essential information. With every copy of Volume XI goes a vest-pocket manual with the frequency range of pre-tuned push-button receivers, color codings of parts, and other valuable data. Bound in the index is the "How It Works" section, which covers 1940 circuit developments. Copies are available at jobbers for \$10.



Chassis layout for dry-cell portable diagramed below.

SETCHELL-CARLSON-"66"



SOUND AT FAIRS

(Continued from page 31)

operate the main PA system. Key B controls the volume level indicator. Selector key C takes care of the telephone circuit connections to the broadcast driver amplifier. The fourth key, D, connects the monitor system to the particular driver amplifier being used.

High frequency pass filters are used in three of the seven power amplifiers which drive the H.F. speakers. Dividing networks in the output side of the remaining four amplifiers split the signal for the high and low frequency speakers.

The monitoring system has a relay controlled speaker which cuts out when the local announcing mike is used. This prevents any feedback from developing and being sent through the entire PA system.

JACKS SIMPLIFY

One of the things that make a big sound system such as this one function so easily, is the wise positioning of circuit jacks. These may appear to be unnecessary to many sound men, but by putting jacks in the circuit before and after important pieces of apparatus, the circuit becomes more flexible, quicker to "patch up" in emergency. Also important is the testing possibilities. A signal fed into the microphone jack may be traced through the system with nothing more elaborate than a pair of high impedance headphones.

THINGS TO DO

This is a sound job which incorporates almost every phase of public address problems. The way various types of equipment have been put to work suggest to every sound man ideas he can use on that next job.

Now is the time to survey the plans of your state and county fairs, contact the officials in charge of producing the show, make your suggestions for a suitable system, work with company engineers on any difficult problems, publicize your installation for more profits in the greatest year for PA.

New Uses for Kontak



Valley and Lynne, tap dance team, use Amperite Kontak mikes on their shoes and guitars for novel act.

AND Now

A BATTERY MERCHANDISER

**Sells More Batteries
•
Lets Your Customer See**



win trade
from drug stores
and
filling stations

Only \$9.00 Deposit

- Set Switch for Voltage
- Read condition of Battery on percentage of useful life meter
- Made by TRIUMPH
- For Counter use or Can Be Mounted on Wall

Delivery made at once on \$8.00 deposit and order for \$10.00 worth of batteries, dealer prices. Deposit refunded on purchase of 430 points. All purchases of N.U. tubes, condensers and batteries count as points.

MAKE MORE MONEY WITH N.U. BATTERIES

Sold Exclusively to Radio Service Dealers

The N.U. line of radio replacement batteries has been developed exclusively for radio service specialists. All popular types are included. Batteries are attractively packaged in rugged boxes incorporating the standard N.U. color scheme—black and two shades of green.

N.U. Batteries are carefully manufactured from the finest materials obtainable and are fully guaranteed against defects in workmanship and materials. All types equipped with standard plugs for quick and easy replacement installation.

Thoroughly moisture proof for satisfactory and reliable service under all climatic conditions.

Install N.U. replacement batteries for more hours of reliable service and satisfied customers.

N.U. brings you a line of replacement batteries on which you can

make your full radio service profit. It is not necessary now for you to test sets and install batteries without adequate compensation for your time and knowledge.

N.U. has been identified with the radio service dealer and his problems since the beginning. You can definitely make more money handling N.U. products.

★
**SEE YOUR DISTRIBUTOR
OR SEND COUPON**

NATIONAL UNION RADIO CORPORATION
57 State Street, Newark, N. J. RT-740

I am interested in your new Battery Merchandiser calling for only \$8.00 deposit. Please send more information.

Please have salesman call.

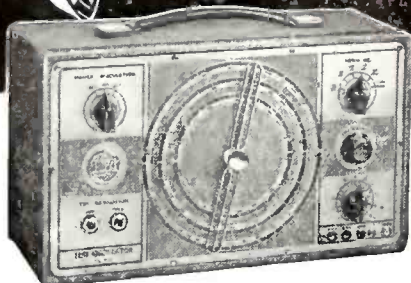
Name

Street Address.....

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

NATIONAL UNION RADIO CORP.
57 STATE STREET NEWARK, N. J.

PROFITABLE ANSWER TO THOSE



New RCA Test Oscillator #167

\$34⁵⁰

ACCURATE, EASY-
READING DIAL

FULL 1.0 VOLT R.F.
MAXIMUM OUTPUT

100-30,000 KC
FUNDAMENTALS

If you're the kind of serviceman who wants to make money on modern, complex receivers—the *tough jobs*—this new RCA #167 Test Oscillator was made for you! It has the range you want for today's receivers... high output for single-stage alignment, or for sets misaligned completely. Its big new dial scale makes readings certain and precise. Trim, attractive, business-like appearance wins customer-confidence.

Study its features... see it at your RCA Distributor's. \$34.50 is all it costs! Don't buy *any* test oscillator until you've seen how much RCA can give you for so little!

Check These RCA Value Features!

- 6 Ranges: 100 to 30,000 K.C.
- 400-cycle 8-volt Audio
- Complete Shielding
- Harmonics of 6th Band for U.H.F.
- Precision, New-type Dial
- Metal Tubes—Compact, Stable
- 2% Accuracy

Over 335 million RCA radio tubes have been purchased by radio users.



LIGHTNING PROTECTION

Sale of arrester installations opens profit opportunity for servicemen

Millions of outdoor antennas are in use today without any form of lightning protection. Such antennas to be most effective in bringing in broadcast signals while reducing interference from housewiring and household appliances, must necessarily be located as *high* as possible above the ground and also be run *away* from the house itself, to intercept program-flux free of electrical interference.

The very location of such outside antennas makes them especially vulnerable to lightning and atmospheric-electricity. In order to safeguard such antennas against bringing down dangerous flashes that may cause death or personal injury, and damage to buildings and radio equipment, modern lightning arresters should be installed.

HELPS THREE WAYS

Such arresters safeguard the home in three ways:

1. In the event of a direct flash to the antenna they provide a path to ground for the lightning discharge, minimizing fire and electrical risks.

2. In the more common cases of secondary or induced strokes (induced from flashes occurring up to a mile away), the lightning arrester supplies a discharge path to ground for the induced voltage effects. Otherwise these may cause (a) personal shock, which may be severe or fatal, or (b) electrical damage to the radio set, to electrical wiring, or the building itself.

3. For atmospheric static which in some climates is continually collecting on radio antennas, a lightning arrester provides a discharge path, safeguarding radio apparatus, transformers, condensers, tubes, etc., against excessive voltages that may build up unknown to the set user. (Some radio men feel that electrostatic charges of this kind explain some of the otherwise unaccountable failures of radio apparatus in home radios, which have been subjected to no known excessive emfs.)

USE THE BEST

With lightning arresters playing such an important three-fold service in protecting life, property and radio equipment, it is evident that the millions of existing antennas should be safeguarded with quality lightning-arresters, properly installed. And certainly the best arrester available should be used. It will not be worthwhile to economize at this point!

Of equal importance is the method of installation of the arrester. The path provided for the lightning discharge should be a *straight line*, so that the lightning currents do not have to pass around any bends or turns on their way to the ground. Shape the installation so that the discharge path from antenna to ground is a straight line; put any side taps, turns or bends in the line feeding the radio set. Lightning, because of its high frequency and steep wave-front, builds up tremendous induced counter-emfs if asked to pass around a curve or right-

angle bend, and will refuse to follow such a curved path. So keep such bends and curves out of the lightning discharge path; put them into the line to the radio set, where they will help keep lightning currents out of the radio set.

GOOD GROUND IMPERATIVE

A good ground is imperative for the discharge path. If connection cannot be made to the steel of the building, or to the water pipe system, drive a ½ inch or ¾ inch pipe into the ground four or five feet, at a point where the ground can be kept moist, so that a good conducting path is always available. Use no wire smaller than No. 14 or No. 12. No. 10 is preferable.

Lightning arrester installation offers a business opportunity for the serviceman at this time of the year. With such installation jobs running from \$2 to \$5, depending on the work involved, the radio man can open up a new market for his services and have the satisfaction of knowing he is rendering a real safeguard to the lives, property and radio sets of his customers.

Importance of Lightning Arresters

A good lightning arrester, properly installed, is a definitely essential safety precaution to protect any radio set from damage by lightning declares E. V. Amy, president of Amy, Aceves & King, consulting antenna engineers, 11 West 42nd Street, New York. It is also a means of reducing fire hazard in the room in which the radio is located, adds Mr. Amy.

By a good lightning arrester is meant one which is listed or approved by the Board of Fire Underwriters.

By a properly installed lightning arrester is meant one which is located as near the aerial as possible outside of the building and having a short straight lead of not less than No. 14 copper wire connected to ground. This ground should preferably be a water pipe on the outside of a building or a 1 in. pipe driven at least three feet into the soil.

In the light of many years experience in the installation and maintenance of aerials for private homes and master aerial systems for apartment houses, the following facts regarding the use of lightning arresters have become well established as definitely essential safety precautions:

1. The use of a lightning arrester on any outdoor or attic aerial is a worthwhile precaution to a radio set in the event of nearby lightning surges.
2. When using an antenna system of the noise-reducing type, it is an additional safety precaution to the transformers and coupling units associated with the system.
3. The risk of fire—due to heavy lightning surges being guided to the room by the aerial downlead—is greatly minimized.

ALIGNING FM SETS

(Continued from page 36)

bias resistor in the limiter circuit. Some sets have a 0.01 by-pass capacitor which is normally shorted by the lead grounding the grid resistor. This condenser is across the meter when the connections are made as shown at L, and its purpose is to shunt the I.F. currents around the meter. The signal generator, still set at the I.F., is connected as shown at 3, while the padders 3a and 3b are adjusted for maximum reading on meter at L in the order mentioned.

The unmodulated I.F. signal is applied at points 4 and 5 where the respective trimmers are adjusted for peak reading of meter L. In step 5 the lead from the 6SA7 grid to antenna coil should be disconnected and the signal fed into the grid of the tube.

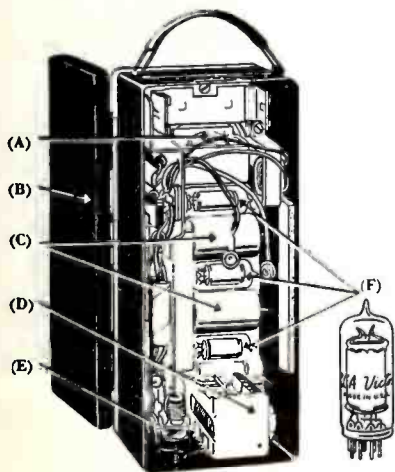
The signal generator connections remain the same in step 6, but the frequency is changed to the high end of the band, about 50 mc. The oscillator padder, marked 6a, is then adjusted for maximum response of meter L.

In step 7, the signal generator is connected in series with a 100-ohm resistor to the antenna terminal of the set, while the lead from the first RF coil to the grid of the 6SA7 is connected. With the generator and set turned to approximately 50 mc., adjust antenna trimmer marked 7 for maximum response on L.

RF adjustments are made for maximum indication of the 0-200 microammeter while the center 0 meter is kept at 0 by rotating the receiver dial back and forth slightly.

The cathode ray oscillograph is another very useful alignment tool for FM work, and its use will be explained in a future issue of RADIO TODAY.

Personal Radio Set Has Compact Parts



A new "personal" receiver just announced by the RCA Mfg. Co., Camden, N. J. is novel in its compactness of parts and in its performance.

Measuring only 9 x 3½ x 3, the set houses a standard superhet with four of the new miniature tubes, also

recently brought out by RCA. In the cut shown, A identifies the three-inch electro-dynamic speaker, B is the loop antenna in the closing lid, C points out the tiny IF transformers, D is the extremely small tuning condenser, E is the iron core tuned oscillator coil, while F shows three of the tubes, the fourth being in front of the two-gang condenser. A 67½ volt battery block made by Eveready slips in front of the IF transformers and tubes. A standard flashlight cell goes in just above the speaker and operates the filaments. The set weighs approximately 4¼ pounds.

A plunger switch turns the set off when the lid is closed. Volume and tuning are controlled by knurled

wheels projecting through the front panel.

Radio in Aviation

Because of the wide interest in aviation among radio men at this time, we have had inquiries for the names of books on aviation radio and electrical equipment. Two such books, with their publishers, are listed below:

"Aircraft Radio & Electrical Equipment" by H. K. Morgan, published by Pitman Pub. Corp., 2 W. 45 St., New York, N. Y.

"Aeronautic Radio" by Myron F. Eddy, published by the Ronald Press Co., 15 E. 26 St., New York, N. Y.



5 REASONS WHY UTAH VIBRATOR SALES INCREASED 63%

The preference for Utah Vibrators has grown with the industry, because most of the important vibrator developments have originated in the Utah laboratory. Outstanding design and advanced engineering have maintained their leadership. In 1939 the demand for Utah Vibrators increased 63% because:

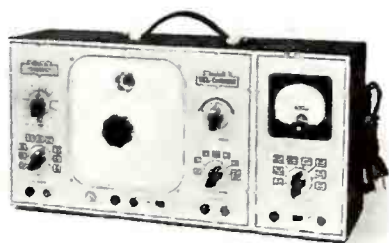
1. Complete exact replacements can be made with the Utah line.
2. Absolute dependability is assured by Utah's rugged, time-proved construction.
3. Finest materials obtainable are used in the manufacture of Utah Vibrators.
4. "Life Tested" in Utah's laboratory—the industry's most versatile and best equipped.
5. 12 months guarantee—against defective workmanship and materials.

The assurance of complete satisfaction has led thousands of users to standardize on Utah Vibrators. You, too, can be sure of all these advantages by insisting on Vibrators that carry the Utah label. For Vibrator information, write Utah Radio Products Co., 814 Orleans Street, Chicago, Illinois. Canadian Sales Office: 560 King Street, Toronto, Ont., Canada. Cable Address: Utaradio, Chicago. In the Argentine: Ucoa Radio Products Company, S. R. L. Buenos Aires.



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SPEAKERS • TRANSFORMERS • UTAH-CARTER PARTS

NEW SERVICE AIDS



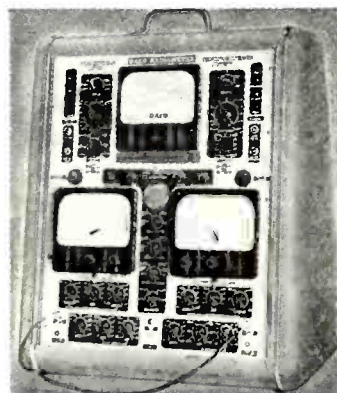
Sprague Tel-Ohmike

★ De Luxe version of the standard capacitor and resistor analyzer contains built-in DC volt-milliammeter to measure leakage current, and test voltages. The regular features of capacity measurement from 10 mmfd to 2000 mfd and resistance to 5 megs are retained. Sprague Products Co., North Adams, Mass.—RADIO TODAY.



Burton-Rogers meters

★ Complete line of round, square panel meters; portable units and the large 9-inch test bench meter with remote selector box and test jacks. Meters in variety of ranges for AC, DC, volts, mills, ohms, etc. Burton-Rogers Co., 857 Boylston St., Boston, Mass.—RADIO TODAY.



Daco Radiometer

★ Complete radio test lab combined into one unit includes vacuum tube voltmeter, audio and super-sonic oscillator of 20 to 150M cps, RF oscillator of 50 kc to 100 mc, signal tracer channels for audio, video, and frequency modulations,

2-inch oscilloscope, and FM speaker. List price with cabinet is \$194.90. Dayton Acme Co., 2339 Gilbert Ave., Cincinnati, Ohio—RADIO TODAY.

ATR converter

★ Operating from 5 No. 2 flashlight cells, new converter replaces portable radio batteries. Unit may also be operated from storage battery. Weight of unit is approximately $\frac{1}{3}$ of batteries it replaces. List \$6.95. American Television & Radio Co., 300 E. 4th St., St. Paul, Minn.—RADIO TODAY.



Radio City tester

★ Model 414 multitester is now available in series V7 with 7-inch square meter, V9 unit has a 9-inch meter while two rack mounting types are also available. Control unit of these instruments may be used near work while meter is in panel. Radio City Products, 88 Park Pl., New York, N. Y.—RADIO TODAY.



Clarostat decade box

★ Power type of decade box has range from 1 to 999,999 ohms with power capacity 225 watts. Housed in gray metal case with through-circuit terminals, inclined panel. Clarostat Mfg. Co., Inc., 285 N. 6th St., Brooklyn, N. Y.—RADIO TODAY.

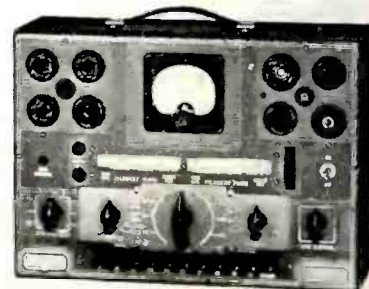
Meissner Signal Splicer

★ Impedance matching unit for coupling short wave sets to any type of antenna boosts signal strength without aid of tubes. Unit comes with one set of coils for \$3.95. Meissner Mfg. Co., Mt. Carmel, Ill.—RADIO TODAY.



Triplett tube checker

★ Model 1620 features individual selection of any tube prong, sectionalized panel construction for inexpensive replacement or modernization, and spare socket. This new counter model tests all present types of receiving tubes, net \$37.84. Triplett Electrical Instrument Co., Bluffton, Ohio—RADIO TODAY.



Jackson tube tester

★ Model 636 dynamic tube checker has full range filament selector from $\frac{3}{4}$ to 115 volts. Tests all types of tubes announced to date. Available in several styles; bench type shown is \$29.95. Jackson Electrical Instrument Co., 135 Wayne Ave., Dayton, Ohio.—RADIO TODAY.



R.S.E. condenser tester

★ This tester designed to locate intermittent, and high resistance bypass and coupling capacitors of all types. Heavy RF current flows through condenser and is rectified to operate electron "eye" tube for indication. For 115 volts AC. Model 12-B, \$39.50. Radio Service Engineers, 110 W. Packard Ave., Ft. Wayne, Ind.—RADIO TODAY.

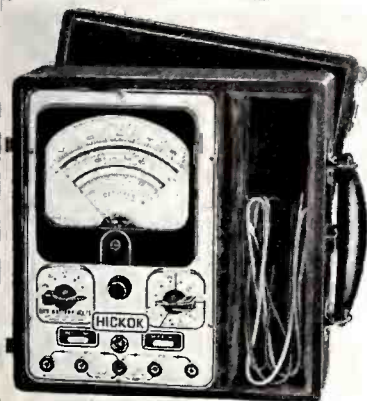
Ward Leonard relay

★ Designed for either AC or DC, midget relay known as 105 available for single pole, normally open, normally closed or double throw. Will handle 1 hp. Coils for 110 or 220 volts. Ward Leonard Elec. Co., Mt. Vernon, N. Y.—RADIO TODAY.



G-C repair kit

★ Complete chemical kit contains carbon-x volume control repair liquid, grapholine, scratch polish, dial oil, non-slip compound, contact cleaner, dial drive cement. Handy applicator in each bottle. List, \$1.75 per kit. General Cement Mfg. Co., Rockford, Ill.—RADIO TODAY.



Hickok set tester

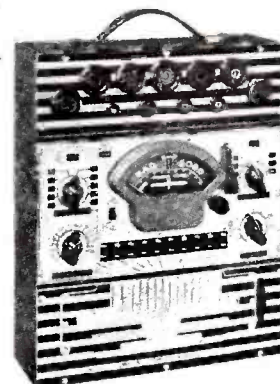
★ Portable tester model 133 features a 40-microamp meter for high sensitivity. Volts to 2500 AC/DC, 40 and 500 microamps, to 500 ma., resistance to 10 megs. Battery testing circuit up to 135 volts. Removable cover, and lead compartment. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio—RADIO TODAY.



Electro Prod. power unit

★ Vibrator power supply operates 1½ volt sets of 4, 5, or 6 tubes

from any 6-volt DC source. Delivers 90 volts at 18 ma. and correct filament voltages for sets with above number of tubes. Syncro model Q draws .75 amps for 4 tube set. Electro Products Labs., 549 W. Randolph St., Chicago, Ill.—RADIO TODAY.



Simpson tube testers

★ Model 400 Professional Standard tube tester, has new 3-way switching system, sectioned panel for inexpensive replacement of roll chart, or socket panel. Extra "write in" space on chart for 50 new tubes. Other models include the Giant 500, similar model 350, and portable model 300. Simpson Electric Co., 5216 W. Kinzie St., Chicago, Ill.—RADIO TODAY.

OPERADIO EQUIPMENT for the Biggest or Smallest Sound Job



In one of the finest sound installations of the past year, the Indiana State Fair Live Stock Pavilion, Indianapolis, Ind., Operadio Rack and Panel equipment was used.

FOR THE BEST IN AMPLIFICATION USE

OPERADIO

AMPLIFIERS • SPEAKERS • INTERCOMMUNICATING SYSTEMS

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Sentinel

QUALITY RADIO
Since 1920

TWO RED HOT VALUES!

● For downright dollar-value Sentinel's new line is a sensation—these two models prove it: A 4-tube 1½ volt superhet complete with 1,000-hour battery at \$19.95 list... A 5-tube AC-DC superhet at \$9.95 with a real profit for you...and both darn good sets, too!

This is only part of a complete line, all types, yours for quick turnover. Write for literature and complete dealer proposition.

SENTINEL RADIO CORPORATION
2020 Ridge Avenue
Dept. RT7 Evanston, Ill.

Only **WARD** can
give you these features

Flex-Angle * PATENT APPLIED FOR



Swings thru 16°

THE AERIAL THAT FITS ALL COWL CONTOURS Without Conversion Parts

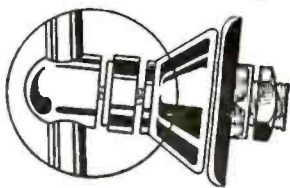
One mounting, with 16° adjustment, adapts it to Torpedo or Chrysler bodies. 3-section aerial, 68" lists at \$3.35.

Ceramic Stanchions

Three section aerials (5XXL, 66" and 8XL, 93") and four section aerials (151L, 100") are available with Ceramic low-loss Stanchions.

Necessary conversion parts for adaptation to Torpedo or Chrysler bodies included with all side cowls

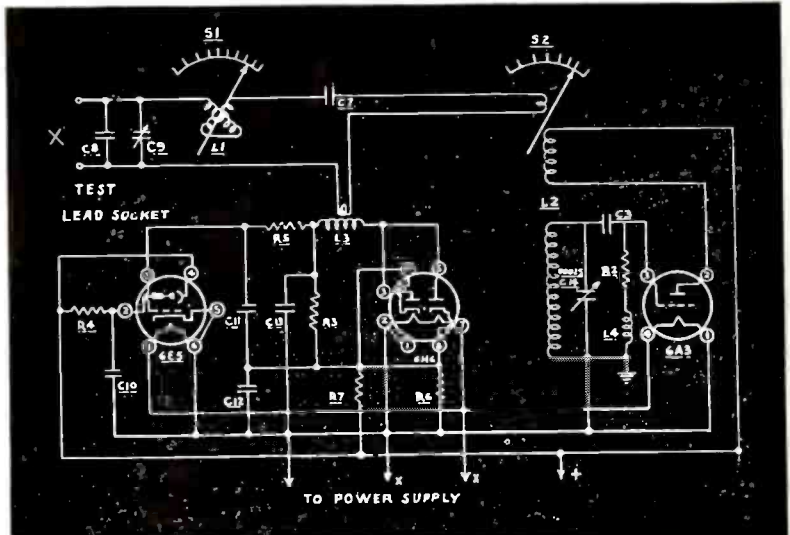
at no extra cost!



Send for Complete Catalog

The **WARD PRODUCTS CORP.**
WARD BUILDING CLEVELAND, OHIO

SERVICE NOTES



Condenser tester measures RF current through capacitor.

RF Tests Condenser in New R.S.E. Instrument

Designed for the purpose of locating high RF resistance in by-pass capacitors as well as leaky and intermittent units, a new tester for servicemen (see circuit diagram) has just been announced by Radio Service Engineers, 110 W. Packard Ave., Ft. Wayne, Ind.

The instrument consists of an RF oscillator which has its frequency fixed during calibration, two variometers controlled by S_1 and S_2 , a diode rectifier, electron eye indicator, and power supply. Any by-pass or coupling condenser up to 1 mfd. is connected by flexible leads to the tuned circuit which is inductively coupled to the 6A3 oscillator. The control S_1 is used to resonate the circuit and it is calibrated in microfarads. S_2 varies the current in the test circuit. A current transformer L_3 delivers an RF voltage to the 6H6 rectifier proportional to the current in the test circuit. The grid of the 6E5 is biased positively by the bleeder circuit of R_6 and R_7 so that the "eye" does not start to indicate until current in the test circuit reaches 1 to 1.5 amperes approximately. The rectified current flows through the load R_3 to offset the positive bias and close the "eye."

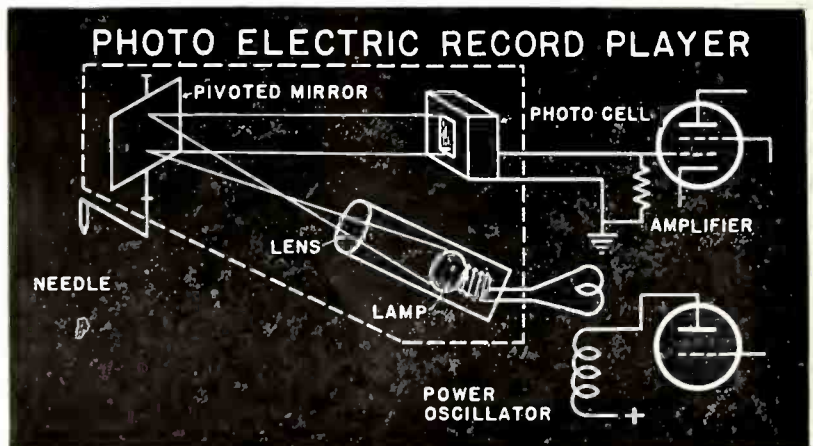
Photo Cell Used in New Record Player

A new departure from the usual electro-mechanical method of playing phonograph records is being introduced by Philco Radio and Television Co., Philadelphia, Pa.

The new system shown in the diagram uses a light source, lens, needle actuated mirror, and photo-cell. These items are all mounted in conventional tone arm head.

The light source is unique in that it is operated from the RF oscillator in the set. The oscillator is of the power pentode type and it is operated at more voltage when the phonograph is in use. RF energy is coupled to the special light bulb in order to provide a steady source of light that will not cause hum in the audio output. Sixty-cycle AC would cause enough ripple in the light output to be audible in the speaker. Even well filtered DC would cause noise due to voltage changes.

A sapphire needle is used to give long record life. It is connected through a crank arm to a pivoted mirror which flashes the light beam on and off the photo-cell. The photo-cell output is amplified in the same manner as a crystal or magnetic pickup.



PARTS JOBBER GROUP PLANS NEW EXPANSION PROGRAM



The Reading, Pa., jobber who's the new president of NRPDA, George D. Barbey.

Action taken at the annual convention of the National Radio Parts Distributors Association in Chicago last month provided for further growth and expansion of the NRPDA membership and activities.

At the Board of Directors meeting, where NRPDA president Walter C. Braun presided, some 20 directors from all parts of the U.S. were present. The Board decided to revise the dues schedule so that the organization could depend on sufficient revenue to carry on the essential activities of NRPDA. The new annual schedule provides that jobbers with sales of \$25,000 to \$50,000 pay \$35; sales of \$50,000 to \$100,000 pay \$75; \$100,000 to \$200,000 pay \$125; and \$200,000 and over pay \$200. The increase for the lowest bracket, which comprises about 75 per cent of the Association membership, was \$10. All other brackets were proportionately higher and the larger concerns voluntarily increased their dues 100 per cent.

NEW STEPS

Reports of sectional NRPDA group meetings showed them to be very effective and it is planned to set up chapters in every important trading area in the country.

A nominating committee of W. O. Schoning, chairman, W. C. Braun, A. Lippman, A. Stallman, Wm. Shuler and Elliott Wilkinson was named to suggest a list of seven Directors, where terms had expired. The committee recommended the reelection of the retiring directors, which was approved at the membership meeting held later. However, the Board recommended that in 1941, seven new Directors be elected who had not previously served.

At the first annual dinner meeting, all the Directors were introduced to the 100 members present, and the group was addressed by Arthur Berard, president of the Show Corp.;

Ken Hathaway, executive secretary of the Show Corp., Joe Marty, executive secretary of the RSA, and C. C. Beekley of QST.

The following officers were unanimously chosen by the Board to serve for the coming year: George Barbey, president; Elliott Wilkinson, Abe Davis, Alex Hirsch and Aaron Lippman, vice-presidents; William Schoning, treasurer; and John Stern, secretary. Arthur Moss, 5 W. 86th St., New York City, is retained as executive secretary.

Plans for 1941 Parts Show

First plans for the 1941 Radio Parts National Trade Show are that it will be held at the Stevens Hotel in Chicago, June 10-13, inclusive. Exhibiting members of the Trade Show Corp. unanimously decided this at a meeting at the last Parts Show.

The meeting also named four directors: A. A. Berard, representing the eastern division of the Sales managers Club; H. W. Clough, for the western part of SMC; and H. E. Osmun and J. J. Kahn representing the RMA. Chairman of the nominating committee was S. N. Shure, retiring director.

One event at the '40 Parts Show was the formation of a radio "Old Timers Club," open to those in radio for 15 years or more. Over 200 members are already listed; there are no dues. John O. Olsen, manufacturers rep of 5314 Beelermont Place, Pittsburgh, Pa., is president, and Ken Hathaway, Trade Show manager, 53 W. Jackson Blvd., Chicago, is secretary.

Interest in the 1940 Parts Show hit a new high. Total registration was 8,456; jobbers numbered 587. There were 140 exhibitors in 175 booths. Buyers came from all parts of U.S., Central and South America, Mexico, Cuba and Canada.

Thousands Go to Boston Show

More than 3,000 electrical appliance and radio dealers from all parts of New England attended a preview of 1941 models at the Copley-Plaza in Boston. The show was sponsored by the Radio Wholesalers Club, Inc., a group of Boston wholesale distributors of electrical merchandise and radio.

Officers of the club are Manny Beckwith, president; T. H. Burke, vice president; Arthur Marquardt, treasurer, and Hollis Vaughn, secretary.

Among the distributors were Wahn Sales Co., Northeastern Radio, Inc., J. H. Burke Co., General Electric Supply Co., Hub Cycle and Radio Co., The Eastern Company, Gross Sales Co., Inc., Milhender-Afes Electrical Supply Co., Inc., Wetmore Savage Electrical Supply Co., and the Graybar Electric Co., Inc.

Another in the new series of
Micamold
DEVELOPMENTS

DRY

"WET" ELECTROLYTICS

are the first of this season's developments to be added to the regular MICAMOLD line of replacements. Leading radio receiver manufacturers who, incidentally, have not used wets for the past two years, agree that dry electrolytics are much more satisfactory.



- ★ They LOOK like "Wets"
- ★ They WORK like "Wets"
- ★ and are PRICED the same

PLUS these ADVANTAGES

- ★ Will NOT lose their electrical qualities when not in use.
- ★ CANNOT FREEZE in cold weather.
- ★ CANNOT LEAK electrolyte
- ★ Eliminate scintillation (sizzle when set is turned on)

SEE THEM AT YOUR JOBBER

MICAMOLD RADIO CORP.

1087 Flushing Ave. Brooklyn, N. Y.

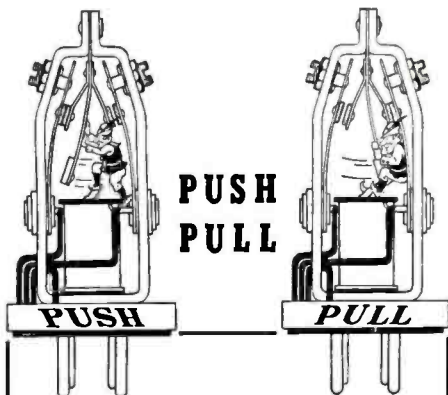
MADE BETTER TO
WORK BETTER



• The combination of high tensile strength that assures a lasting bond, and faster, cleaner work made possible by quick acting flux of pure water white rosin, has given Gardiner Rosin-Core Solders an outstanding reputation for efficiency and economy on radio work by expert or amateur. Yet, due to modern production methods and big sales, Gardiner Solders cost less than even ordinary kinds. Made in various alloys and core sizes . . . and in gauges as small as 1/32 of an inch . . . in 1, 5 and 20-lb. spools.



4815 S. Campbell Ave., Chicago, Ill.



PUSH-PULL AUTO RADIO VIBRATORS

A new, revolutionary principle in vibrator design—providing higher frequency of the reed with increased amplitude—positive contact of points with wiping action—50% less R.F. interference—more stable operation and increased life span. Internal assembly accessible for servicing.

James Vibrapowr units are available in both synchronous and non-synchronous types—in a wide range of models to meet every replacement need. Packed in factory sealed cartons with exposed terminals for testing.

James Vibrapowr units list at \$2.95 for the non-synchronous types—and \$4.95 for the DeLuxe Push-Pull synchronous types. All types are guaranteed for one year.

Literature and Discounts on request.

James Vibrapowr Co., Inc.
CHICAGO • ILLINOIS, U.S.A.

RECORDER NEWS

Now Comes a Portable Recording Studio for Dealers

A knock-down recording studio, available at low cost, is now ready to start retailers on a new merchandising spree in the field of recorders, blanks, accessories, etc. The novel unit comes from Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York City at \$199.

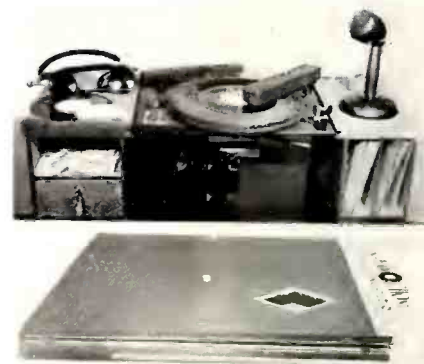
The collapsible double-booth sound-proof outfit includes a Speak-O-Phone Deluxe recorder, play-back phonograph, 2-way communication system, crystal mike, built-in P.A. system for ballyhoo, space for records, needles, etc., 100 blank records, 100 pkgs. needles, colored signs, idea booklets, etc.

The portable studio is designed to build store traffic to make and sell "personal" records of all kinds, to advertise the store at amusement parks, clubs, amateur nights; to dramatize the whole story of instantaneous recording; to increase interest in home recorders; to establish the dealer as headquarters for a new branch of home entertainment; to establish contact with prospects for other merchandise; and generally to give the dealer a fresh, interesting source of new profits.

There's room in the recording side of the booth for the playing of the smaller musical instruments, although the practice of recording just the customer's voice is becoming universally popular.



The portable studio here gets a noise-free record of the customer's voice.



View at bottom shows studio in knocked-down state. Upper picture shows complete equipment for the operator.

Recordisc Firm Ready with New Blanks

A vigorous entry into the recording blank field has been made by the Recordisc Corp., 395 Broadway, New York City, who are now selling a complete line of popular size blanks at popular prices through radio distributors and dealers exclusively.

Believing that "recording in the home has 'caught on' and is here to stay," Recordisc enters the market "after many years of specialization in the making of fine blanks." The company is owned and operated by the Gould-Moody Co., well known makers of the "Perfected" disc for professional use. The new blanks are presented for use with all types of home recorders now on the market or soon to appear. Both inflammable and non-inflammable blanks are offered.

Special packaging conveniences are offered to dealers and distributors as well as the consumer and extra attention is given to proper shipping. Recordisc will also have new store displays for dealers.

Actone Ready with New Cutting Needles

Announcement from the H. W. Actone Co., Inc., 370 Seventh Ave., New York City, is that the new Actone cutting needles are now ready for distributors and dealers. The needles come three to a package, priced at 75¢. They are individually ground and lapped to a mirror-like finish, specially designed to cut a clean polished groove.

Electrovox Names Reps in Nine States

Announcement has been made by Electrovox Co., 424 Madison Ave., New York City, that a group of 12 sales representatives have been appointed to handle the company's line of home recording discs, sapphire and steel cutting needles and sapphire playback needles.

Electrovox representatives include the following:

Mr. William J. Purdy, 420 Market St., San Francisco, Calif., for Northern Calif.; Wilmer S. Trinkle, 2324 Ripley St., Philadelphia, Pa., for Eastern Pa., Delaware & Md.; G. G. Willison, 306 West Bldg., Houston, Tex., for Texas; Albert Rapfogel, 700 Prospect Ave., Cleveland, Ohio, for Ohio; Stephen Redmann, 2322 Valmont St., New Orleans, La., for Louisiana, Miss., Western Tenn.; Harry A. Lasure, 2216 W. 11th St., Los Angeles, Calif., for Southern Calif.; Bob Whan, 831 No. Wabash Ave., Chicago, Ill., for Illinois; J. J. MacBride, 5451 Washington St., Chicago, Ill., for Southern Wisc., Iowa & Nebraska; Dave Lee, 1001 Westlake Ave., Seattle, Wash., for Washington & Oregon; Eliot E. Harding, 4925 Penn Ave., Minneapolis, Minn., for Minn., Northwestern Wisc., and the Dakotas; H. W. Grotzinger, 1500 Cooper Ave., Pittsburgh, Pa., for Western Penn. & West Va.; and Fred Groves, 3106 Edgewood Ave., Richmond, Va., for Washington, D.C., Virginia, North & South Carolina.

Presto Offers Complete Set of Sales Aids



To fit into the market where "there will be a huge demand for recording discs and needles this Fall," the Presto Recording Corp., 242 W. 55th Street., New York City, has developed a complete set of merchandising aids offered free to radio and music dealers handling Presto products.

These include a metal counter display cabinet containing 90 Presto Blue Label recording discs and 220 cutting and playing needles assorted for quick turnover. With each cabinet, the dealer receives 2 window display posters, 200 disc order cards imprinted with his mail address and 3 mats for local newspaper advertising.

In addition Presto is offering a new Home Recording Kit containing four 6 inch, three 8 inch and two 10 inch

Blue Label discs, a semi-permanent Stellite cutting needle and Transcription tone playing needle. The sale of this kit as initial equipment with a home recorder saves valuable time for retailers as it provides convenient accessories the customer needs to start with.

The Presto Blue Label disc was developed especially for home recording, and is identical with the professional disc which the firm has supplied for the past 5 years to leading recording studios and broadcasting stations except that the base is thinner, making it less expensive for the home user. The coating material is non-inflammable.

RCA Victorolas Shown at Conventions

Previews of a complete new string of RCA Victrola instruments, featuring "a new type of home entertainment instrument which combines radio and phonograph reproduction" were given to RCA distributors last week. Those of the middle and far West went to a 2-day session at the Palmer House, Chicago, and those of the East met at Haddon Hall, Atlantic City.

Henry C. Bonfig, commercial vice president, made the presentations of table and console instruments which are in a variety of modern and authentic period styles.

The new series covers every price bracket from the lowest to that of the deluxe home entertainment instrument. A new type of loud-speaker adds musical brilliance while reducing surface noise. Other improvements cover re-

design of electrical circuits, and more effective acoustic treatment of the Victrola compartment.

Mueller Marks 100,000,000th Clip



Ralph S. Mueller of Mueller Electric finishes hundred millionth clip for firm's officials.

Company officials of Mueller Electric Co., makers of Universal clips, recently celebrated the manufacture of the 100,000,000th clip at the Mueller headquarters at 1583 E. 31st St., Cleveland, Ohio. Ralph S. Mueller, senior partner of the firm, assembled the clip himself, and it will now be used for display purposes.

The 100,000,001st clip has been tagged and placed in stock unknown to the shipping department, but the ultimate purchaser will be given a prize of \$5 on presentation of the tag.

ANNOUNCING ★ HOME RECORDING DISC

HERE IT IS... A NON-INFLAMMABLE PROFESSIONAL QUALITY DISC PRICED FOR HOME RECORDERS

Check These Entirely New Features:—

- 1 Non-Inflammable Thread
- 2 No Surface Noise
- 3 Indefinite Shelf-Life
- 4 More Than 100 Perfect Playbacks
- 5 Cannot Injure Cutting Needles
- 6 Lowest Prices Ever Offered

PRICES
 6½".....5 for \$90
 8".....4 for .95
 10".....3 for 1.00
 FOR ADDED PROFITS
 Ask about Walco Sapphire
 Cutting and Playback
 Needles.



JOBBERs: Exclusive Territories Open. Write or wire today for sample disc.

DELIVERIES AVAILABLE IMMEDIATELY

ELECTROVOX COMPANY

424 MADISON AVENUE, NEW YORK, N. Y.—PLaza 8-2740



THE ESSEX
 \$159.50
 With
 Automatic
 Changer

FOR 8 YEARS

Consistent
 DEALER
 PROTECTION

Consistent
 STYLE
 LEADERSHIP

Consistent
 ENGINEERING
 PRE-EMINENCE

Consistent
 PROFIT for
 ANSLEY DEALERS

The most
 complete line of
 phonographs and
 combinations

and

ANSLEY
 DYNATONE
 The Leader of
 Amplified Pianos

ANSLEY DYNAPHONE

"Superb Tone from Records and Radio"

Make ANSLEY your NUMBER ONE LINE for the coming season

ANSLEY RADIO CORPORATION
 4377 Bronx Boulevard New York, N. Y.

**NOW . . . brace yourself
for Big News! . . .**

THE NEW MELLAPHONE RECORDER

**Connects easily to any radio
Multiplies recorder market.**

- Made by a recognized manufacturer of talking picture and phono equipment.
- Recordings from microphone, radio, phono records, etc.
- Records and plays 12" records.
- Precision cutting head; built-in pre-amplifier; high grade microphone; separate pickup 50-5000 cycles response.
- High fidelity phonograph, home broadcaster or PA unit.

**MELLAPHONE CORPORATION
Rochester, New York**



Wire or write
today for
prices,
discounts,
territories, etc.

CROWE AUTOMATIC CUTOUT

HERE'S a new source of profit for dealer and service man. It's the **CROWE Automatic CUTOUT**. Every car, whether radio-equipped or not, needs one. It concentrates power for quicker starting, and eliminates vibrator trouble.

SAVES RADIO VIBRATOR
No longer need car owners worry about radio vibrator trouble due to starting the engine while radio is playing. This complaint is eliminated with the Crowe Automatic Cutout. It shuts off radio the instant motorist steps on starter. This prevents sticking or burning out of vibrator because of voltage drop.

INSURES QUICKER STARTING
There is still another use for the Crowe Automatic Cutout. It insures quicker starting. It not only shuts off radio, but also headlights, heater, foglights and other accessories, concentrating power for the starting operation. This is particularly important for cars equipped with "Sealed Beam" lights. It restores circuit after engine is started.

Ask your Radio Parts Jobber about extra discount on special dealer package and free advertising material.
Ask for Folder S-2.

**CROWE NAME PLATE & MFG. CO.
1771 GRACE STREET CHICAGO**



A pair of traffic-builders at Millner's store, Lynchburg, Va. Recording studio is adjacent to Record Bar (by Bitter Construction Co.). Millner's rates Bar as "handsome, compact . . . good for efficiency and speed."

"Okeh" Records in Snappy Come-Back

With the announcement that the famous old label "Okeh" is now substituted for the "Vocalion" name, dealers are getting promotion kits with posters, streamers, window displays, artist photos, easel cards, etc., designed to tell the story of "the greatest array of talent on any 35¢ label."

Columbia Recording Corp., 1473 Barnum Ave., Bridgeport, Conn., decided to revive the Okeh label with a vigorous promotion campaign involving radio, newspapers, trade papers, and the point-of-sale material. The new purple-and-gold label Okeh will include popular, hillbilly, race and foreign records.

Recording stars to be represented on Okeh are Gene Krupa, Count Basie, Dick Jurgens, Frankie Masters, Cab Calloway, Tommy Tucker, Ben Bernie, Lawrence Welk, Al Donahue, Ginny Simms, Frankie Carle, Billie Holliday, and many others.

Edward Wallerstein, Columbia president, believes this artist line-up to be "without equal in the 35¢ field." Sales manager Paul Southard made the Okeh announcements to district managers, and the 40 Columbia jobbers made the

dealer presentations from coast to coast.

The promotion campaign is being handled mainly by Wayne Varnum, chief of the popular division of the CRC sales promotion department.

Varsity Makes First Kaye Records

Last week, two executives of the United States Record Corp. went to Chicago to personally supervise the first recordings to be made by Sammy Kaye on the Varsity label. Eli E. Oberstein, vice-president, and Harry Smith, chief engineer, made the trip. The first Kaye numbers come from the score of the new Al Jolson show.

Magnavox Dealers to Dine

The annual Magnavox Dealers' Dinner will be held July 30 at the Hotel Stevens, Chicago, during the summer convention of the National Association of Music Merchants. Unveiling of new models and an interesting program are promised by officials of the Magnavox Company.

A GOOD NAME GOES A LONG WAY

Ken-Rad Radio Tubes can be depended upon to bring you profits because they are dependable in service and easy to sell.
KEN-RAD TUBE & LAMP CORP.
OWENSBORO, KY.
Export Dept.
116 Broad St., New York, U.S.A.
Cable Address: Minthorn, New York

KEN-RAD

DEPENDABLE RADIO TUBES

Automatic Changers and Uniform Records



C. P. Cushway of Webster-Chicago, who here makes a constructive suggestion regarding records.

The automatic record-player manufacturer and the phonograph-record maker are partners in a great musical enterprise—increasing the appreciation of selective classical and popular music, declares C. P. Cushway, general sales manager of Webster-Chicago. That these efforts are appreciated and successful is evidenced in the spontaneous response and demand exhibited by the public today. The phonograph record has definitely become a part of the national home life of America.

To obtain the most for its money, the consumer has the right to demand that all manufacturers involved work together in establishing standards for their respective units that will harmonize in their functions. Some justified complaints have been registered by consumers against "jamming" of record players or "chipping" of records or automatic playing that is not "synchronized" on all brands of records.

NEW PROBLEM

We, as manufacturers of automatic record players, have from the start recognized that only efficient handling of records automatically would earn for our product the respect of the consumer. It has not been an easy task to design an automatic device for playing and changing records as found on the market a year ago. Naturally, the manufacturers of these records could not anticipate the advent of the home-type automatic changer. Consequently, there has been little or no standardization, especially on the points essential to the needs of automatic changers.

Unquestionably, the automatic record changer is here to stay by public demand. Therefore, it seems virtually imperative that the record manufacturers recognize the advantages of designing and producing records that will co-ordinate with automatic record

changers and not be limited to successful operation only on manual players. Perhaps 98 per cent of the records made today are satisfactory for operation on the quality type of automatic changer, but it is the remaining 2 per cent which proves most annoying and which finds the consumer uncertain as to whether the difficulty is the fault of the automatic changer or the record.

Heretofore, the consumer has had little to be concerned about in his selection and use of records. Price, quality and size, whether 10 in. or 12 in., have been about the only factors involved. Now, however, there are other factors to be considered and which are beyond the control of the automatic-changer manufacturer:

POINTS FOR IMPROVEMENT

- (a) *Records that become badly warped.* While this is not always due to faulty manufacture, it is important that every precaution be taken to insure non-warping of records under ordinary conditions and handling. Even the best of automatic changers cannot overcome the "cork-screw" periphery of a badly warped record.
- (b) *Variations in thickness of records.* Standardization on this point, similar to that found in other industries or as set up by the Underwriters, would be very helpful. Most good record-changers will take care of variations ranging from .025 in. to .030 in. in thickness; yet it would be a definite
- (c) *Rough and irregular edges.* Heretofore, the shape or finish of the record edge has meant little in conjunction with manual players. But on automatic changers, edges that are irregular, concave, grooved, finned or beveled, are a definite source of trouble. It is this irregularity of edges that is generally the cause of jamming. An easy and common cure is for the consumer to apply emery or fine sandpaper to the edge to obtain a semi-circular shape. However, the best remedy would be for each manufacturer of records to set up, as part of his record production specifications, the finishing of all edges in a true semi-circular contour from both sides of the record.
- (d) *Starting and finishing channels.* Most quality-type automatic changers handle successfully the variations in the width of blank space on a record between the edge and the starting groove; also the finishing point on the average record is not at all beyond the automatic changer's functions. Here again there is room for standardization as to starting grooves and finishing points, especially to insure a uniform type of finishing spiral that will "aid" the record-changer performance.

VELOCITY **AMPERITE** **P.S. DYNAMIC**

2 GREAT MIKES!



AMPERITE VELOCITY
with exclusive
ACOUSTIC COMPENSATOR

Actually a combination Velocity-Dynamic, having best features of both types.

Model RBHk, hi-imp: (RBMk, 200 ohms); LIST \$42.00
Model RBSHk, hi-imp: (RBSk, 200 ohms); LIST \$32.00



ELIPSOID PICKUP PATTERN

Features new superior **UNI-DIRECTIONAL elipsoid pickup pattern.**
ELIMINATES FEEDBACK TROUBLE. HAS FLAT RESPONSE.

Model PGH, hi-imp: (PGL, 200 ohms); 40-10,000 CPS,..... Chrome LIST \$32.00
Model PGAH, hi-imp: (PGAL, 200 ohms); 70-8000 CPS,..... Chrome LIST \$25.00

AMPERITE KONTAK MIKE

Puts musical instruments across. Beautiful results with any amplifier, record player, and most radio sets.

MODEL SKH (hi-imp)..... LIST \$12.00
MODEL KKH, with hand volume control, LIST \$18.00
Plug extra LIST \$1.50

AMPERITE WRITE FOR FREE SALES AIDS
561 BROADWAY
NEW YORK





ACME IS O. K. WITH JOBBERS . . .
because Porto-Power batteries are easy to sell. The customer's confidence is always there because Acme Batteries are backed by a twenty-year reputation.

ACME IS O. K. WITH DEALERS . . .
because Porto-Power batteries give them the edge over competition. Extra low prices means extra profits.

ACME IS O. K. WITH SERVICE MEN . . .
because Porto-Power batteries give high power performance. This extra margin of performance always means greater consumer satisfaction.

ACME IS O. K. WITH CONSUMERS . . .
because they know that Porto-Power batteries are factory-tested for longer life. That's why they insist on Acme for original equipment and replacement.

From Acme's own laboratories and plant comes a complete line of batteries, designed to meet the most exacting requirements. They are guaranteed to fit standard makes of portables. All Acme batteries are union made.

SPECIAL ACME DESIGN AND CONSTRUCTION SERVICE

If your battery problem is unique, if you want a special construction, call on Acme. You get this extra service at no extra cost and at a tremendous saving in time and money. Write today for illustrated Bulletin R.



Emerson Markets Own Tube Line

Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York City, is now in the tube business, and has announced a line of Emerson Quality tubes for replacement use to be distributed throughout the world.

Jack Geartner, former sales manager of Arcturus Radio Tube Co., has been named manager of the tube division. Widely known throughout the U.S., Mr. Geartner has for the past 12 years gained extensive experience in selling, advertising and merchandising tubes.

The new tube line, which appears in all Emerson models for 1941, includes Glass, G, GT, Metal and Loktal types. They are guaranteed, and they come in sealed, 2-color cartons with a detachable tab to simplify re-ordering. The line was enthusiastically welcomed by U.S. distributors, as well as foreign ones, at the Emerson convention.

"The Representatives" Headed for New Success

A new constitution for "The Representatives" of Radio Parts Manufacturers was one feature of the Repts annual convention last month in Chicago. Almost 100 members attended the meetings, where the president S. K. MacDonald presided.

The new constitution provides for the organization of local chapters throughout the country, so that sectional groups may work more effi-

ciently on local problems. Actual work on the chapters is now under way; applications have been prepared by groups in the Southern States, Texas, Chicago, and Atlanta.

Various committees were complimented for their recent work. D. R. Bittan and Perry Saftler were cited for good work on the Representatives Special Train to the last Parts Show in Chicago; 102 radio men took the trip. Extra credit also went to the membership committee—to chairman Nevins and assistants Joseph Friedman, Schenck and Steinberg. Secretary and treasurer David Sonkin, 220 E. 23rd St., New York City, was awarded a surprise gift for five years of faithful work.

New members elected at the meeting were Tim Coakley, 17 Beacon St., Boston; Irvin I. Aaron, 4028 N. 16th St., Milwaukee; and J. A. McGuire, 5th & Chestnut St., Philadelphia.

General Television in Elaborate New Quarters

A new and up-to-the-minute plant at 1240-58 N. Homan Ave., Chicago, has been occupied by General Television & Radio Corp., which now has 30,000 sq. ft. of space all on one floor.

Modern equipment for progressive production, daylight working conditions, and recreational facilities for employees have been emphasized at the new site. General was formerly located at 513 S. Sangamon St., Chicago.

Mr. Radio Serviceman:

**A NEW SEASON BEGINS . . .
MOVE FORWARD WITH RSA!**

Plans announced at the Radio Parts Trade Show make it more imperative than ever that you belong to RSA. All the new developments planned by manufacturers place increased responsibility on trained top-flight servicemen. Join other good servicemen in RSA! Send Coupon Today!

MAIL THIS COUPON NOW!

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

I am interested in RSA Membership. Tell me about it.

Name

Address

City State

*Let's Grow Together
in 1940*



**RADIO SERVICEMEN
OF AMERICA, Inc.**

RELIABLE SERVICE ASSURED

JOE MARTY, JR., EXECUTIVE SECRETARY
304 S. DEARBORN STREET, CHICAGO, U.S.A.

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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.

Fada Ready With New Line

New York showing of the 1941 models of the Fada Radio & Electric Co., 30-20 Thompson Ave., Long Island City, N.Y., was staged at the Governor Clinton Hotel last month with new table models, consoles, phonograph combinations, home recorders, portables, farm radios and export models on display.

Besides the new recorders and the highly seasonal portables, a group of "Catalin Radios" in striking color combination attracted considerable attention. These "gem-like" plastics with translucent illuminated dials and colorful grilles were enthusiastically received.

Fada is offering a new series of displays for window and interior use, plenty of counter cards and price placards, attractive stands, neon signs, streamers, electric clocks, glossy photos, etc. along with newspaper ads.

At the show, the interest of foreign buyers was exceptional, considering the limitations imposed by the war. Radio men from Chile, Brazil, and other regions of South America attended, along with more from Mexico, Portugal, South Africa, London and India. Diego Fernandez is manager of Fada's export division.

Four New Displays Are Here



Included in the new radio promotions of Continental Radio & Television Corp., 3800 Cortland St., Chicago, are four new displays for store use in showing and demonstrating the new Admiral line of radios. "Smart set—with exclusive Aeroscope" is the catch phrase. These are for compact and consoles; displays for portables were announced earlier.

Winning special favor in the trade is the girl display (one of the two shown herewith)—a colorful, life-size show piece for a single table model. It stands 61 in. high. All the displays are from Admiral jobbers.

A Help to Dealers

Permo Products Corp., 6415 Ravenswood Ave., Chicago, have prepared a booklet giving useful information on cutting needles, records, improving all kinds of recordings. Features an audible spectrum chart.



RIMCO Complete Dynamic Signal Chaser

FIRST with speaker enabling you to "listen in" on signals in any radio channel from antenna to voice coil. FIRST to feed broadcast signals into P.A. amplifiers, etc. TESTS 3 channels simultaneously, up to 15 MC.

VACUUM TUBE Voltmeter enables you to see as well as hear gain-stage. . . MEASURES AVC, AFC and DC voltages at sensitivity of 2 meg. per volt. . . resistances, 1 ohm to 10 meg. FASTEST and SIMPLEST "signal chaser" on the market. . . MAKE MORE MONEY EASIER with a RIMCO DYNALYZER!

See your parts jobber or write for "pay-as-you-earn" plan and free circuit diagram, TODAY!

RADIO INSTRUMENTS MFG. CO.

Box 1121-T, Jackson, Miss.

Export Division
646 N. Michigan Ave., Chicago, Ill., U. S. A.



TRIPLET Model 1200-F Push-Button Type

Dealer Net Price
\$27.84

Push-button switching by a new, simpler way makes the Model 1200-F an entirely automatic Volt-Ohm-Milliammeter with maximum speed and minimum switching. Only one button need be pressed for any range and test setting. Ranges: DC 0-10-50-250-500-1000 at 20,000 ohms per volt. . . AC 0-10-50-250-500-1000 at 1000 ohms per volt. DC Milliampers 0-1-10-50-250. . . 0-50 DC Microampers. . . Resistance 0-500 Low Ohms, shunt type circuit; 0-300,000 ohms; 0-3 and 0-30 Meg-ohms, series type circuit. Self-contained batteries for all ranges. RED • DOT Lifetime Guaranteed Instrument, rectifier type. Attractive metal case with rich brown suede enamel finish. Panel with new three-tone finish. Dealer Net Price. . . . **\$27.84**

Write for Catalog—Section 197 Harmon Drive

THE TRIPLET ELECTRICAL INSTRUMENT COMPANY
Dayton, Ohio

Interference

Filters



● It's easy to suppress troublesome radio noises the Aerovox way. And it's profitable, too, for serviceman, retailer, jobber.

Six different types take care of six general classes of noise sources. Literature indicates what type to use. For the most critical cases, the Aerovox Interference Analyzer instantly indicates correct filter and how to apply it.

CATALOG . . .

Ask jobber for latest data on these Aerovox interference filters, and the Interference Analyzer. Or write us direct.

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

MUSICAL TOWERS

For Bigger Sales and Service Returns

Here's a sure profit-maker! Handle the complete Sunco amplifying system of tower and heltry chimes. It's the best sound installation proposition in the field—not only do you get the best equipment, but also expert technical assistance and sales help.



Sunco "Master" has wide range of usage. Broadcasts chimes or organ music. Powered for 2, 6, and 12 mile dia. coverage. Can be used as P.A. unit. Automatic record changer play 10" and 12" records mixed. We have many specially recorded low-noise acetate discs for this work. Ask about them. **REAL MONEY FOR SOUND EQUIPMENT SPECIALISTS** — Protected territory, everything furnished, speakers, accessories, installation and service directions. Get the facts about this

money-making offer. No obligation, **WRITE TODAY!**

SUNDT ENGINEERING COMPANY
4763 Ravenswood Ave., Chicago, Illinois

Sell & Use LITTELFUSES



Write for Catalog



Get this new catalog FREE. Shows complete line of Littelfuses for radio, transmitters, rectifiers, meters, instruments. **FUSE MOUNTINGS**—all kinds. When you want fuses—**LITTELFUSE!** See your jobber or write:

LITTELFUSE INC.
4763 RAVENSWOOD AVE. CHICAGO, ILL.

National Union Interest Sold to Philco

Philco Corp. has bought a substantial interest in National Union Radio Corp., Newark, N. J., makers of radio tubes for new sets and for replacement. The action was announced by NU president S. W. Muldowny, as the first step in an expansion program for his firm.

"National Union will continue as a separate company to manufacture its products and distribute them nationally under its own trade-mark, as in the past," said Mr. Muldowny. "The greater financial strength resulting from our connection with Philco, together with additional working capital which has been raised, will enable us to make a larger place for ourselves in the radio tube industry. It is planned to invest substantial amounts of money in our plant further to modernize equipment and increase our tube-making capacity to take care of anticipated demands. Engineering and research experience of the Philco Research Laboratories will be placed at the disposal of National Union."

Emerson Sees Good Year for New Line

Some 250 distributors, from all parts of the U.S. and South America, saw the 1941 Emerson line of small radios, consoles, phonoradios, recorders, portables, television and farm radios at the annual jobber convention at the Hotel New Yorker, New York City, June 24-25.

Emerson Radio & Phonograph Corp. president Ben Abrams, opened the meet with a statement on the increasing public demand for radios since the war abroad started. The firm's own pick-up in business this year is about 25 per cent over last year; personnel and facilities have been expanded. Mr. Abrams predicted that over 10,000,000 sets will be sold during the next 12 months.

Emerson's entry into the replacement tube business was announced, along with complete radio promotion and merchandising plans. The convention program also included entertainment and the awarding of prizes to sales quota winners among the distributors.

Arvin Radio in Big Expansion

A steady upswing in the radio business of Noblitt-Sparks Industries, Inc., Columbus, Ind., is the background for an announcement that the firm is now expanding its plant facilities at the Indiana headquarters of Arvin. The most modern equipment and production methods are being installed, according to G. W. (Tommy) Thompson, Noblitt-Sparks vice president.

Expansion was necessary because of increased radio business activity during the last two years, according to Mr. Thompson. He reports that in 1939 the company sold nearly four times as many radios as in 1938. For the first six months of 1940 Arvin has sold 20 per cent more radios than in all of 1939.

The company is well known for many products which have been nationally advertised and sold under the Arvin name for many years. The firm has total capital, surplus and reserves of more than \$5,000,000—has eight factories in south central Indiana, including the radio plant in Columbus, Indiana. Noblitt-Sparks Industries specializes in the manufacture of low-priced radios retailing from \$6.95 to \$27.95.

The new line of Arvin Headliner models for 1941 is being introduced to the trade now. The line includes 3 to 6 tube sets in nine different cabinet designs. Plastic, walnut wood, and unbreakable cabinets are featured in ivory and walnut finishes, to make a total of 14 model numbers.

Big Increase in Farnsworth Promotion

An advertising program which will represent a 50 per cent increase over similar expenditures last year, has been announced for the Farnsworth line of radios and radio-phonographs, and the deluxe products of the Capehart division. The news comes from Farnsworth general sales manager Pierre Boucheron.

Distinctive ads will appear (starting after Labor Day) in *Life*, *Saturday Evening Post*, *Colliers*, *Time*, *New Yorker*, *Town and Country*, and *Country Life*. Radio stations will be used in 54 key cities from coast to coast.

Connor Stars in New Lecture Series

With a series of appearances before a large number of radio service groups in the states of Washington and California, George C. Connor, commercial engineer for Hygrade Sylvania Corp., has completed a new string of practical lectures in the Pacific Coast area.

Profit angles of radio servicing today, as well as many new circuits and tubes, were presented to Pacific radio men, in interesting, authentic, illustrated talks by expert Connor. Many jobbers, and Sylvania reps in the territory, were active in sponsoring the meetings.

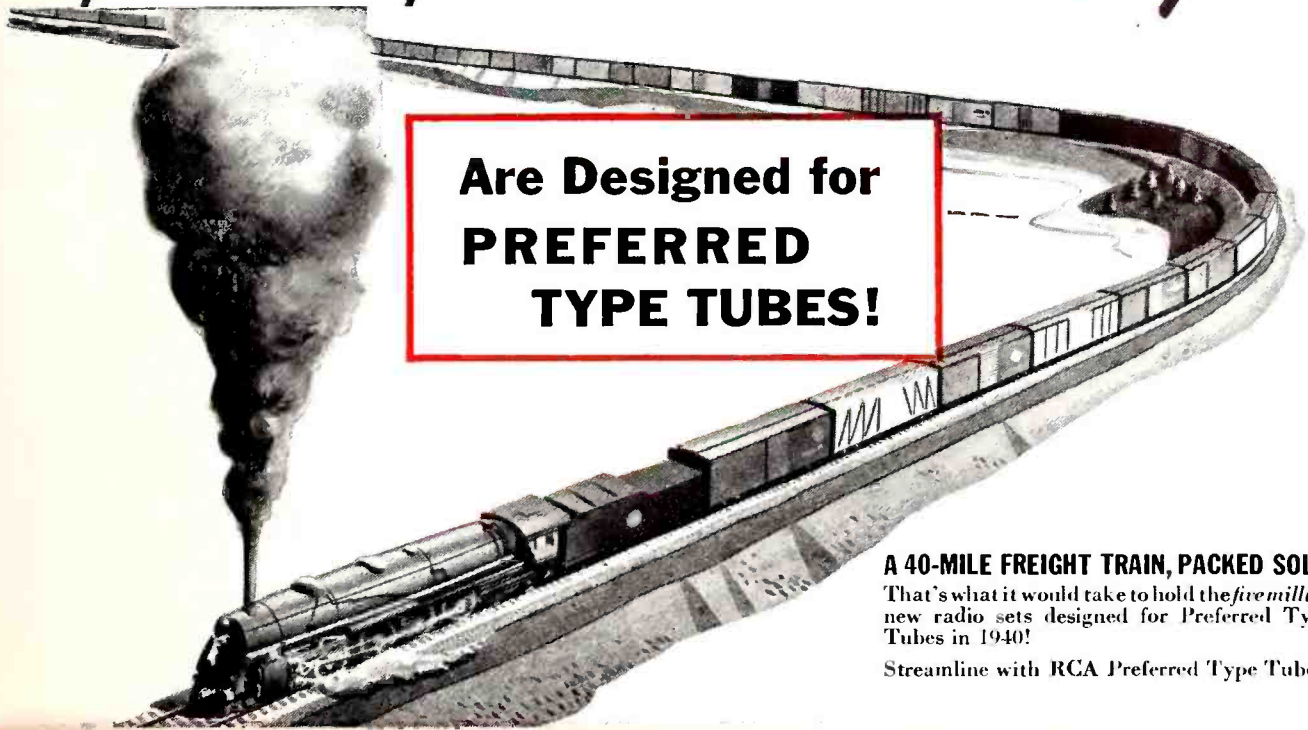
Crosley Names Clement Engineering Head

The new manager of the engineering division of the Crosley Corp., Cincinnati, is Lewis M. Clement, according to word from Raymond C. Cosgrove, vice-president and general manager of Crosley's manufacturing division. Before accepting the Crosley post, Mr. Clement was chief engineer, and vice-president in charge of research and engineering for RCA.

Manufacturer Needs Representatives

A manufacturer of a complete line of home recording equipment in New York state now wants representatives to call on jobbers and present the line. Those interested may contact the company by writing to Box 133, RADIO TODAY, 480 Lexington Ave., New York City.

5,000,000 SETS *this year*



**Are Designed for
PREFERRED
TYPE TUBES!**

A 40-MILE FREIGHT TRAIN, PACKED SOLID

That's what it would take to hold the *five million* new radio sets designed for Preferred Type Tubes in 1940!

Streamline with RCA Preferred Type Tubes!

WHO Prefers "Preferred Type Tubes" . . . ?

17 Manufacturers of radio receivers in addition to RCA Victor have publicly endorsed the RCA Preferred Type Tubes Program. 17 Manufacturers in addition to RCA Victor *are engineering their current models* around Preferred Type Tubes! Almost 5 million sets coming off the production lines this year will use Preferred Type Tubes—approximately half the industry's entire output!

HOW Has This Acceptance Taken Hold . . . ?

When the Program was first announced, only 32% of all RCA Tubes taken by manufacturers for new equipment were Preferred Types. By April, 1940, this percentage had spurted to better than 78%. Today, it is around the 90% mark!

WHY Has Such Backing Been Given . . . ?

Manufacturers were quick to agree that inventories could be simplified; warehousing costs lowered; deliveries speeded; and better, more uniform tubes turned out at lower costs, with *fewer* tube types in use. With *preferred* types, manufacturers can now design and build practically any type of radio receiver for best performance at lowest overall cost!

WHEN Will The Industry Benefit . . . ?

These manufacturers are benefiting *today*. They have found that the Preferred Type Tubes Program performs as promised! And as this year's 5,000,000 sets built around the program go into use, the *replacement* tube market will improve equally. Distributors, dealers and servicemen will all find that increased turnover of fewer, faster-moving types means more profitable business . . . better tubes *and* better service to consumers!



Preferred Type Tubes

RCA Manufacturing Co., Inc., Camden, N. J.
A Service of Radio Corporation of America



© N. Y. W. P.

As Advertised in *THE SATURDAY EVENING POST*

NOW! Make an Automatic Phonograph of your Present Radio

New 1941 *Motorola*

Wireless

AUTOMATIC RECORD CHANGER

ONLY \$29.95
Slightly more in South



THREE SENSATIONAL FEATURES!

1. Changes eight 10 inch or seven 12 inch Records Automatically.
2. Requires no connections, hook-ups or wiring to your radio... just plug into 110 volt AC 60 cycle current in any part of the room.
3. Makes an Automatic Phono-Radio Combination of any Radio regardless of age, make or model.



Now... ENJOY THE
WORLD'S FINEST RECORDED MUSIC
when you want it... as you want it!

HEAR EXCITING, RADIANT

CONCERT QUALITY TONE IN NEW 1941

Motorola RADIOS and PHONO-RADIOS

Thanks to radio, America has an educated ear for music. That educated ear will thrill to an entirely new kind of radio performance in the 1941 Motorola Home Radios. "It's a musician's instrument," says Tito Schipa, internationally famous operatic tenor... and such famous musicians as Mary Martin, Allan Jones, Ted Weems, Abe Lyman and Dick Powell, join in the chorus of enthusiastic approval. See, hear and choose a Motorola for your fun and education in 1941!

MODEL 83F1. Automatic Record Changer Phonograph-Radio: Changes Eight 10" or Seven 12" Records: Crystal Pick-Up: 6 Push Buttons: 3 Bands: 8 Tubes including Rectifier: "Aero-Vane" Loop Antenna: 12" Speaker: Walnut Veneer Lowboy Cabinet.



MODEL 103CK2. "Self-Tuning" Motorola: Automatically Station after Station all day: 10 Tubes including Rectifier: 6 Push Buttons: 3 Bands: 12" Speaker: Semi-Rotatable Vane" Loop: Magnificent Veneer Cabinet: Television and Phono Connection.



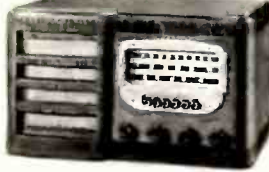
MODEL 50X1. 5 Tubes including Rectifier: AC/DC Superhet: "Aero-Vane" Loop Antenna: Brown Plastic Cabinet: Big Radio Performance at a Low Price.



MODEL 56X1. 5 Tubes including Rectifier: 5" Speaker: AC/DC Superhet: "Aero-Vane" Loop Antenna: Sensitive and Selective: Large Brown Plastic Cabinet.



MODEL 56XAW. 5 Tubes including Rectifier: AC/DC Superhet: "Aero-Vane" Loop Antenna: 4 Automatic Push Buttons: 5" Speaker: Walnut Cabinet.



MODEL 62T1. 6 Tubes including Rectifier: 3 Gang: 2 Bands: 6" Speaker: Tone Control: "Aero-Vane" Loop: Large Walnut Veneer Cabinet: 6 Buttons.



MODEL 58FRC. Automatic Record Changer Phonograph-Radio: Changes Eight 10" or Seven 12" Records: Crystal Pick-Up: 5 Tubes including Rectifier:

Motorola Home and Car Radio

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