

RADIO 4171 TODAY

Yearly Caldwell-Clements, Inc., 480 Lexington Ave., New York, N. Y. September, 1936

Auto Sales
REFRIGERATOR SALES RISE
UPTURN IN
Road to Spend 4 Million
CINCINNATI
STEEL OUTPUT AT TOP RATE OF
BANKERS PREDICT STEADY TRADE GAIN
RAILROAD EARNINGS RISE 129%
PACKARD DOUBLING CAPACITY OF PLANT
BOSTON
HOUSING PERMITS RISE TO NEW HIGH
CHICAGO
Motor Employment Figure Near Peak
Metal Production In Arizona U
Grain and Meats Lift Cash
HOMES R
New Pen
Rus
Was Highest Since
Rise to 2 Plants
MARKET IS BUSIER IN 92% OF CITIES
Industry Spu
Rising Output
FALL LEASES FOR MANY APARTMENTS
BUILDING OPERATIONS KEEP AT HIGH LEVEL
GOODS VOLU
Rise Over Year Ago Last Week
JULY EMPLOYMENT HIGHER
SALE TRADING HIGHER

ALL BUSINESS IS BOOMING—HE'LL MAKE THE SALE!

Your market measured— Our promise kept



Ten years ago this November, the National Broadcasting Company was launched with this statement of its first Chairman of the Board, Mr. Owen D. Young:

THE market for receiving sets in the future will be determined largely by the quantity and quality of the programs broadcast.

"We say *Quantity* because they must be diversified enough so that some of them will appeal to all possible listeners.

"We say *Quality* because each program must be the best of its kind.

"The purpose of the National Broadcasting Company will be to provide the best programs available for broadcasting in the United States."



Through ten years, the National Broadcasting Company has hewed to its purpose without swerving. *Programs still come first.* And NBC network programs have won the largest audience in the world, as proved by countless polls among radio listeners.

These programs have done more to sell the better types of receiving sets than all the high-powered salesmanship we could command. Dealers know this, and are alert to use the appeal of the "Big Name" NBC network stars in putting over the sale of a higher-priced set.

So we say now, "Get the line-up of the great NBC Ten-Year Anniversary Feature Programs. Familiarize yourself with the finest all-star schedule of radio programs ever offered to your prospects. Talk them up—and watch your sales of fine sets step right along with them!"

Listen to the RCA Magic Key Program on the NBC Blue Network, Sundays 2 to 3 P. M. Eastern Daylight Saving Time

NATIONAL BROADCASTING CO., Inc.

A Radio Corporation of America Service

NEW YORK

•

CHICAGO

•

WASHINGTON

•

SAN FRANCISCO



Sensational NEWS FOR THE RADIO DEALER

Majestic The Plus Radio

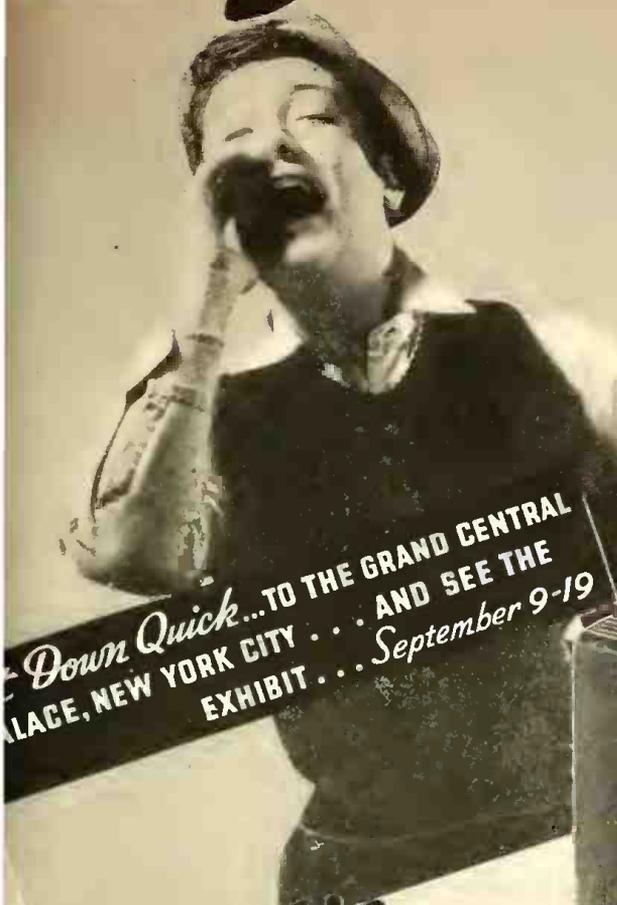
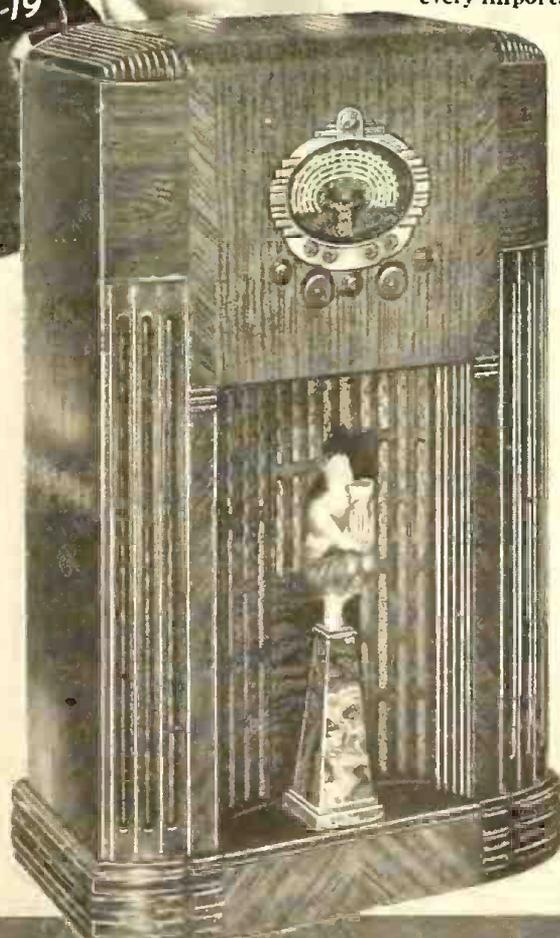
MIGHTY MONARCH OF THE AIR

SCOOPS THE WORLD WITH THE NEW 1937 SETS

YEARS AHEAD OF THE INDUSTRY

MAJESTIC... *The Plus Line* ... gives the public every important scientific feature to be had in any radio set made, *Plus* ... additional improvements in design, construction and performance offered exclusively by Majestic.

Irresistible eye-appeal is paralleled by matchless performance, *Plus* hitherto undreamed-of values in each of the fifteen super-powered "De Luxe" models. Every model is a custom-built job, but competitively priced to put it within reach of the masses. The cabinets are objets d'art ... breath-taking beauty that will capture the buying preference of America. History-making Majestic leadership is destined to soar to a height which will amaze the radio world. *Investigate! Phone, wire or write today!*



Down Quick... TO THE GRAND CENTRAL
PALACE, NEW YORK CITY ... AND SEE THE
EXHIBIT ... September 9-19

Majestic

The greatest name in radio and the greatest profit opportunity in all history for the radio dealer

Majestic... *The Plus Line* ... gives you a profit in three ways: Sold direct from factory to you means extra profits. Selective limited distribution in a territory assures you greater sales volume. Increases tremendously the traffic in your store.

More than \$29,000,000 spent advertising Majestic... Plus More than 5,000,000 Satisfied Majestic Users... Plus Revolutionary New Merchandising Plan.....

Guarantees you immediate and future sales on a sale that will paralyze your competition. Telephone or wire us NOW!

Majestic

MIGHTY MONARCH OF THE ARCTIC



Majestic Refrigerators incorporate basic refrigeration improvements invented, developed, tested and perfected during the past years by the world's outstanding scientists and engineers.

Majestic RADIO & TELEVISION CO.

600 WEST ADAMS ST. CHICAGO, ILL.
FACTORY: MARION, INDIANA NEW YORK OFFICES: 315 BROADWAY

RADIO INDUSTRY SEETHES WITH INTEREST AS



NOON ADJOURNMENT of General Household's recent two-day Executives' Conference. "Floor traffic" was terrific as distributors, amazed at sensational new radio values, crowded around models on display. Even radio veterans couldn't help twirling **TELEDIAL!** Sure proof here of the drawing power this amazing "self-tuning" feature will have with your prospects.



THE EARNEST GENTLEMAN in the white suit is E. E. Forbes of Birmingham. The camera caught him telling Harry Alter of Chicago: "We'll sell 'em faster than they can build 'em." Next day Harry showed the line to Chicago dealers and took immediate shipment orders for over 1700 sets.



AMONG FIRST RETAILERS to inspect new Grunow line was Dave Reddaway (center) of People's Outfitting Company, Detroit. He came via plane after hurry call from Leonard Turnbull (right) Grunow distributor in Detroit, advised him Grunow had lifted the lid on radio values. Mr. Reddaway pronounced new Grunow sets exactly the kind of merchandise retailers need to overcome mail-order chain competition.

NEW GRUNOW "TELEDIAL TWELVE" . . .
Automatic Tuning . . . Accurate to A Hairline, 15 Stations in 15 Seconds! A Twelve-Tube Set . . . Metal Tubes, 12-Inch Speaker . . . All-Wave, All-World Reception . . . Patented "Violin-Shaped" Cabinet

AND NEW GRUNOW "ELEVEN" . . .
An Eleven-Tube Radio At The Price Of A "Six"! All-Wave, All-World Reception . . . Metal Tubes! 12-Inch Speaker . . . "Violin-Shaped" Cabinet

ALSO . . . *New 1937 Grunow Radios For Farm . . . Boat . . . And Camp Use*

TWIN SENSATIONS THAT



GRUNOW PRESENTS "TELEDIAL 12" AND "ELEVEN!"



SHIRLEY TEMPLE WAS THERE! This cutout of the beautiful little 20th Century-Fox star, in natural-color, astounded distributors with its lifelike attractiveness. This display and a smashing tie-up plan featuring Shirley and her forthcoming picture, "The Bowery Princess," are now available to all Grunow dealers.



LEADING CHICAGO STORES rush to display TELEDIAL—Almost before the Executives' Conference was over Chicago's biggest department stores were devoting whole windows to Grunow "Eleven" and "TELEDIAL Twelve." The above photo shows how one famous Loop store went into action. Sales zoomed within 24 hours after the display was put up.

SHOOK THE RADIO WORLD!



GRUNOW has done in radio what Ford did in the automobile business! With a revolutionary new policy of *concentrated mass production!* A line composed exclusively of proved price and quality leaders.

Grunow dealers can now concentrate on a few fast-selling strongly-advertised items—four console sets, one table model! Priced \$19.95 and up!

And—Grunow gives you TELEDIAL! Radio's hottest feature sensation for 1937. Nationally advertised as the "self-tuning" radio—with Shirley Temple as the TELEDIAL ad-girl!

With TELEDIAL—record-breaking values—and powerful promotion, Grunow will make radio history in 1937. Let us give you the details. Get in touch with your nearest Grunow distributor, or, mail us the coupon below. Do it today!

WIRE DISTRIBUTOR OR MAIL THIS COUPON

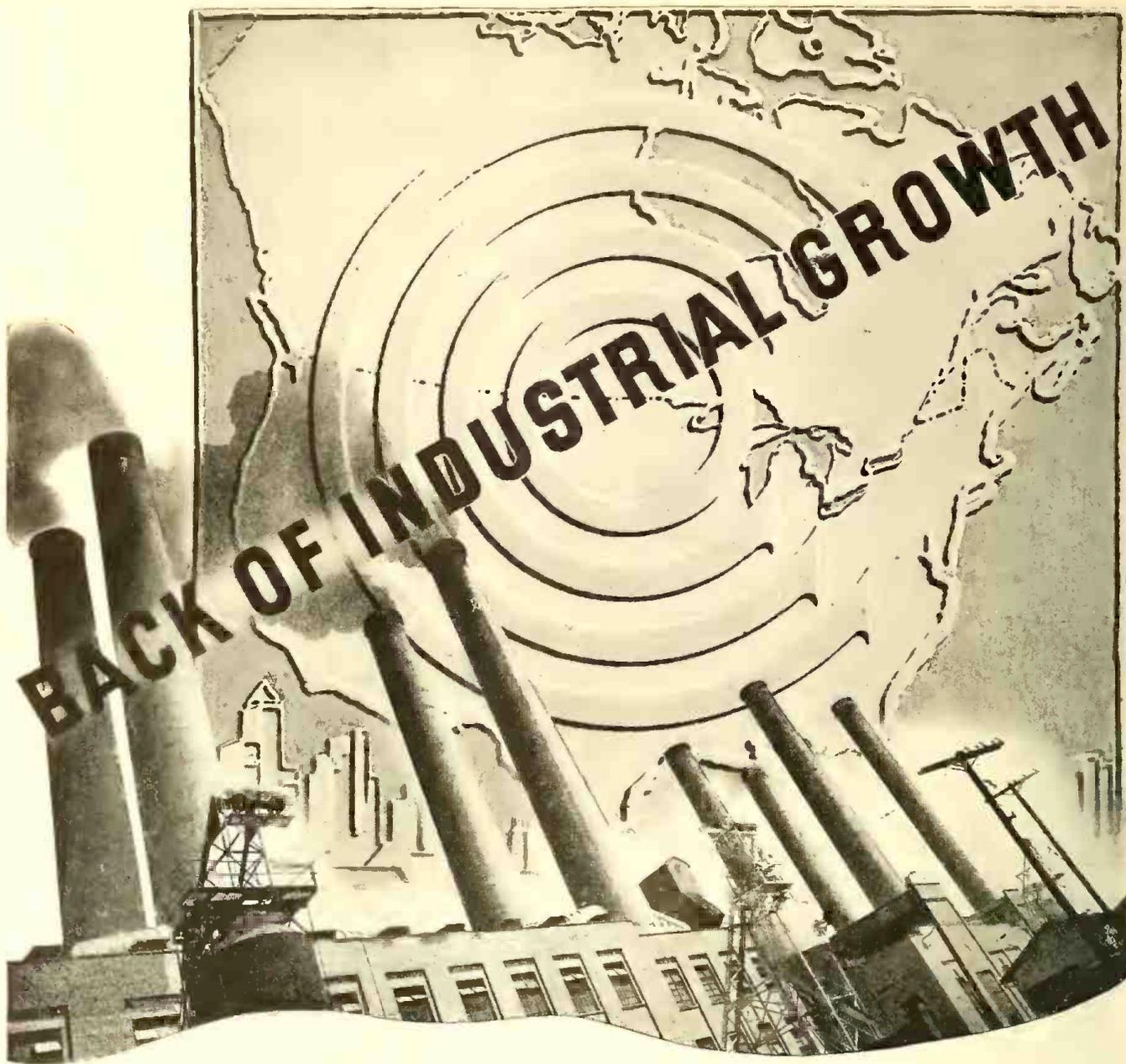
General Household Utilities Company
2670 North Pulaski Road, Chicago, Illinois

Please have my nearest Grunow distributor get in touch with me at once. Meantime send big counter catalog of new 1937 Grunow radios showing all selling features.

Name

Address

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



A SAFE and sane, nationally known and thoroughly reliable time payment plan, is a vital asset to the manufacturers, distributors and retailers of many products that are today considered indispensables in the lives of American families.

Most of the automobiles, radios, domestic heating equipment, refrigerators, air conditioning equipment and other modern appliances for the home are bought "on time".

Commercial Credit Company's time-payment plan requires no "selling" on the part of the dealer. It is

the official plan of many leading American manufacturers. Its liberal conditions are highly favorable to dealers. Its reputable name, nationally advertised for years, assures the confidence of the buyer and is a distinct aid in closing sales.

More than 170 offices in principal cities of the United States and Canada provide speedy and accurate credit investigation and prompt remittance.

For full details of Commercial Credit financing plans, write or phone headquarters or any branch office.

COMMERCIAL CREDIT COMPANY

COMMERCIAL BANKERS
CONSOLIDATED CAPITAL



HEADQUARTERS: BALTIMORE
AND SURPLUS \$49,000,000

FINANCING SERVICE FOR MANUFACTURERS, DISTRIBUTORS AND DEALERS
THROUGH 170 OFFICES IN THE UNITED STATES AND CANADA

**THE PUBLIC'S MAGIC KEY TO ENTERTAINMENT
IS YOUR**

Magic Key to Profits!

**... RCA Victor's outstanding
Sunday radio program turns
listeners into prospects ...
sends them to YOU... to BUY!**

EVERY Sunday afternoon RCA Victor sponsors the Magic Key radio program—a full hour of diversified entertainment heard by millions throughout the nation. And every Sunday RCA Victor sends powerful sales messages into the homes of this vast audience—messages that create new prospects—send them marching to your store—to BUY!

One dealer in Dallas told us recently that the Magic Key program had led directly to six orders—all for high-priced sets—and one for the most expensive instrument in the 1937 line! And this is but a typical example!

It will pay you to regard the Magic Key program as *your* Magic Key to Greater Profits. Back up this broadcast and the advertising in national magazines with the many sales helps RCA Victor makes available to you. Feature the great 1937 RCA Victor radios ... **EXTRA VALUE SERIES** of 28 models under \$100 ... **MAGIC VOICE SERIES** from \$129.95 up. Push them for all they're worth—and they'll be worth plenty to you!



MAGIC VOICE SERIES ... Model 9K-2, console with Magic Voice, Magic Brain, Magic Eye, RCA Metal Tubes. A 9-tube, 5-band superheterodyne. Foreign, domestic, police, aviation, amateur, U. S. weather reports. Phonograph connection and 13 other important features. . \$129.95

EXTRA VALUE SERIES ... Model 5-X. 2-band table set for AC or DC. Domestic programs, short wave (49m.), police, aviation, amateur calls. \$32.95

*All prices f.o.b. Camden, N. J.
(Subject to change without
notice.)*



RCA Victor

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

Full and Complete Finance Service for

RADIO DEALERS

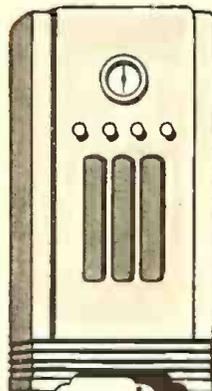
through C.I.T.

RADIO manufacturers, from A to Z, are now providing their dealers with the C. I. T. Budget Plan.

This makes available for radios the same quick, personalized service that has helped dealers build record sales for refrigerators and other major household appliances.

Furthermore, you can now offer your customers a combination C. I. T. Budget Plan sale of any two or more acceptable articles in one contract.

With the advantage of this new and better selling weapon the 1936-37 season should be one of the most profitable that radio dealers have ever known.



THROUGH LOCAL OFFICES FROM COAST TO COAST, C. I. T.'s NATIONWIDE CREDIT SERVICE IS AS NEAR TO YOU AS YOUR TELEPHONE.

FOR THE PURCHASE OF PAPER CALL THE NEAREST OFFICE LISTED BELOW.

Abilene - Akron - Albany - Altoona
Amarillo - Asheville - Atlanta - Augusta
Bakersfield - Baltimore - Bangor - Bay Shore
Beaumont - Beckley - Billings - Binghamton
Birmingham - Boise - Bastan - Bridgeport
Bronx - Brooklyn - Buffalo - Butte - Camden
Canton - Cape Girardeau - Carbandale
Cedar Rapids - Charleston - Charlotte
Chattanooga - Chicago - Cincinnati - Clarksburg
Cleveland - Columbia - Columbus - Cumberland
Dallas - Dayton - Denver - Des Moines
Detroit - El Paso - Erie - Evansville - Florence
Fort Wayne - Fort Worth - Fresno - Glens Falls
Greensboro - Greenville - Hagerstown

Harrisburg - Hartford - Hempstead - Hickory
Houston - Huntington, W. Va. - Indianapolis
Jacksonville - Jamaica - Jamestown
Jersey City - Johnson City - Kansas City
Knoxville - Lexington - Lincoln - Little Rock
Los Angeles - Louisville - McAllen - Manchester
Memphis - Miami - Milwaukee - Minneapolis
Mobile - Montgomery - Montpelier - Mt. Vernon
Nashville - Newark - Newburgh - New Haven
New Orleans - New York - Norfolk
Oklahoma City - Omaha - Orlando
Paducah - Paterson - Peoria - Perth Amboy
Phoenix - Philadelphia - Pittsburgh

Portland, Me. - Portland, Ore. - Portsmouth
Poughkeepsie - Providence - Raleigh
Reading - Reno - Richmond, Ind.
Richmond, Va. - Roanoke - Rochester
Rome, Ga. - Sacramento - St. Louis - Salisbury
Salt Lake City - San Antonio - San Diego
San Francisco - San Jose - Savannah - Scranton
Seattle - Spartanburg - Spokane - Springfield,
Mass. - Springfield, Ohio - Stockton - Syracuse
Tampa - Texarkana - Toledo - Tucson - Tulsa
Utica - Washington - Watertown - West
Palm Beach - Wheeling - White Plains
Wichita - Wilkes-Barre - Wilson - Worcester
Yakima - Youngstown - Zanesville

C.I.T.

C. I. T. CORPORATION • NEW YORK • CHICAGO • SAN FRANCISCO

A UNIT OF COMMERCIAL INVESTMENT TRUST CORPORATION

CAPITAL AND SURPLUS MORE THAN \$100,000,000



HELPING DEALERS TO WIDEN THE SCOPE OF THEIR BUSINESS

ZENITH

TRADE MARK REG.

→ LONG DISTANCE ← RADIO

TRADE MARK REG.

Again a year ahead

THE LIGHTNING STATION FINDER

(EMDE SPINNER METHOD)



*"From
Tokio
to
Berlin
in
One
Spin"*

Still Another Exclusive Feature of America's Most Copied Radio

Here's another sales scoop, one more sure-fire sales point for Zenith.

If your customers are like most, they appreciate this sort of ease and facility—this thoughtfulness that is so typical of all Zenith design.

Gone is the laborious, slow, twisting and turning of the tuning control. Now a speedy spin—with flywheel momentum giving extra force—carries the indicator full circle or even more at *one* spin.

For wide swings, you get in *five* seconds what once took thirty! For example, from 7.5 to 19 meters.

Truly, here again Zenith pioneers. Again a year ahead!

ZENITH RADIO CORPORATION, 3620 Iron Street, Chicago, Ill.

REALLY COMPLETE FINANCING

Zenith and C.I.T. now offer you *without one penny* service charge ample floor planning. Also time payment sales plan with limited recourse. Rates and terms unusually attractive. See the Zenith distributor or your local C.I.T. office for details. Well worth investigating.

Be ready with the *right* answers
about

PHILCO AUTOMATIC TUNING

Philco advertising is sending prospects to you. They want to try Philco Automatic Tuning. They'll get a big thrill out of whirling the dial . . . hearing stations come in instantly, automatically, perfectly.

They'll see, hear, appreciate the value and importance of this newest Philco achievement. They'll be in a buying mood . . . but they'll have questions to ask . . . questions your salesmen should be primed to answer.

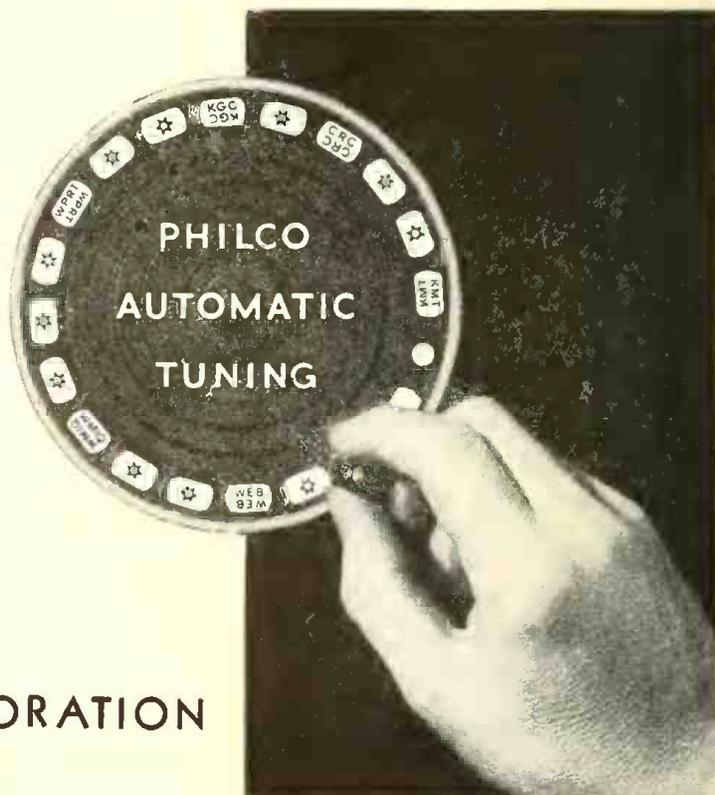
Be sure they have the right answers. Be sure they emphasize that this is not merely a mechanical method of tuning . . . but that Philco Magnetic Tuning swings into action back of the dial and puts you on the exact frequency of the station being tuned . . . and holds the receiver there as long as you want to listen.

Be sure that your salesmen tell prospects that Philco Magnetic Tuning works on foreign stations, too! Only Philco gives you this invaluable aid in tuning stations overseas. It's not only easier to get the strong foreign stations . . . but once you get them Philco Magnetic Tuning "holds" them!

And don't forget to show the ladies how Philco thought of them and their carefully manicured finger-nails. Every woman who uses an automatic telephone often . . . always uses a pencil to twirl the dial. That's why Philco provides a handy knob to spin the dial . . . save the finger-nails . . . and make an instant appeal to every woman who sees it!

Be set to tell the whole story when Philco advertising sends them into your store! When you demonstrate Philco Automatic Tuning . . . give a real demonstration. Don't forget for a moment Philco's greater power and selectivity on both American and foreign stations! Don't forget that in addition to Philco Automatic Tuning, the 116X DeLuxe gives the thrilling realism of Philco High-Fidelity Tone.

Your distributor has a tremendous program of special plans to make this the biggest September you've ever had. Many of them are based on demonstrations . . . and in the Philco 116X DeLuxe you've got the greatest radio to demonstrate the world has ever seen or heard!



PHILCO RADIO AND
TELEVISION CORPORATION

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RADIO TODAY

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New York City
Tel. PLaza 3-1340

Vol. 11, No. 9

BUSINESS ON A GALLOP

★ With likelihood of war in Europe now put off at least 12 to 24 months, U. S. situation has generally brightened, and business is looking ahead to a banner year.

Electric power, car-loadings, steel production, and retail buying still climb. Auto industry has slackened somewhat, getting ready new models for early shows again this year, (a lot of them radio-equipped).

Employment, buying power and retail buying, are all definitely up.

RADIO DEMAND FLOURISHES

★ Following a slight slackening of radio buying as August temperatures mounted, return of cool September days has brought preparations for Fall and radio listening. Radio is perking again, and the trade looks for a big selling season.

Reports from factories show shipments running 50 and 60 per cent ahead of a year ago. Excise-tax figures reveal totals holding up into third quarter.

Public demand is for better-quality merchandise. Higher-price consoles are getting the call, with small sets for extra receivers around the house. This trend to quality goods is emphasized in radio even beyond other lines.

COAXIAL CABLE OCT. 15

★ The coaxial "television" cable which A T & T is laying between New York and Philadelphia, will be ready for tests Oct. 15. All the cable has been manufactured, and more than 50 miles has been laid and spliced. The repeater at New York, the repeater and power-supply equipment at Newark are complete.

The cable contains two one-way co-axial conductors, each capable of transmitting 200 telephone conversations or one television picture.

RADIO DATES AHEAD

National Radio and Electrical Exposition, Grand Central Palace, 480 Lexington Ave., New York City, Sept. 9-19.

Convention and Exhibit, Institute of Radio Service Men, Hotel Pennsylvania, New York City, Sept. 18-20.

Minneapolis Radio and Home Appliance Show, Sept. 28 to Oct. 3.

Yale Football Season, Oct. 3.

Broadcast Re-Allocation Hearings, Federal Communication Commission, Washington, D. C. Oct. 5.

World Series, early in Oct.

Rochester Fall Meeting, Institute of Radio Engineers, Rochester, N. Y., Nov. 16-18.

8,000,000 RADIOS IN 1936

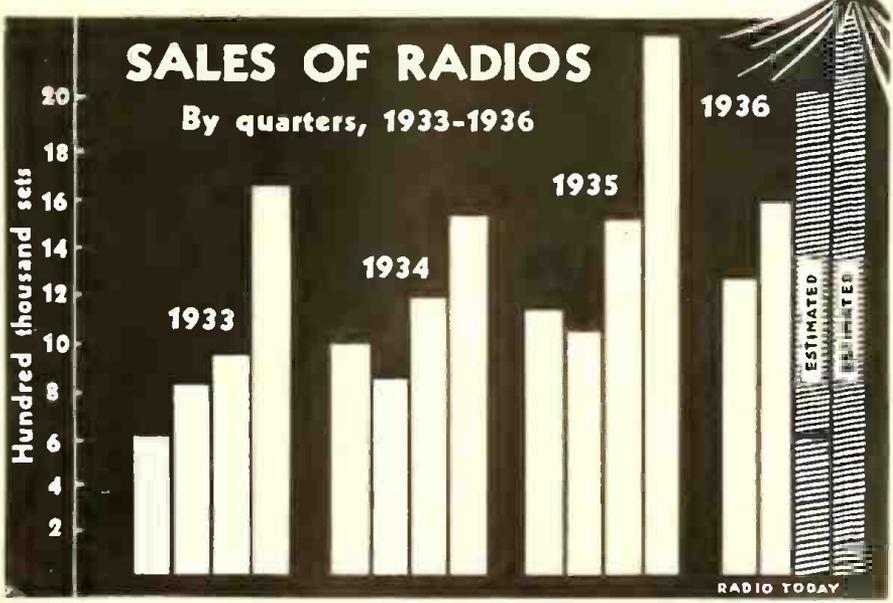
★ If the present pace of radio-set sales continues some 8,000,000 radio receivers may be manufactured and sold during 1936, is the indication of current license figures and Federal excise-tax returns.

Radio-set sales for the second quarter of 1936 increased 49 per cent over corresponding sales a year ago. Sales for the first half of 1936, ran 29 per

cent ahead of 1935. Such an average increase for this year (with 6,026,000 sets sold in 1935), would assure well over 7,500,000 sets in 1936. But as the second quarter figure indicates, the pace was greatly accelerated in the April-June period, and this increased rate of output was still being maintained in the third quarter. With auto-radio sales showing great activities this Fall, total radio-set sales may pass 8,000,000 for the year — an all-time high.

Following shows the radio sets manufactured and sold by quarter-year periods, with estimates on future production:

1935
1st quarter 1,155,438
2nd quarter 1,074,909
3rd quarter 1,528,684
4th quarter 2,267,000
Total 6,026,031
1936
1st quarter (actual) . . . 1,287,463
2nd quarter (actual) . . . 1,600,000
3rd quarter (est.) 2,100,000
4th quarter (est.) 3,100,000
Total (est.) . . . 8,087,463





Philco gen'l salesmanager Tom Kennally respectfully eyes his righthandman, George B. Norton.

RADIONEERS

★ "Radioneer" now joins realtor, electragist, mortician and other specially contrived additions to our language. "Radioneer" is the copyrighted property of the Institute of Radio Service Men, and only service men who pass special tests will qualify to use the term (which appears to be derived from a contraction of "radio engineer"). Full details are given by IRSM executive Ken Hathaway in the Service Section of this issue.

PROGRAM SALESCRAFT

★ National Broadcasting Co. suggests that radio dealers and distributors go to work on a certain selling notion while radio schedules are all lit up with birthday candles.

Those studios are proud of a 10th birthday, have all manner of red-and-blue plans for plus quality broadcasts during the current anniversary to-do. NBC's crafty campaign among 18,600 dealers declares that radio salesmen "have at their command a bigger and better sales argument than ever before."

Glibly NBC tells dealers that it has on its networks enough special broadcasts, enough favorite programs this Fall to furnish dramatic high points in selling and demonstrating

activities. Broadcaster thus takes a national step to prove that extra air bills mean extra retail sales, and any web should be happier when it knows that its features are heard through improved receivers.

THOSE WHO FOLD

★ Robust state of affairs was revealed in the last big report of insolvency in the radio biz, made by Dun & Bradstreet as a necessary evil. Number of radio wholesalers and retailers folding since 1932 has spectacularly declined; in that year there were 170 bankruptcies, and in 1935 there were a total of 42. Number for 1936 has not been estimated but Dun & Bradstreet has listed only 28 in this report.

Among the manufacturers, the report shows that in 1933, 25 of them went under, and the casualties for '34 and '35 respectively were 9 and 7. Only 4 have been listed for the current year.

Report adds brightly that wholesale collections have been better by 8 to 10 per cent than a year ago, installment conditions the best since 1929, repossessions the fewest on record. This for the first 6 months of 1936.



Walter L. Eckhardt, pioneer radio-music exec, now director of sales for Grunow.



Tobe Deutschmann (left) and F. W. Sickles, Massachusetts parts makers, hook half the local fish.

ONE-KNOB CONTROL; SWING-UP DIAL

★ Two novel features in British radio sets were shown at Radiolympia, London's radio show, Aug. 26 to Sept. 5.

One home receiver has a *single* knob which controls everything. Rotation of knob effects tuning; shifting knob like a gearshift, controls volume, tone, and selectivity.

Another set has a hinged tuning dial on top, which can be swung into either vertical or horizontal position, so that tuning dial can be operated from front or top, to avoid user stooping over. More on a following page.

NOTICE OF STRENGTH

★ Seems that a steady obligato of increases went singing through the broadcaster's income for the first six months of 1936. None so steady, however, as the pick-up in electrical transcription volume, national and local, which the National Association of Broadcasters' report went so far as to call "the principal development of interest during the period."

Total transcription volume for the period shows an increase of 50.4 per cent over last year, brag the reports. Figure for the first six months of 1935 was \$3,805,738, this year it was \$5,723,950.

10th YEAR PEAK

★ Florescent details of NBC's airings during its 10th birthday celebration are something to stare at. Seems that a world salute has been planned for the feature-house of Radio City; upper orchestras, choirs, singers and radio stars the earth over are mixed up in the tribute.

Special series of international broadcasts began Sept. 13 and will continue on the Red Net on Sundays from 12 noon to 12:30. Final feature is set for Nov. 15, which is actually NBC's birthday. Then's when 15 different foreign countries follow each other in a series of 4-minute salutes, sampling almost every language. Besides the Sunday series, extra internationals will be aired on week days.

FREE AIR

★ Question of "the freedom of the air"—the out-and-out privilege of a radio commentator to speak his mind, appears to center around the courageous broadcasts of Boake Carter. Test case No. 1 is Mr. Carter's run-in with Governor Harold G. Hoffman of New Jersey.

It is generally known that the Oxford-accented commentator covered the Lindbergh kidnapping case, got 15,000 letters of praise, knows his way around in the Hauptmann affair. He thought that the New Jersey exec got out of line, said so on the air. The Governor yelled "libel" in a \$100,000 damage suit in the state Supreme Court, filed against sponsor Philco and others.

Last month Philco told the court in so many words that it wouldn't know, whether Governor Hoffman had been or could be damaged. Philco said that it had no responsibility, anyway. Meanwhile Mr. Carter continued his challenge in occasional remarks in his broadcasts, never gave an inch. Matter now awaits further action by the Court at Trenton, N. J.

ALL BUSINESS IS UP; MEANS MORE BUYING OF RADIOS

★ That business in all lines is showing a marked advance over even a year ago, with consequent increases in payrolls and individual buying power, is revealed by the tabulation from various fields, below:

Residence construction	Up 61%
Automobile sales	Up 27%
Electric refrigerator sales	Up 30%
Steel production	Up 35%
Bank-check clearings	Up 16%
Department store sales	Up 10%
Rural sales	Up 11%
Electricity sales	Up 13%
Petroleum	Up 13%
Paint and varnish sales	Up 11%
Cement shipments	Up 42%
Grain shipments	Up 23%
Cotton production	Up 17%
Machine tools	Up 71%

Of course this means, indirectly, more cash to buy new radio sets, better sets, and more sets, as well as to replace tubes and have old sets serviced into best operating condition.

ALARM ITEM

★ Hit-skip auto drivers of Ohio and Northern Kentucky now have a mob of radio fans on their bloody trail. Police departments of that area have begun the practice of giv-



Paul C. Richardson, new manager of field activities, RCA-Victor, Camden.

ing Station WCKY the high sign when such accidents occur; Cincinnati announcers air descriptions of the cars and name probable positions of the offenders.

Since nearly everyone is a bit of a hunter at heart, a bit of a sleuth really, the hit-skip barbarians should find themselves tangled in a net from which there is no sneaking. More of this, and drivers may learn to think twice, due to the utterly OK stunt idead by WCKY.

TUBE PRODUCTION UP 29%

★ Reports from radio-tube manufacturers on the number of tubes made during the first half of 1936, indicate that production went up 29 per cent compared with a year ago for the corresponding period.

Tube production for the first quarter of 1936 was 21 per cent ahead of the first quarter of 1935. For the second quarter of 1936 the pace increased, and the gain over the second quarter of 1935 was 37 per cent.

Following are the figures, with values given in factory selling prices:

1935	Tubes	Value
Jan.-Mar.	15,247,456	\$ 5,266,500
Apr.-June	14,454,219	4,563,800
July-Sept.	20,559,634	7,365,897
Oct.-Dec.	25,450,000	9,268,000
Total	75,711,309	\$26,464,197

1936	Tubes	Value
Jan.-Mar.	18,475,077	\$ 6,066,462
Apr.-June	19,893,369	6,556,000



Jerry Kahn, president Standard Transformer Corp. and head of the Sales Managers Club, Chicago division, with his new sales promotion manager Gene Carrington.

SALES BOOSTERS



COURT IN SESSION—WMCA's Good Will air tribunal hears a real case. Its drama, director, bench and fans move to NBC Sept. 20.



OPERA STAR Helen Jepson recently stepped aboard the Show Boat to sing regularly on Thursdays.



SLY, FRENCHY Fifi D'Orsay, transmitting her fun and her songs for the "Revue de Paris"—important to Wednesday night dialists.



WILD COMEDY of Joe Penner, styled this time like nothing else on the air, will be ready at WABC on Oct. 4.



VIGOROUS Boake Carter will continue news-commenting in spite of Jersey's nervous governor.

BIG PUSH STARTS

Reading time: just before you decide on what sales arguments to use for Fall.

★ AUTUMN sends a shudder through the earth, but not the ether.

In all reports, the simple story of a record season for radio, built up out of a Presidential year, a strong trend toward dazzling entertainment features, a studied attention to exceptional Fall events in the field of sports, a vital coverage of war-conscious Europe.

In the end, the entire set-up seems dedicated directly to the man who sells radio sets. Rightly the dealer has noted a livelier flow of money in his field and others; he has still to reap the benefits of in-the-hag cooperation from the broadcasters.

NBC's tenth birthday

Lenox R. Lohr, NBC's president, begins the story:

"Celebrating its Tenth Anniversary, the National Broadcasting Company sees a promising outlook for the Winter season, both from the standpoint of business and programs. Unfilled orders are at a record high point, while the inelasticity of hours and minutes presents a stubborn problem.

"An interesting aspect of NBC sponsored broadcasts is the large number of time-tried programs which continued through the Summer, and the return to the air of many others which have proved their popularity with the public.

"Generally speaking, NBC sustaining programs will stress cultural and educational features even more emphatically than in the past. The Metropolitan Opera will be broadcast as usual; the Music Appreciation Hour continues. In connection with its Tenth Anniversary the company is listing numerous special broadcasts through the Fall, including an elaborate series to be heard from stations throughout the world."

Columbia's big season

H. K. Boice, vice-president and sales manager of Columbia Broadcasting System, sees this season the biggest ever:

"When the books are closed on 1936 radio time sales, total expenditures of network advertisers will be found to exceed all previous records.

This is a certainty. National radio advertising, for 34 consecutive months, has held well ahead of the marks set in corresponding months of previous years; six-month totals for year showed a 7.6 per cent gain over the first half of 1935. Columbia's billings for this same period were 21.3 per cent above last year. What our year-end total will be remains, of course, in doubt, but it is certain to be the highest in Columbia's history—probably in the neighborhood of \$22,000,000.

"Impressive as radio's time sales have been to date, the use to which that broadcasting time is being put is, to me, equally impressive. Never in my experience has there been so high a standard in commercial and sustaining entertainment on the air as is represented in current program schedules. The variety, quantity, and quality of the talent that has been signed for the 60 or more sponsored programs on Columbia's Fall schedule, has never been surpassed. With balanced distribution of this array of talent already provided for, we feel that Columbia advertisers this year are attracting and holding for each other a larger proportion of the radio audience than ever before."

Mutual's gala schedule

Fred Weher, general manager of the Mutual Broadcasting System, points to the fact that MBS is soon to be a national web:

"The Mutual Broadcasting System is anxiously looking forward to its affiliation with the Don Lee network, which becomes effective not later than Dec. 29, and the release of programs by the Central States Broadcasting System, the Iowa network, and radio

WEB WONDERS

Sponsors shell out for new entertainment hours.

Republicans and Democrats dig their trenches in the air lanes.

Prize fights, football classics and horses' add wallop to Fall broadcasts.

European war threat colors the news flashes.

station KWK in St. Louis, WSM in Nashville and WRVA in Richmond. Mutual can then progress with more enthusiasm, and high-ranking entertainment than ever before.

"As for trends, Mutual started one early this Spring when it signed horse-wise Bryan Field, noted racing authority to broadcast exclusive descriptions of races from five New York racing associations. Mutual also stuck another feather in its cap when it broadcast the biggest daytime musical program—the sponsored, cooperative "Morning Matinee" last season. Sponsored by associated department stores in various cities, it returned again September 10 with top-name bands like Kemp, Lombardo, Bernie with many more sponsors.

"Gabriel Heatter of Flemington, N. J., fame, becomes Mutual's first regular news commentator, sponsored four times weekly. With an eye toward coast expansion, eastern key station WOR signed such stars as Benay Venuta, Joey Nash, and The Grunmits. The talent from all stations affiliated with Mutual is star-studded and sprinkled with well-liked performers."

Yankee's feature plans

John Shepard, III, head man of the Yankee Network, reports renewed activity:

"The busiest season in its history is in the offing for the new Yankee Network, and the newly established Colonial Network shows promise of producing startling results at minimum costs for the advertiser of limited budget.

"Yankee Network and Colonial Network programs will continue to pioneer the use of new ideas in programs to promote the sales of sponsors. Spot news, sports and human interest features dominate the fall schedule. Musical programs have given way to dramatizations and Yankee Network producers have found immediate response from the agencies for special features with an element of news in their content.

"Appropriations for Yankee Network shows have increased by more than 30 per cent over last year and the lineup of shows indicates the acceptance on the part of the advertisers that more money must be spent in producing than was done in previous years.

"Switches in national network affiliations are responsible for a new and more powerful Yankee Network now comprised of 11 stations, the majority of which are affiliated with the NBC 'Red' Network."

THE NEW 1937 SETS ANALYZED

For complete specifications and selling features of all
the new lines, turn to pages 47 to 56

★ WITH nearly a thousand different radio-receiver models being offered by the radio manufacturers of America, in their 1937 lines, a tremendous variety of choice is made available for retail buyers, just as the most important listening season in all radio's history opens up.

Looked at as a vast "radio show," these thousand radio-set offerings would fill the largest exposition building ever erected at any of our recent World's Fairs. Allowing four feet to a model, some 4,000 ft. of aisle displays would be taken up, nearly a mile of continuous, unduplicated displays!

33 hours to see 'em all

And for the radio buyer who undertook to inspect this tremendous array of radio sets, if he allowed only two minutes for the study and scrutiny of each model, he would have to plan on 2,000 minutes or 33 hours of unremitting seeing! Taken in a succession of evenings say from 8 to 10:30 p.m., he would need two full weeks of radio-show going, to make the rounds!

That is "the complete 1937 radio show," and a large proportion of these

models are represented with detail specifications in the tabulations on following pages.

List prices, it will be noted, extend over a wide range, from \$8.95 as a minimum offering, up to proud and haughty pieces that "have everything" at \$750.00. Tube complements run the gamut, all the way from 3 tubes in the modest jalopies, to 25 in the masterpieces of the designer's art.

The "1937-average" radio set

Pictured herewith an "average" console and "average" table receiver. Based upon RADIO TODAY's *Sales Features and Specifications* appearing on pages 47 to 56, the average console lists at \$101.25. It has 7½ watts power output which feeds a 10¾-inch dynamic speaker.

Approximately nine tubes are used in this composite set—and a 6¼-inch dial is employed for easier tuning.

The average table receiver boasts of a watt output and a 6½-inch electrodynamic speaker—six tubes are used in this set which lists for \$41.90. The dial is 4⅝ inches.

Taking the prices of all AC and

AC-DC table and console models, we get an average set price of \$65.

Practically all the console sets cover the short-wave bands. The band coverage chart shows that 82 per cent of all consoles tune in the police band and 88 per cent provide short-wave reception. With table models these percentages are much less because of the many single-band receivers which sell under \$20. Even so, 55 per cent of the table receivers tune to both the police and shortwave bands. A few of them cover the intermediate police (P₁ on chart) and intermediate shortwave (S₁) bands—these represent ranges of a few two-band sets.

The weather band and ultra-short-wave are finding more popularity this year. About ten per cent of the consoles are capable of tuning above 20,000 kc.—all of them exceeding 40,000 kc. and a few reach 70,000 kc. Only 8 per cent of the table sets tune to the long-wave band—22 per cent of the consoles cover this band which extends from approximately 150 to 350-400 kc.

Metal-vs-glass tubes

The use of metal tubes is considerably greater than a year ago; 48 per cent of the consoles use metal tubes exclusively (disregarding rectifier and tuning indicator), and with table sets the percentage is 37. Glass tubes are used extensively in 53 per cent of the table sets.

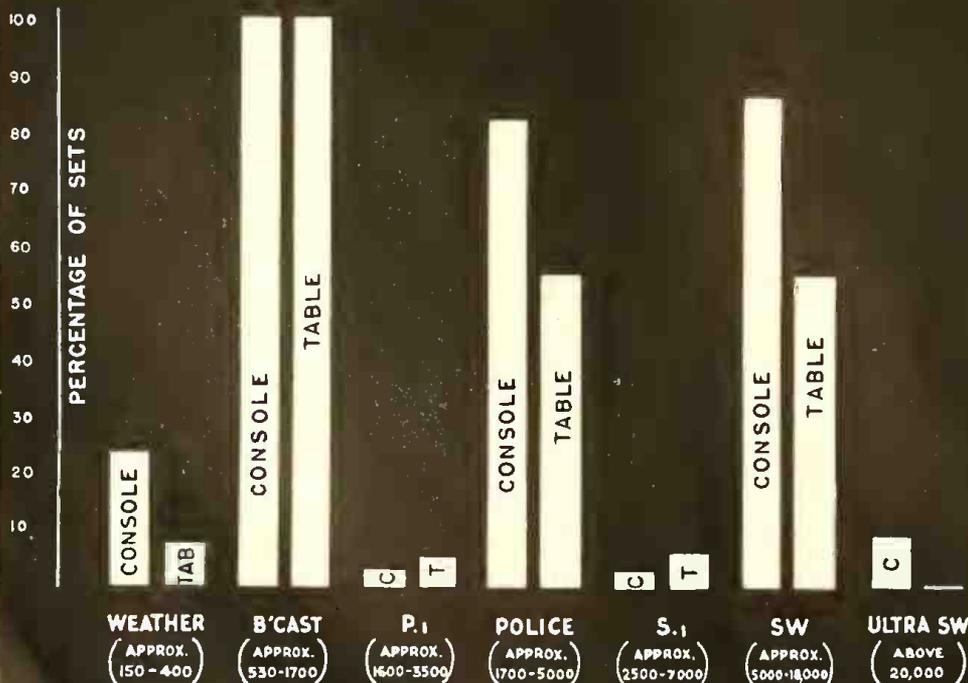
Octal glass or "G" tubes are used exclusively in some lines—the percentages are as follows: table 4 per cent, console 4 per cent.

Other combinations of metal, glass, and octal are shown in the accompanying table.

The specifications show that most of the better sets employ a tuning indicator of some type—most widely used is the cathode-ray indicator or electric eye. A few sets use the shadowgraph or shadow tuning indicator.

Large dials are the vogue—some of them almost a foot in their maximum dimension. And power outputs that rival many a P.A. system are found in the larger console models—top figure is around 60 watts. To util-

BAND COVERAGE OF 1936-7 SETS



GLASS-VS-METAL TUBES IN NEW SETS

Type of tube	Table sets	Consoles
M—metal*	30%	53%
G—glass	49%	13%
O—octal glass or "G"	12%	23%
MG—mainly metal, some glass	5 1/2%	4 1/2%
GM—mainly glass, some metal	3%	3 1/2%
OM—mainly octal, some metal	1 1/2%	3%

*May have glass rectifier and tuning indicator.

Percentage of sets using the various types of tubes—based upon the AC and AC-DC models listed in Radio Today's specifications.

ize this tremendous power. 12 and 15-inch speakers are used—with a few models having dual speakers to cover the entire tonal range with maximum fidelity.

Tubes and speakers

Noticeable in the present Fall offerings of radio sets, is a tendency to emphasize the number of tubes presented for a price. Also there is a disposition more general than ever before, to make a selling point of loud-speaker size and power, and to use the physical dimensions of the speaker-housing as a clinching argument in effecting retail sales.

Some radio engineers have questioned whether the public is fully alive to the confusion in receiver value which may result from a mere counting of tube-envelopes, or a casual and superficial inspection of speaker dimensions.

These sound experts have even contended that over-large cones in speakers introduce serious limitations into the audio response, and so make for less rather than greater fidelity. These acoustic designers point out that the present tendency to use large frameworks on speakers, and to put large cans on the field coils may add to the "eye-value" and merchandising value of the job, but certainly do not add anything to the "ear-value."

Needless tubes misleading

"The number of tubes in a radio receiver, when these tubes are honestly used in efficient circuits, serves as an index of the operating worth of the set," comments Dr. Ray H. Manson, vice-president and chief engineer of the Stromberg-Carlson Company. "However, the present tendency of building up large tube complements by employing single-purpose instead of multi-duty tubes, and the using of extra audio tubes with low cost and inefficient circuit elements, instead of a few number of audio tubes and better circuit apparatus, is misleading to a prospective customer. In such a case

permanent and efficient circuit apparatus is displaced by extra tubes, which later have a limited life and must be replaced periodically. This results in higher cost of operation without any compensating operating benefits.

"Using size alone as a yardstick to judge operating efficiency of a loud-speaker is very misleading. The audio-frequency range, smoothness of response, operating efficiency, and load-carrying capabilities are the factors which must be considered when selecting the correct size of the speaker for any particular radio set. Table-model receivers and small-size consoles usually have limited audio-frequency range and limited power output, so that a comparatively small size of speaker may give just as good (or even better) results than a larger speaker."

Tubes add smoothness

Dorman D. Israel, Emerson chief engineer, formerly with Crosley, takes a practical-minded point of view:

"Beyond a certain 'subsistence' minimum, a reasonable number of additional tubes may add smoothness, power and certain other performance

features if used conscientiously. There is nothing to prevent the addition of these tubes without conscience, so to speak, and at a great saving in cost," says Mr. Israel.

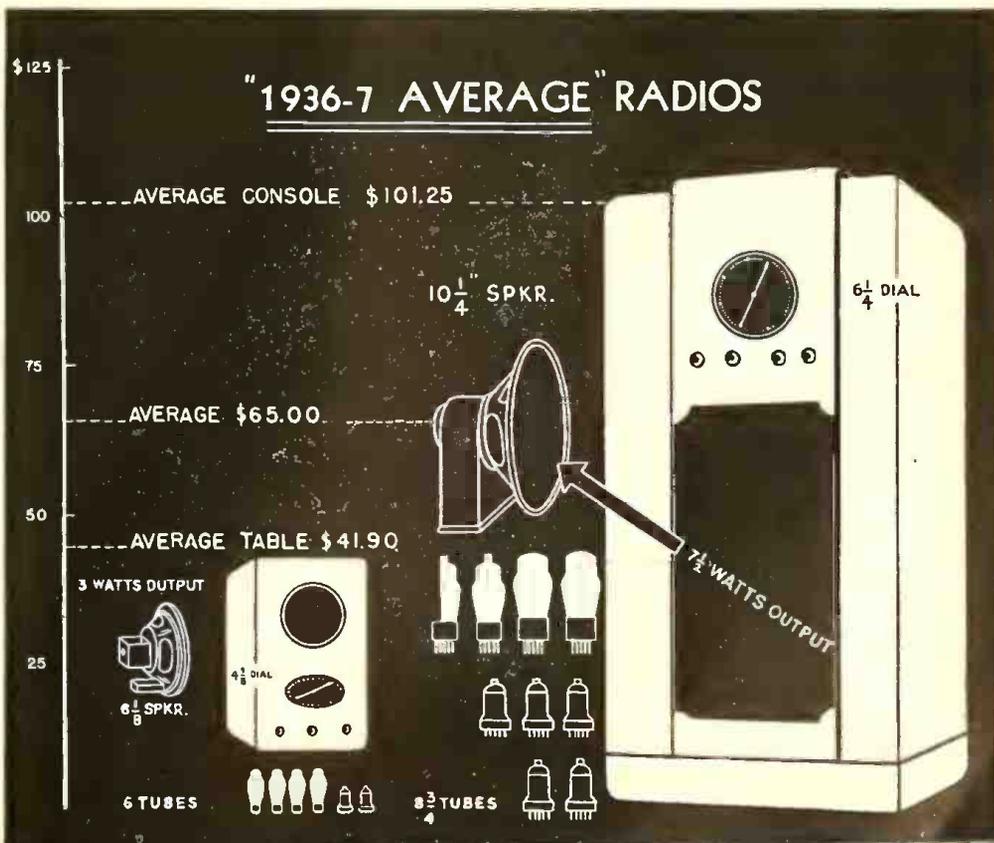
"In a similar way, a larger speaker, if properly designed and used, can improve fidelity. The savings effected by 'dummying' the speaker are appreciable.

"In the last analysis, the public soon decides if a certain design suits its needs. If extra tubes and jumbo speakers are indicated, why not give them to John Q. Public as long as the dose is not harmful."

Hopeless to change public

On the other hand, Dr. Alfred N. Goldsmith, consulting engineer, New York, and former RCA vice-president, thinks that:

"Describing a receiver by number of tubes and size of speaker, while a rough and ready practice, is probably as good on the average as any other method which has been proposed. Even the radio industry hesitates to specify receivers by a long list of numbers giving exact performance characteristics which will require an expert to weigh, to correlate, and to use as a basis for further conclusions. There is no present need of changing this practice, particularly in view of possible changes to partial ultra-high-frequency operation, facsimile broadcasting and television broadcasting. The public continues to regard the number of cylinders in an automobile as a useful index of value. Admitting that one can draw wrong conclusions from number of tubes or number of cylinders, respectively, yet statistically this is as simple and acceptable a specification as could likely be used successfully in the present stage of industrial and public attitude. For engineers and manufacturers elaborate precision specifications may be useful—but the public is not likely to accept them or to find them helpful."



AUTOMOBILE-RADIO BOOM

- dealers' Fall sales expected to be biggest ever
- proper installation and servicing location necessary

★ FALL is an active season for radio-dealer sales of automobile radios, because each year, experience shows, hundreds of thousands of car-owners purchase auto-radios for Fall driving. And of course this year, with politics buzzing and important international news on the air, car-radio becomes important to any person taking an autumn outing.

In this connection, R. L. Heberling, vice-president in charge of Philco auto radio, reports the most active auto-radio season in many years. According to Mr. Heberling, a tremendous increase in auto-radio business has been experienced, with the increase coming from old-car drivers as well as new-car owners.

Overhead speaker popular

"This clearly indicates that car buyers and owners all over the country have definitely become convinced of the many benefits to be had from having auto-radios in their cars," Mr. Heberling said. "It also indicates that the auto-radio is becoming more and more of a necessary motor-ing accessory.

"I find a great deal of satisfaction in noting that a large proportion of the sales reported by our auto-radio dealers are of the models employing either an overhead speaker alone, or two speakers, one in the set itself and the other for mounting above the windshield. This trend shows clearly that motorists are not only convinced of the added enjoyment an auto-radio gives to motoring but want the better type of auto-radio—models that provide the most natural and unobstructed reception to the rear-seat, as well as to front-seat passengers."

Stretch toward two million

Sales of auto-radio sets for 1936 are expected to reach 1,600,000 to 1,750,000 units, compared with 1,200,000 auto-radios sold in 1935.

Gossip around Detroit is that at least a quarter of the low-priced cars are now coming out radio-equipped. The Ford output has been as high as 28 per cent with radio during the present year; then fell off, but is again reaching new highs for radio installation. Chevrolet has run

around 25 per cent, and Chryslers have been up to 28 per cent. On the other hand, the more costly cars like Packards, have been coming through at least 50 per cent radio.

Car antennas of the "fish-pole" type represent one of the new developments this year, particularly in local markets. In some cities, like Boston, car after car is seen with its vertical antenna rod sticking up behind; in other centers this type of aerial is almost unknown so far.

Attempts have been made to install "fin" antennas on the tops of closed cars with steel roofs, but many car-owners object to marring the appearance of shiny new machines with radio superstructures of this kind, and so the under-runningboard type of antenna, linking with the ground, still seems to be favored by most auto-radio installers.

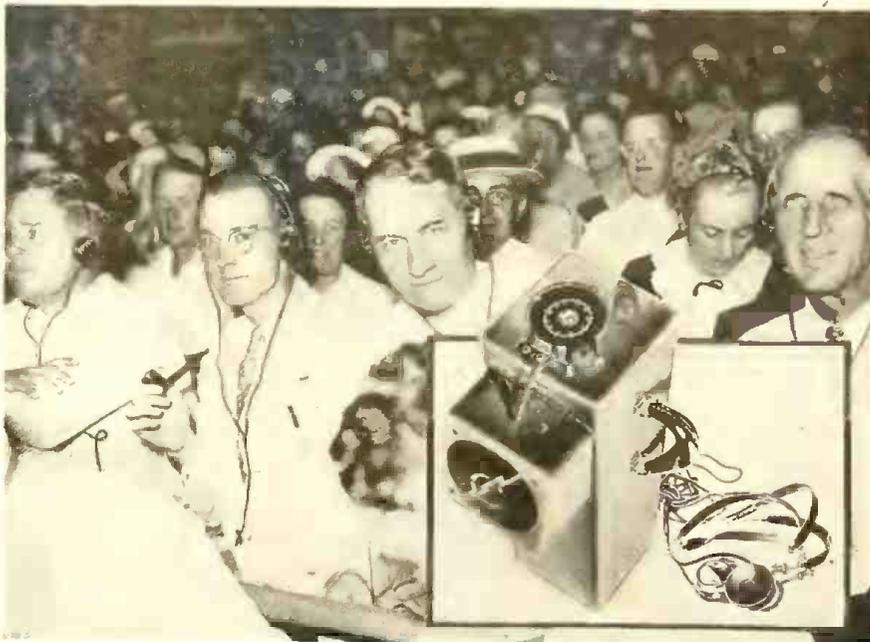
Most radio men taking on auto-radio lines have begun with curbside installation of sets. But more and more, radio dealers and servicemen are finding that it pays good dividends to have proper facilities and location for servicing radios in cars.

Installation facilities vital

An example is the Linden Radio Service of Baltimore, Md. When, a few years ago this company extended its home-radio activities to include auto-radio service, at 1944 Linden Avenue, Baltimore, its installers rendered a curb service. This soon grew so as to make it necessary to open a separate auto-radio service establishment. The growth in the business necessitated larger quarters and several months ago the concern constructed and opened Baltimore's first modern auto-radio service station at 934 N. Eutaw St. It is Baltimore's largest radio service station, having a capacity for about 25 cars. Since the opening of this station, business has been about doubled.

According to Joseph Kippnes, head of the concern, an average of from 40 to 50 cars are serviced each day, either for installation, repairs, etc. The service force has been more than doubled since the beginning of the year in keeping with the growth in the business. "Satisfaction in service," and "going out of the way to please a customer," are two maxims that epitomize the success of this concern. Advertising, outside solicitation, and dealer contacts have helped in building up the business, plus the opening of the large specially designed auto-radio service station.

WILL PORTABLE SETS OFFER NEXT VOLUME MARKET FOR RADIO?



Portable radios, which can be carried anywhere, may be the next big trade development. Crosley leads the way with this 18-lb. "golf-bag" portable set. See the ball game, and hear it interpreted, too! Or listen in, on train or bus.

ACROSS THE ATLANTIC

— one-knob sets, “non-stoop” dials, at London’s Radiolympia
— re-projection television screened at Berlin Radio Show

★ TRAVELLERS returning from Europe often comment that radio-set novelties which are introduced into the United States as innovations, have in many cases previously been in commercial use in European countries for a year or two before being introduced here. Looking back on some of the most attractive features employed in American radio sets during 1935 and 1936, there can be pointed out English and Continental prototypes which were standard market line abroad many months before they created their American furores.

London’s annual radio show, Radiolympia, held under the auspices of the British Radio Manufacturers Association Aug. 26 to Sept. 5, has just brought to public attention some of the novelties which will be on the English and European market this winter, and which are of great interest to American set makers as indicating possible future trends on this side of the water.

One-knob receivers

Two features deserve special mention—the new sets with a single knob controlling all set operations, tuning, volume, etc.—and the models with movable dials which can be swung into vertical or horizontal position, so that the dial can be tuned from the front or top without stooping.

In the Philips receivers at Radiolympia were shown the latest single-knob controls, where only one knob is employed, but that knob controls tuning, volume, tone, and selectivity. The knob may aptly be referred to as a radio joy-stick, for it consists of a small knurled bakelite knob working in a universal ball-joint movement, and through the medium of bowden leads it actuates the various separate controls. The knob itself may be rotated, whilst the entire assembly is moved in the ball-and-socket joint, the rotation of the knob effecting the tuning, and the direction in which the knob is moved controlling the remaining effects.

“Non-stoop tuning” is another feature interesting the English this year. The American market has witnessed a set with tuning dial set at 45 deg. at the top, to avoid making the listener kneel or crouch when tuning.

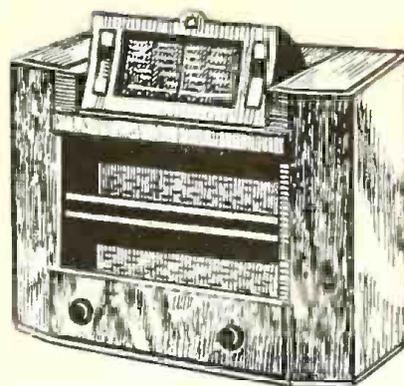
But one of the new British sets goes this “one better” and provides an adjustable dial as pictured. At will, it may be raised or lowered to the most convenient position.

Bicycle radio

The Watch Committee (Police Dept. to you) of Liverpool, England, has ordered 80 bicycle radios from a local radio manufacturer for use by the pedalling cops of the place. Cycle receiver has a circuit arranged so that background noise is heard during the periods between police broadcasts; officers do not need to switch the set on and off. When messages come in, the policeman gets a signal as the background is automatically cut out.

Re-projection television

The Berlin Radio Show followed shortly after that at London, and television proved one of its features, particularly a new form of re-projection television in which the cathode-ray image is actually bright enough to be projected optically upon a screen 3 by 5 ft. in size. To accomplish this optical enlargement, two former difficulties had to be overcome. By increasing the cathode-ray emf to 12,000 volts, electron velocities of 20,000 miles per second were obtained. With this increased im-

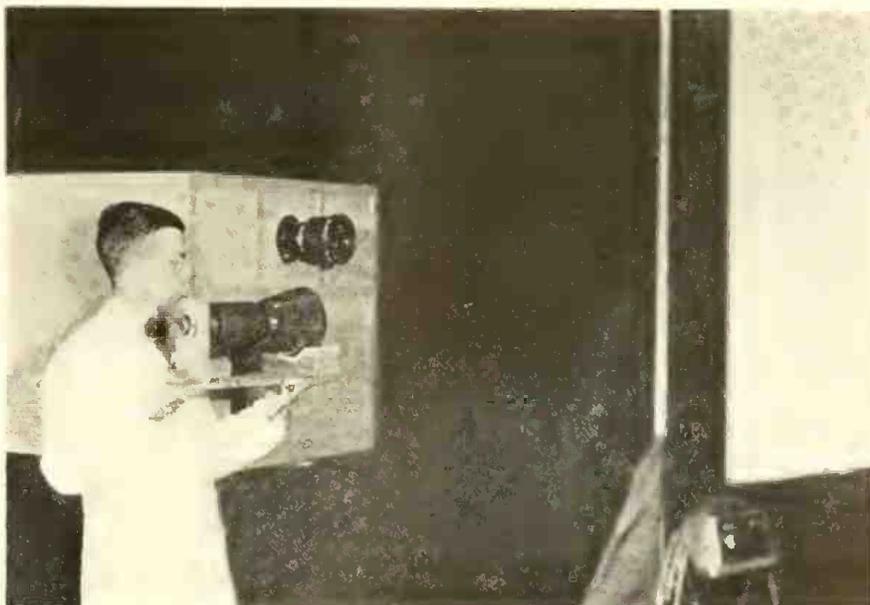


Dial of this English set can be turned vertical or horizontal, at will.

portant, intensely illuminated pictures are obtained on the tube end—pictures really much too bright to look at directly.

But before these bright images could be re-projected optically onto an enlarged screen, it was necessary to get the cathode surface into a flat plane for proper focusing. This has been accomplished in the new “flat-bottom” tube which with walls nearly ½ inch thick, is able to withstand the pressure of the atmosphere without the aid of the arch structure of the older rounded-tube form.

When the intensely bright cathode-screen image is projected by a simple lens system onto the movie screen, a large group can watch the television picture, as in a theatre. While the cost of equipment for such a re-projection television receiver totals about \$2,000, this is not excessive for theatre purposes, and already a number of Berlin movie houses are understood to have ordered apparatus from Telefunken, developer of the news system.



The television image on the tube (held by the operator) is so brilliant, that when tube is placed in box behind the lens shown, a full movie-size picture is reprojected on to screen at right.

DEALER-SERVICEMEN ARE "TOPS"

Parts jobbers report that repairmen who do merchandising are best customers, best credit risks. Ham servicers and "casuals" passing out.

★ SWEEPING CHANGES have been taking place in radio servicing. Conditions are improving for both servicemen and the parts suppliers who sell to them. With the increasing number of sets in use, the business of repairing and furnishing repair parts is becoming a factor of major industry importance.

RADIO TODAY has been making a country-wide survey of servicing conditions, and finds evidence of several distinct trends "to the good."

During the years of the depression and general unemployment, there was an influx of curbstone or "casual" servicemen who attempted to share the existing small volume of business. Factory workers, garage mechanics, chauffeurs, janitors, temporarily out of jobs, had turned to curbstone radio servicing.

Day of 100% service specialists

But now with the return of employment, these "casuals" are giving up their radio-service work and going back to their non-radio jobs, leaving the service field to the real 100 per cent radio-service specialists.

As a result, parts jobbers find that their lists of "servicemen" are being weeded down to the responsible individuals and organizations who are really capable of making a business out of servicing.

Moreover these legitimate service men are improving their credit. They are increasing their purchases, and investing in better test equipment.

But from the standpoint of business capacity and responsibility, it seems to be the servicemen operating in connection with stores or merchandising businesses, who hold first place with the parts distributors. Dealer servicemen are almost invariably ranked highest by parts-jobbers, east and west. In the following paragraphs these suppliers speak for themselves.

MINNEAPOLIS, MINN.

We find the "casuals" in the radio servicing business are slowly fading out of the picture, due to their inability to cope with the skilled mechanics. Indirectly they are leaving the radio business to find some sort of definite or more substantial income.

We find the service men and organ-

izations who are getting justified prices for their work, are now purchasing equipment to keep themselves abreast of engineering developments by the factories. Our records show that they are paying their bills on present purchases as well as paying on delinquent accounts, thus making the radio-servicing trade much more interesting than at any time since the inception of radio.—LEW BONN COMPANY, L. J. Bonn.

FORT SMITH, ARK.

We find that service men connected with dealers are more successful as a rule than independent service men. This is especially true where the dealer has vision enough to see the possibilities of a good service department. Here is another thing worth considering—the dealers who maintain service departments and actually solicit service are the ones that are doing by far the best business.—AUTOMOTIVE SUPPLY CO., W. A. Johnson.



The full-time radio-service man is once more coming into his own.

GAINESVILLE, FLA.

We find that service men who operate in combination with radio dealers usually have a better credit rating than those who are in the business for themselves and who do only service work without attempting to enter into sales work.

We are frank to say that we attribute the low credit rating of service men to the fact that they are not charging for their services sufficiently to keep their business in a liquid condition.

Radio service work in the past few years has rapidly become more difficult and the service men have failed to take cognizance of the fact that it now requires more time to service the average radio than was required four or five years ago. The consequent loss of revenue has been reflected in the credit rating of this type business.—BAIRD HARDWARE COMPANY, James W. Shackelford.

EVANSVILLE, IND.

The serviceman must operate a general radio business. He must expect to invest more money in his store. The day when a man could make a living in radio on a \$100 investment is past. He must be able to render better service than could be had from the place in which radio was only a sideline.—PAUL CASTRUP RADIO SERVICE, Paul Castrup.

CHICAGO, ILL.

We serve an area within a 150-mile radius of Chicago, and 85 per cent of our accounts are radio dealers who are setting themselves up more than ever to take care of the service business.

In our experience in the past six months our books show that we have had more equipment business during this time than in any two years previous—which goes to prove that the radio dealers are actually going back into the servicing business.—THE LUKKO SALES CORP., Wm. O. Schoning, General Manager.

ATLANTA, GA.

The service field in this territory is gradually going back to the legitimate specialists, who have completed training courses in various schools and are now establishing a place of business. It is true they are endeavoring to improve their credit, also to invest in the better test equipment. Slowly, but surely, the situation is growing better, consequently the field of radio-servicing is on a much more substantial basis.

It is our experience that service men combined with radio dealers are more successful and desirable as customers.—GARVIN ELECTRIC COMPANY, H. L. Garvin.

PORTLAND, ME.

There are very few territories where it is possible for a service man to successfully operate a service business and we believe that those service men who have been able to stay in the business for any period of time are those who also have the ability to sell as well as service. This makes it all the more apparent that the ordinary, untrained man cannot expect to do this kind of business.—FRANK M. BROWN COMPANY, A. H. Gross.

HARTFORD, CONN.

It has been our experience that the service man who conducts a service and sales business is the most successful.

We are selling many new tube testers and quite a volume of test equipment, which would indicate that the service men are increasing their equipment for the rendering of quicker and better service.—NORTHEASTERN RADIO, INC., George Cohen.

PHILADELPHIA, PA.

Most of the men with whom we do business now are really capable of making a business out of servicing. The legitimate service men are improving their credit. They are greatly increasing their purchases and investing in high-grade testing equipment.

We find a great many men who run a straight service business just as successful and desirable as the service men combined with radio dealers.—PHILADELPHIA RADIO SUPPLY CO., J. R. Barnett.

CAMBRIDGE, MASS.

We find that service men combined with radio dealers, are more successful, and desirable as customers, than those who run straight service businesses.—WOODROW RADIO CO.

PROVIDENCE, R. I.

We find that the most desirable customers are:—The successful service man who operates a radio sales and service store, and the dealer who employs one or more service men.—WM. DANDRETA & Co., A. J. Marrese.

CLEVELAND, OHIO

From the standpoint of tubes or parts sales, the service man is of course the larger user. But financially the radio dealer is still the better credit risk. After all, it simmers down to the individual, his technical training and his business acumen.

One improvement in service men's business, which will, I believe, increase as time goes on, is the tendency of radio dealers to pass their service work on to service men who handle the work of several dealers on a wholesale basis. This applies not only to auto radios but increasingly to house radios as well.—LYTRON CORPORATION, H. E. Erickson.

ELMIRA, N. Y.

It is hard to say whether service men working alone are as good customers as those tied in with radio dealers. Of course, in most cases, dealer service men are better credit risks. However, some of our largest accounts are with independent service men.—F. C. HARRISON'S, H. Jenkins, Sales Manager.

GLOVERSVILLE, N. Y.

Our best business is with the independent service man, probably because there are more of him. However, several of our best customers are sales outlets maintaining their own service department, paying good wages to their personnel, showing a very decent profit in spite of generally poor business conditions, and building tremendous good-will, with consequent heavy jingling of the cash register in all departments. We think that this viewpoint (for it is only a mental attitude on the part of the management), is coming more and more to the front with the better houses.—ADIRONDACK RADIO SUPPLY, Blakely E. Cross.

CEDAR RAPIDS, IOWA

Our experience has been that there are more and more radio service men popping up all the time. In this little city of less than sixty thousand people there are in the neighborhood of seventy-five to eighty radio amateur licenses. The big majority of these kids are more or less radio service men. Only twelve to fifteen of them, of course, advertise and pretend to be in business.—TERRY-DURIN COMPANY, J. B. Terry.

MANCHESTER, N. H.

Due to the fact that service men in business for themselves are exceptionally poor business men—too much technically minded for their own good, we find that service men combined with radio dealers, are more successful, and desirable as our customers, than those who run straight service businesses.—RADIO SERVICE LABORATORY.

CROTON-ON-HUDSON, N. Y.

It has been our observation that a dealer or service man who sells sets and accessories is usually more successful. Another class of very successful service men are those who do servicing for several stores and under agreement with these stores must confine their efforts to strictly servicing.—WRO RADIO LABORATORY, William R. Osborn.

DENVER, COLO.

From our experience we believe that the legitimate service men are improving their credit, increasing their purchases and improving their test equipment.—THE PARKER COMPANY, Earl W. Dickson.

BOSTON, MASS.

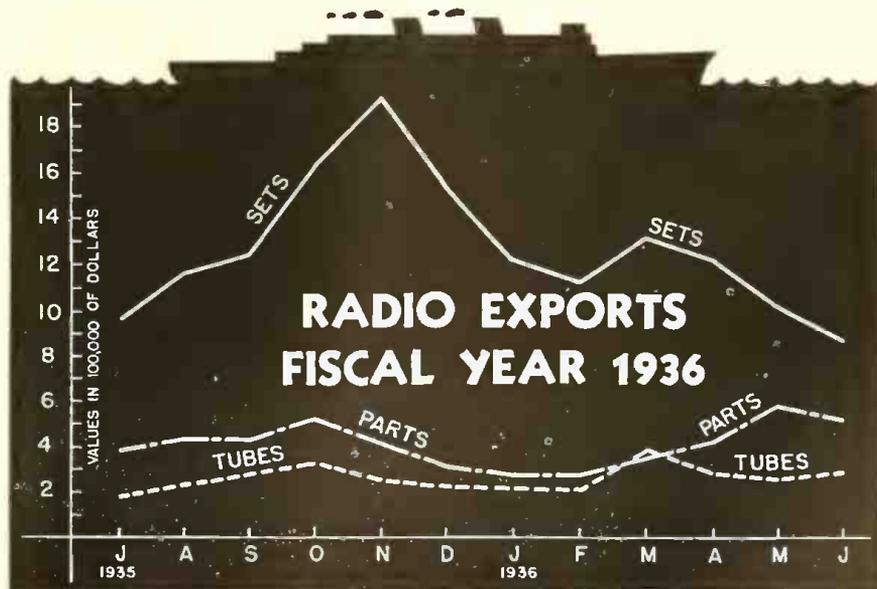
In covering the service trade we have made it a distinct practice to pick what to us seems the most promising and logical prospect in the field, both from a technical and a business point of view. We realize the impossibility of calling on and serving all of the so-called service men, and as we do not believe that the service field is large enough to warrant the large number of so-called service men, we believe that our policy in picking our prospects with the intentions of helping educate them in business practices, and in bringing them along, so to speak, in their community, in an endeavor to have them establish themselves in their local community as a merchant, is the right solution to this problem. Our success in the majority of cases would seem to indicate this.—H. JAPPE COMPANY, H. Jappe.

ELYRIA, OHIO

Few legitimate radio shops are making any money on service, largely because of the inroads of the countless "casuals" or ham service men. There is only a certain amount of repairs, and the "Home operators" because of their number, get the lion's share of the total.

The cure? A state licensing system, with a high registration fee, would compel a large percentage of the "casuals" to suspend operations. Refusal to grant a license to a person otherwise gainfully employed would help.

Distributors have it within their power to ease the situation of the legitimate service shop. They are too willing to sell to the service men operating out of their homes; this covers parts as well as sets. Cooperation among the distributors agreeing to sell only to stores would doubtless help.—ZENITH RADIO ELECTRIC APPLIANCE CO., E. R. Smith.



ACTUALLY MORE ON THE SALES BALL

Merchandisers move in on radio's this-Autumn uproar

THEATRES BUY RADIOS

★ New, interesting market for receivers of the higher-priced types has appeared among theatre managers and companies who want the instruments to give away. The business stirs popular interest in new consoles and special models, gets valuable publicity for the dealer and his lines.

Big theatre chains, such as Fox West Coast, the Skouras and Rand-force group in and around New York City, the Schine chain in New York, Pennsylvania and Ohio and the Shea outfit in Buffalo, N. Y., have all begun the practice and are using Radiobars as door prizes to stimulate attendance. These receivers are either purchased outright by the theatre or by a promoter who sells advertising space in connection with the giveaway of some local sponsor.

SELLING TONE

★ Demonstration novelty worked out by W. T. Noss of the Baldwin Hardware Co., Springfield, Mo., was regarded as exceptionally successful in merchandising tone fidelity of auto radios. Baldwin Co. is a distributor and the stunt was staged for dealers, but it has retail possibilities.

Affair was held in the studios of KWTO. Guests were seated in a room facing a pianist in action, and the auto radio demonstrator set car-



Regular femme features and political news are now wanted in many kitchens.

1936 Collegiate Football

Big 10 and Notre Dame

Team	Oct. 3	Oct. 10	Oct. 17	Oct. 24
Chicago	Vanderbilt	Butler	Purdue	
Illinois	Wash. U.	U. of S. Cal.	at Iowa	No'western
Indiana	Center Col.	at Mich.	at Neb.	at Ohio
Iowa	at N. W.	So. Dak.	Illinois	
Michigan	Mich. State	Indiana	at Minn.	Columbia
Minnesota		Nebraska	Michigan	Purdue
No'western	Iowa	N. Dak. St.	Ohio	at Ill.
Ohio State	N. Y. U.	Pittsburgh	at N. W.	Indiana
Purdue		Wisconsin	at Cal.	at Minn.
Wisconsin	Marquette	at Purdue	at Notre D.	
Notre Dame	Cornell	Wash. U.	Wisconsin	at Pitts.

Conference Games in Bold Type

In the East

Team	Oct. 3	Oct. 10	Oct. 17	Oct. 24
Army	Was. & Lee	at Colum.	at Harvard	Springfield
Brown	Rhode Ia.	at Harvard	at Darim'th	at Penn.
Cornegie	at Notre D.	Mich. Sta.		at H. Cross
Colgate	Ursinus	St. Law're	Tulane	Lafayette
Columbia	Maine	Army	Va. Milit'y	at Mich.
Cornell	at Yale		Syracuse	Penn. Sta.
Dartmouth	Vermont	Holy Cross	Brown	at Harvard
Harvard	Amherst	Brown	Army	Dartmouth
Navy	Davidson	Virginia	Yale	at Prince.
Penn. State	Muhlenburg	Villa Nova	at Lehigh	at Cornell
Penn.	Lafayette	at Yale	Princeton	Brown
Pittsburgh	West Va.	at Ohio Sta.	Duquesne	Notre D.
Princeton	Williams	Rutgers	at Penn.	Navy
Syracuse	Clerkson	Bald. W.	at Cornell	Maryland
Yale	Cornell	Penh.	at Navy	Rutgers

Copyright by Haynes' Radio Log, Chicago

Games to be aired next month give dealers another promotion chance.

rying a broadcast from another room. Artist in the latter room was also a pianist, playing the same composition in perfect step with the visible player. Alternately the radio was turned off and the pianist in the room took up the playing; guests were unable to tell where the music was coming from. Listeners regarded the stunt as a dramatic proof of the tone quality of the auto receiver.

SURPRISE BROADCAST

★ Transcribed method of selling, via dealer's local station, is being used with fine success by American-Bosch distributors to sell the listening public on the advantages of 1937 models, at the same time to sell the dealer.

Plan centers around a series of one-minute spot dramatizations, electrically transcribed, which American-Bosch furnishes to its distributors and dealers. Distributor arranges for the broadcast of one of these announcements at a certain time every day—preferably three o'clock in the afternoon. A little before three o'clock each day a distributor's salesman calls on a dealer and sets up a sample radio set. He tunes in the station carrying the program. The dealer hears an entertaining dramatized human interest broadcast that tells him the selling features of the set, while the quality of reception is audible proof of the claims made for it. The effect on the dealer is made even more compelling when the salesman reminds him that hundreds of his customers are listening to the same message at the same time.

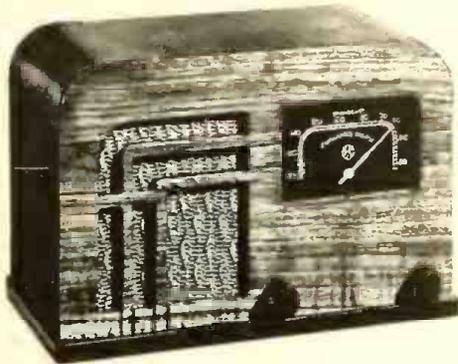
Transcriptions consist of 13 one-minute human-interest dramatizations by NBC artists, built around the reception qualities of new sets. Each recording has a 10-second section for announcement of the dealer's name and address.

TELEGRAMS AND TICKETS

★ Direct mailing pieces of unusual value have been found by dealers among the selection newly offered by Philco. First of them is designed to stir interest in foreign broadcasts—a set of 6 facsimile tickets, made up in regulation theater style, each admitting one to broadcast features to be heard from foreign stations. Ticket gives the name of the show, the station from which it is broadcast, and the dial setting.

Company also has prepared direct mail communications for dealer use, written in eye-catching telegram form, rather than in the usual letter form.

COMPLETE LINE OF FAIRBANKS-MORSE RADIOS GIVES YOU EVERYTHING



F-M model 69-T-7. 6-tube AC-DC superheterodyne. Band range 540 to 1750 kilocycles. Attractive walnut cabinet, 12 $\frac{1}{4}$ " long by 8" high by 6 $\frac{1}{4}$ " deep. Price \$19.99.

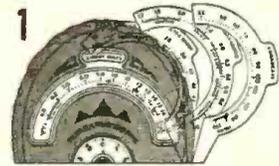
See the Fairbanks-Morse Line at the National Electrical and Radio Exposition, Grand Central Palace, September 9th to 19th—Space 45

17 models • Priced from \$19.99 to \$149.95 plus sales-clinching exclusive features

No matter what size or priced radio your customer wants—no matter whether he lives on or off the high lines, in AC or DC areas—you have it with the Fairbanks-Morse line. And you also have the radio that has what 3 out of 4 buyers want. Easy short-wave tuning. Quiet reception. True-to-life tone.

Hundreds of men and women representing a cross section of the radio prospects of the entire nation recently inspected the new Fairbanks-Morse radio and three other sets—all leaders. Asked which they would investigate if buying a radio, 3 to 1 voted for the Fairbanks-Morse.

1 *New Semaphore Dial makes short-wave tuning easy.* No puzzling array of numbers on this dial. One set of numbers at a time is placed in the band window automatically by turning the wave-band control. Widely spaced figures are easily read. Every tuning operation is visibly indicated. A child can tune it!

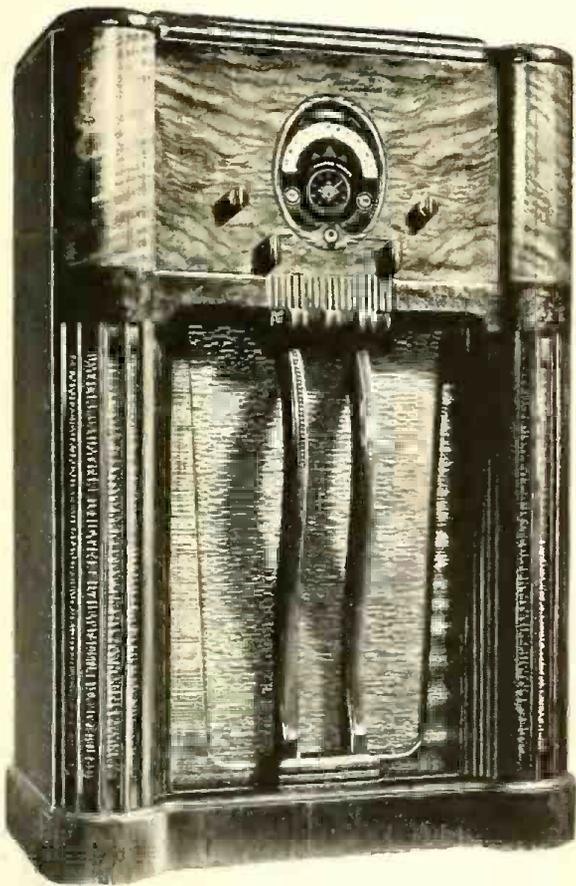


2 *See this Turret Shielded Chassis.* Note the neat appearance it gives the set. What it *does* is more important—and just as easily explained. Turret Shielding, an exclusive F-M feature, with other improvements enables this radio to give clear reception in even the so-called "noisy" locations and permits signals from foreign stations to come in clear and strong.



3 *See that new, exclusive Tone Projector.* Show it to a prospect and you've started a sale. Let him *listen* to it and you've closed a sale. The tone of most radios except Fairbanks-Morse is best when heard directly in front of the speaker. F-M Tone Projector, permitting largest baffle used on any radio today, diffuses all tones to all parts of the room. Gives tonal purity your prospects have never heard before in any radio.

Write for details of the F-M radio franchise—maybe it is available in your community. If so, you can "go to town" with this line just as other F-M dealers everywhere are doing. Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Ave., Indianapolis, Ind. Other F-M products: Conservador Refrigerators, Washing Machines, Ironers, Automatic Coal Burners.



F-M model 12-C-6. 12-tube superheterodyne. Turret Shielded. Semaphore Dial. Tone Projector. Five bands including ultra short-wave and long-wave weather band; 540-1720 kc., 1720-5500 kc., 5500-18,500 kc., 18,500 to 70,000 kc. Balanced perspective cabinet. Price, \$119.95.

FAIRBANKS · MORSE RADIO

MERCHANDISING THE WAX

- record biz rings the (school) bell
- list of exclusives by disc labels

★ WHO'S Who on today's lists of exclusive artists, recording their better-selling work under various labels, is revealed in current reports from several record headquarters.

Heading the exclusive list for Brunswick is the name of Fred Astaire, who, as far as the tunes from his current screen hit, "Swing-Time" are concerned, is all Brunswick's. The others are Johnny Green, Nat Brandwynne, Cab Calloway, Duke Ellington, Lud Gluskin, Jimmie Grier, Kay Kyser, Russ Morgan, Leo Reisman, Art Shaw, Pinky Tomlin, Teddy Wilson, the Hudson-De Lange combination, Hal Kemp and Ozzie Nelson.

None-other list for the Vocalion label includes Bunny Berigan, Putney Dandridge, and Stuff Smith. Exclusive for the American Record labels are Rudy Vallee, Chick Bullock and Joe Haynes.

Victor's names

Victor has Nelson Eddy all tied up for songs from current pictures,



Shep Fields, master of Rippling Rhythm, leading Bluebird sales.

and has a special contract with Jeanette McDonald to record exclusively her tunes from the flashy movie "Maytime," now in production.

Otherwise, Victor points to the dance artists Tommy Dorsey, Eddy Duchin, Benny Goodman, Fletcher Henderson, Guy Lombardo, Ray Noble, "Fats" Waller and Paul Whiteman. For the Bluebird label the exclusives are Charlie Barnet, Wingy Mannone and Shep Fields.

AID FOR DISC DEALERS

★ RCA-Victor reports that sales of records during the past year were 150 per cent over sales for 1933. Extra demand for the wax is credited to radio's novel exploitation of musical culture during the past two years.

Record biz for the first seven months of this year showed nearly a 100 per cent increase; month of August alone saw a gain of 225 per cent over the same month last year.

Against this cheerful background, Victor outlines its current campaign to keep the record pace and to tap the new market for today's disc offerings. Campaign might be referred to as a sort of a 7-point drive: (1) consistent plugging on the Magic Key program on Sundays, (2) Hook-up with the "Your Hit Parade" broadcast, (3) Hit Parade display pieces for music shops, (4) use of the top song lists by tobacco retailers and jobbers (the program is sponsored by the American Tobacco Co.), (5) Special collegiate appeals sent to fraternity and sorority houses, (6) Direct mail advertising, and (7) Ad campaigns in newspapers and magazines.

BEST SELLERS AS WE GO TO PRESS

BLUEBIRD

Did I Remember—Fox trot. **Sittin' In The Sand A-Sunnin'**—Fox trot. Both with Shep Fields and his Rippling Rhythm—B6476.

When I'm With You—Fox trot. **But Definitely**—Fox trot. Both with Charlie Barnet and his Glen Island Casino orchestra—B6433.

And Still No Luck With You—Fox trot. **All Is Quiet On The Old Front Porch Tonight**—Fox trot. Both with the Washboard Wonders—B6463.

BRUNSWICK

These Foolish Things Remind Me Of You—Fox trot. VC by Billie Holiday. From the revue "Spread It Abroad." **Why Do I Lie To Myself About You**—Fox trot. Both with Teddy Wilson and his orchestra—7699.

There's A Small Hotel—Fox trot. VC by Maxine Grey. **It's Gotta Be Love**—Fox trot. VC by Skinny Ennis. Both from "On Your Toes," both with Hal Kemp and his orchestra—7634.

On the Beach at Bail Ball—Fox trot. **Afterglow**—Fox trot. Both with VC by Larry Stewart, both with Leo Reisman and his orchestra—7696.

COLUMBIA

Ride, Red, Ride—Fox trot. **Congo Carnival**—Fox trot. Both by Mills' Blue Rhythm Band, directed by Lucky Millinder—3087D.

These Foolish Things Remind Me Of You—Fox trot. Voc. Ref. with Carroll Gibbons and the Savoy Hotel Orpheans. **You Started Me Dreaming**—Fox trot. Voc. Ref. with Henry Hall and his orchestra—3136D.

Jes' Natch'ully Lazy—Fox trot. Voc. Ref. by Chuck Richards and George Washington. **Everything Is Still Okay**—Fox trot. Voc. Ref. by Chuck Richards. Both by Mills' Blue Rhythm Band—3134D.

DECCA (By Titles)

When I'm With You—Fox trot. VC by Joseph Sudy. From "Poor Little Rich Girl." Henry King and his orchestra—804.

These Foolish Things Remind Me Of You—Fox trot. Victor Young and his orchestra—865. Joe Sanders and his orchestra—843. Benny Fields—849.

Did I Remember—Fox trot. Jan Garber and his orchestra—859.

VICTOR

Until The Real Thing Comes Along—Fox trot. **I'm Crazy 'Bout My Baby**—Fox trot. Both with "Fats" Waller and his Rhythm—25374.

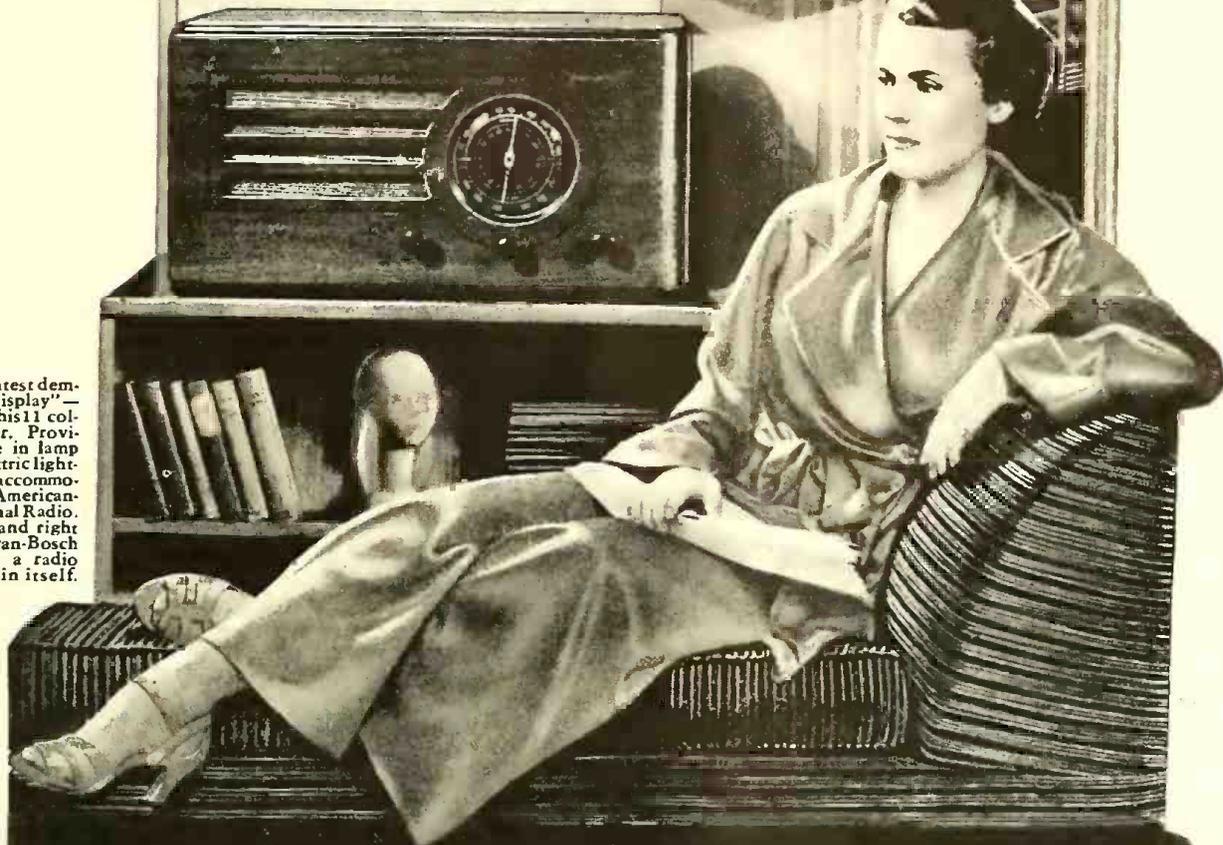
Knock, Knock, Who's There—Fox trot. **Until Today**—Fox trot. Both with Fletcher Henderson and his orchestra—25373.

Lonesome China Boy—Fox trot. **Oh Lady Be Good**—Fox trot. Both with Benny Goodman Trio—25351.



Jan Garber, familiar name among Decca's best sellers.

AMERICAN BOSCH *Personal* RADIO



★
"Radio's greatest demonstration display"—dealers call this 11 color salesman. Provision is made in lamp shade for electric lighting. Display accommodates any American-Bosch Personal Radio. Flanked left and right by an American-Bosch Console, it's a radio department in itself.

Lovely to look at.
DELIGHTFUL TO HEAR

PICTURE THIS SET-UP...in your store

WHAT do you need for greater Success in the Radio Business? *Strong selling helps!* American-Bosch offers you such dynamic helps as the amazing 11 color demonstration display illustrated above—it sells radio sets. *Sound merchandise!* American-Bosch CentrOmatic Radio headlines 24 all-star features, with the spotlight on the "Automatic Maestro." *Beautiful cabinets!* American-Bosch brings you radio sets that are captivating in every detail of line and finish. *National and local advertising cooperation!* *Intelligent pricing!* *Unquestionable dependability!* American-Bosch brings you these and more! You want sales—mail coupon at right for your "Success in the Radio Business."

American-Bosch Radio is licensed under patents and applications of R. C. A. and Hazeltine Corp.



**SEND THIS
COUPON TODAY**

UNITED AMERICAN BOSCH CORPORATION
SPRINGFIELD, MASS. Dept. RT-3

Please send copy of "Success in the Radio Business" containing complete information about the new American-Bosch line.

Name.....

Address.....

STAMPEDE TO "SOUND"

— current exhibition of selling P.A.

— dealers find new types of prospects

STEEPLE CHASE

★ Dealers on the look-out for likely places to spot sound equipment have stopped to notice the local churches. It is becoming the custom among religious groups to arrange for parts of the service to be heard outside the church; opening hymns, organ preludes, special music, etc., are attractive items for any community when heard through an outside amplifier.

Procedure is to hook a directional baffle loudspeaker into the inside sound system, thus to cover the immediate area with good reproductions of preliminary parts of services.

Churches are profitable institutions to be acquainted with, anyway, since many of the large ones require elaborate sound systems to cover the main assembly, and usually sponsor a number of social activities where amplifiers may be needed. Smaller churches provide a good market for portable sound equipment.

WIRING A STATUE

★ Extremely practical manager of a parking lot in Chicago found at the same time a new use for a P.A. system and a new use for an old statue. When he got the parking lot, he got the bronze figure of a medieval herald, nearly 12 feet high, weighing 3 tons. Fact that the herald held a trumpet at his lips gave the manager an idea for advertising.

Plan is to wire the trumpet for sound, and to have the herald bellowing "Calling all cars, calling all cars!" Spectacle of the ancient figure using the raucy lingo of a downtown announcer does not seem to bother the Chicago promoter.

SOUND SYSTEM BUILDS SALES

★ Lakeside Radio Shop, Louisville, Ky., finds that it can garner a great deal of publicity by donating the use of its portable sound system for public gatherings and church charity bazaars, which would otherwise not use sound equipment.

A condition of such service is that the announcer will read a short message advertising the Lakeside Radio

THESE HAVE SPOKEN!

(Out-of-the-ordinary items that can be wired for sound)

Portraits	Refrigerators
Motors	Halloween Witches
Silk Hats	Ventilators
Fans	Electric Ranges
Clocks	Musical Instruments
Statues	Side Shows
Signs	Dishwashers
Heaters	Electric Irons
Floats	

Shop at intervals during the bazaar. Free use of the sound system is confined to large gatherings, otherwise many smaller groups would ask for such service.

The radio proprietor claims that some bazaars entertain as high as 5,000 people daily, therefore such advertising helps a radio shop, as well



Helped to hear—church-goers are supplied with phones hooked to the main sound system.

as demonstrating the sound apparatus. The organization has been able to trace considerable business to this source. People who attend the events apparently like to reciprocate by sending the firm service work and by purchasing their new radios at the Lakeside Shop.

SCHOOL BELLS

★ Radio and the "sound" arts have grabbed a new and important place in modern methods of education; few modern classrooms, playgrounds, or laboratories are without traces of the new trend. Schoolroom broadcasts, inter-department sound systems, recorded voice studies, outdoor amplifiers have become routine matters in the better equipped units of American instruction.

New developments in the "sound" field appear to have new applications to current problems in education. RCA-Victor, for one, intends to promote the business; Thomas F. Joyce, advertising and sales promotion manager has announced a definitely wider scope for his company. To that end, Ellsworth C. Dent has been appointed director of the RCA-Victor Educational Division. Dent was formerly chief of the Motion Picture Division, U. S. Department of Interior, has had years of experience as a collegiate instructor of visual education.

Dr. Frances E. Clark, pioneer in educational recordings who has been with RCA and Victor for 25 years, has been named Director Emeritus of Victor's Educational Dept.

O GRAVE WHERE IS THY STING?

★ Dread of being buried alive, fills many people.

To safeguard against this possibility, one Middle West tycoon has arranged with his local sound man to install a microphone in his coffin, so that if he is accidentally interred before rigor mortis sets in, he can turn over and shout for help.

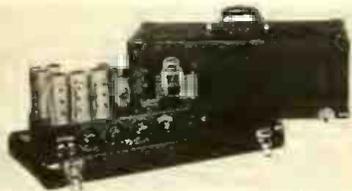
The coffin is already bought, equipped, and waiting — with circuits wired up connecting the grave-site with the cemetery caretaker's cottage. As a precaution against open circuit, an electric bell is also installed in the coffin, so that the outfit can be tested regularly by the caretaker, by pushing the bell-button and listening for the return ring of the bell. Under contract, the caretaker is to test and listen regularly for a year after the funeral.

there is only **One** **WEBSTER ELECTRIC**

*This name identifies the
Quality Sound Equipment
demanded by these markets* →

● In the column at the right you will find a partial list of the many markets which exist for high quality, high fidelity sound equipment . . . The field offers you no better line with which to meet the requirements of these markets than WEBSTER ELECTRIC Sound Equipment . . . It is good-looking equipment . . . It is built to exceptionally precise standards . . . It is priced right for the quality it embodies . . . It is sold through legitimate channels—the channels that insure dealers the right profit. The four models illustrated below are typical of the line as a whole . . . Write for information regarding them.

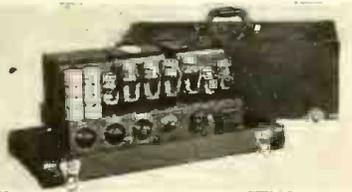
[Webster Electric Sound Systems are licensed by agreement with Electrical Research Products, Inc., under patents owned by Western Electric Company, Inc. and American Telephone and Telegraph Company]



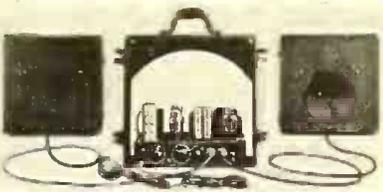
The Webster Electric 15 watt, Class "A" all-purpose, semi-portable sound system includes virtually the same equipment as the 30 watt system.



Dual mobile sound system operates from a 6-volt battery or on 110 volts. It includes spherical type microphone and two 12" heavy duty dynamic speakers.



The Webster Electric 30 watt, Class "A" all-purpose, semi-portable sound system handles two crystal microphones, phonograph unit and two 12" dynamic speakers.



The compact, portable Webster Electric 7 watt system includes hand or lapel type crystal microphone, carrying case and two 10" dynamic speakers.

WEBSTER ELECTRIC COMPANY
RACINE, WISCONSIN, U. S. A. • ESTABLISHED 1909
Export Department: 100 Varick Street, New York, N. Y.



You can sell
Sound
in these locations

- +
- Auditoriums
- Band Stands
- Colleges
- Churches
- Conventions
- Dance Halls
- Golf Clubs
- Gymnasiums
- Hospitals
- Hotels
- Lodges
- Advertising Trucks
- Amusement Parks
- Arenas
- Armories
- Athletic Fields
- Banquet Halls
- Baseball Parks
- Bathing Beaches
- Orchestras
- Parks
- Playgrounds
- Restaurants
- Schools
- Stadiums
- Theatres
- Vaudeville
- Undertakers
- Lecture Rooms
- Memorial Parks
- Summer Resorts
- Swimming Pools



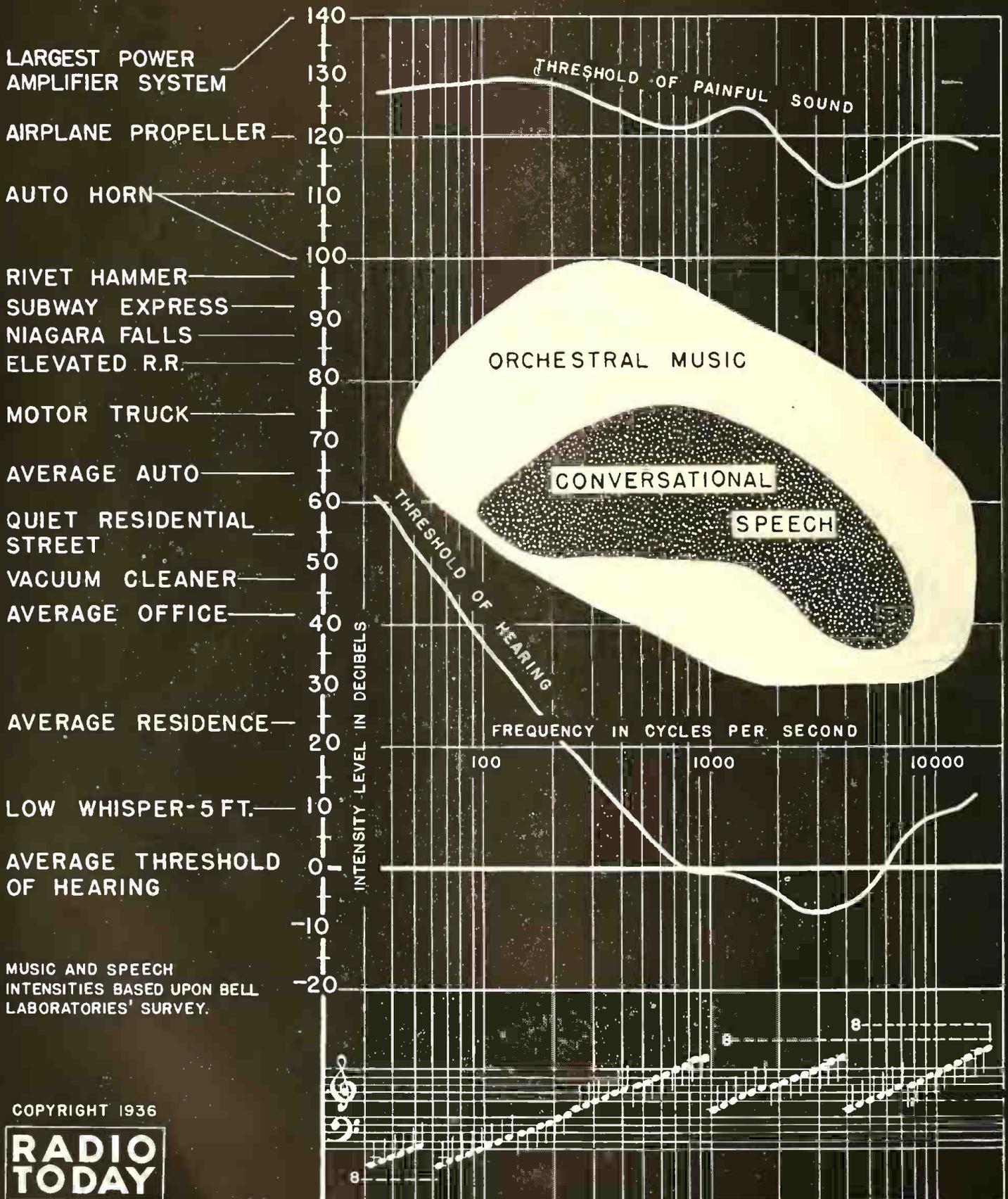
NEW!
**Webster Electric
Teletalk**

Here is a new product that you can sell to 78% of all businesses. A two-way intercommunicating system that sells on sight. Ask your jobber about it.

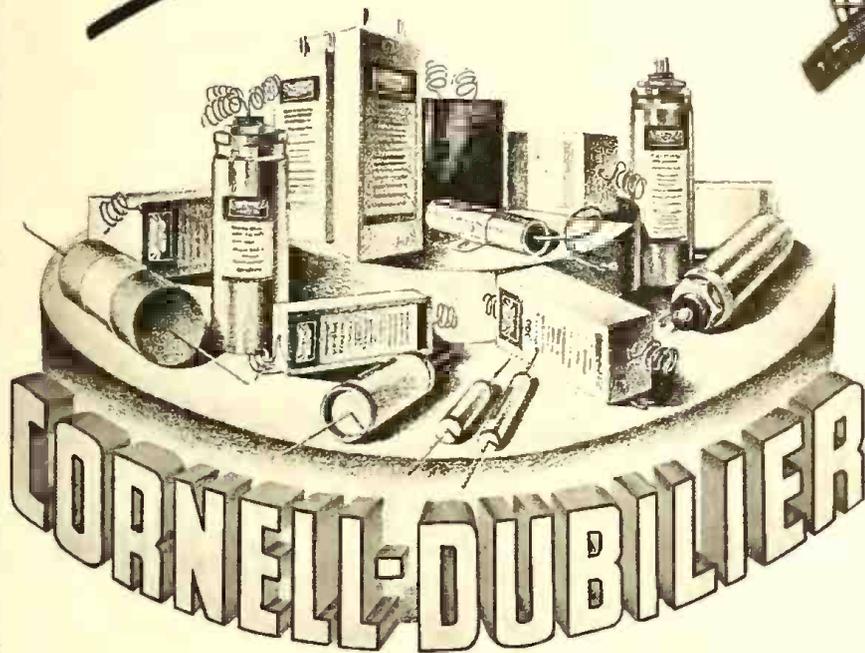
WEBSTER ELECTRIC SOUND EQUIPMENT

LOUDNESS OF FAMILIAR SOUNDS

Intensity and frequency ranges of speech and music
Decibel levels for installers of sound equipment



HIGH PRESSURE is out!



Thousands of Servicemen throughout the world have learned that it pays to standardize on Cornell-Dubilier condensers. They know that the use of Quality condensers means the elimination of those expensive FREE repeat calls — that C-D condensers mean customer satisfaction. Use C-D's on your next service job, and build your reputation.

It required no "high pressure" sales campaign to put Cornell-Dubilier condensers "across." Our success formula is simple: "Make a BETTER product . . . price it RIGHT . . . tell 'em about it."

C-D products have always been built UP to a standard — never down to a price, yet, C-D production is so enormous that C-D price schedules are in line with modern day requirements.

Cornell-Dubilier Dry Electrolytics, utilizing the "High Formation" process of manufacturing, are triply sealed in their containers by a special method, assuring maximum efficiency in operation—indefinite shelf life and

unfailing, dependable service. C-D Electrolytics are available in a complete line of aluminum containers and cardboard cartons. All electrolytics are supplied with either lug or lead terminal assembly.

For the tight service jobs the "Handy Mike" series fill the bill. Constructed in handsome silver cartons, they are convenient for mounting and simple to hook into the circuit.

Look for the C-D display featuring the entire condenser line for the servicing fraternity.

Descriptive catalogue No. 128 sent on request.

MICA • DYKANOL • WET AND DRY ELECTROLYTICS • PAPER

CORNELL DUBILIER

1022 HAMILTON BOULEVARD

SO. PLAINFIELD, N. J.

SOUND-EQUIPMENT SALES AND DISCOUNTS

Strict jobber-dealer policy necessary for trade's protection
"Who is jobber?" How industry conferences would help

★ ONE of the serious drawbacks to the commercial development of the sound-equipment field has been the general lack of trade discounts and sales policies on the part of many of those producing and selling sound apparatus. This absence of co-ordination has resulted in many evils, both immediate and indirect.

Some critics declare that manufacturers sell direct to servicemen without trying to protect their jobbers. Others claim that the jobbers sell to ultimate consumers at dealer discounts and even jobber prices.

It is asserted that certain manufacturers stand ready to give their maximum discounts "to anyone and everyone" who will write in and ask for them, whether qualified or not. This not only takes dealer sales away from jobbers, but also takes consumer sales away from the dealers.

Had a similar policy been pursued by the automobile industry, it is obvious that the great automotive business would not be where it is today. On the other hand, the strict observance of a sales policy protecting distributors and dealers, undoubtedly

could be made to work the same benefits for the sound-equipment business as it has done in automobile manufacture and sales.

Operadio states policies

"We for one have always maintained a very rigid jobber-dealer policy," explains Laurence A. King, sales manager of Operadio, St. Charles, Ill. "We have turned down a lot of sales because of it, but we feel that in the long run this policy will pay.

"Unfortunately up until the last year, the jobbers themselves have not realized the importance of the stability of trade discounts, to purchasers of sound equipment. This may possibly have been due to their lack of interest in this particular type of equipment, or their lack of foresight as to how it will affect them. Up to the present time, with few exceptions, it has been necessary for us to take the initiative in pointing out to jobbers the value of a rigid trade discount. Of course, after we have had an opportunity to bring this person-

ally to their attention, we have not had one single instance where they have not absolutely agreed with us and are all for it.

"However, you can appreciate how costly this method of 'missionary work' is because it really does require a personal call. But we believe that with the amount of 'missionary work' that has now been done, the jobbers will more and more demand some sort of protection in the stability of trade discounts.

To dealers at dealer discounts

"Our policy at the present time on all of our equipment (except our custom-built rack and panel apparatus) is merchandising exclusively through jobbers. The only exception to this is where in a new territory we have not been able to interest a jobber, and then we will promote direct dealer sales at *dealer discounts* until such time as we can interest or find the proper jobber. Even though we do not have a jobber in such a territory, we still give the dealer only a dealer's discount.

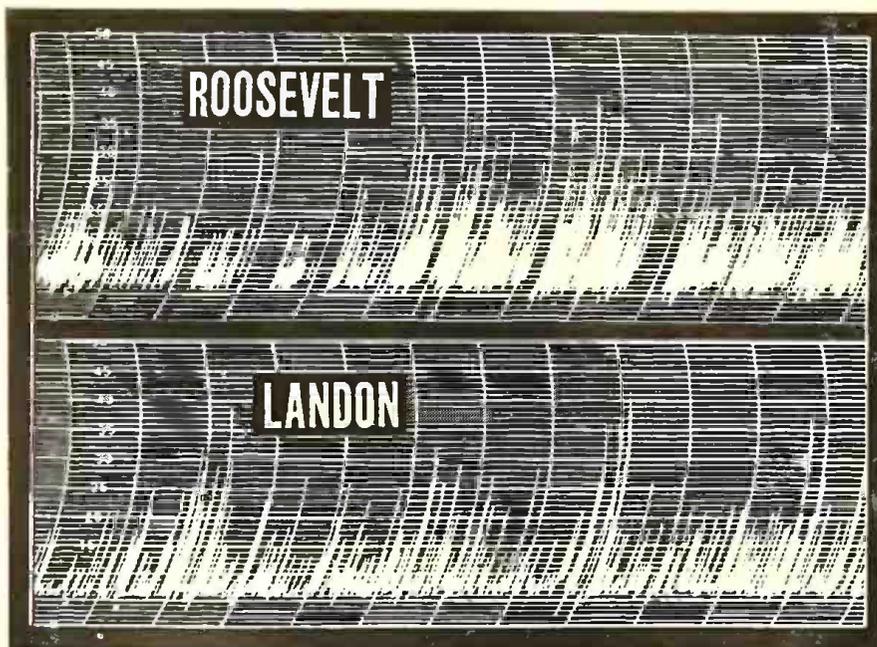
"As to how the sound-equipment industry can reach a better understanding as to trade discounts and their application, this, of course, is a complex problem. Any suggestion as to how it can be done is dependent entirely upon the desires and integrity of the majority of the manufacturers.

Approved jobber lists

"Although I am not personally in favor of the Patman-Robinson bill which has just been passed, I do believe that this particular bill might be used to good advantage and as a nucleus around which to build a policy. Of course, the only way to start it would be for every manufacturer to submit to a neutral party a list of those firms which he considers legitimate jobbers. This neutral party would then make an analysis of these various lists and after by consultation weed out any considered not entitled to the extreme discount.

"Then, by mutual consent, all the manufacturers would agree not to add any other names to this list without

SOUND-LEVEL RECORDINGS OF THE PRESIDENTIAL CANDIDATES



These two graphic-meter records were taken under identical conditions from the same microphone set-up, by NBC sound engineers, and show the candidates' characteristic pauses and voice levels.

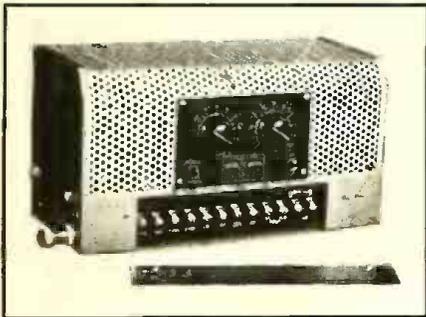
RCA SOUND EQUIPMENT...FINEST FOR EVERY PURPOSE...YOURS AT MODERATE COST!

IN sound equipment—as in all other fields of radio—RCA leads! For RCA's background of years devoted to research and development has produced equipment that stands the most rigid testing—equipment made specially to do a fine job for its user.

On this page you see a few of RCA's sound equipment products. There are many others—a complete line for every purpose—and all are modestly priced. Remember—when you buy RCA sound equipment you not only gain the benefits of quality and dependability—but you centralize your responsibility as well. For RCA's sound equipment is standardized and interchangeable. And, since RCA manufactures everything from the microphone in the studio to the loud-speaker in the home, all units are matched for super performance.

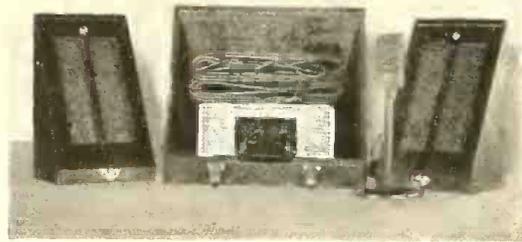
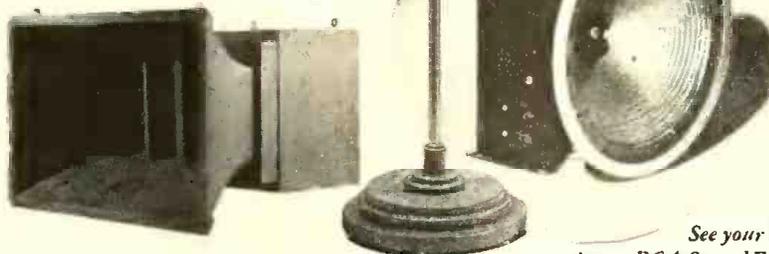
RCA AMPLIFIER MI-4283... for general sound reinforcement purposes, such as amplification of public address, radio and phonograph programs. 4 stages with 16,000 ohm input impedance, for use with

MI-4010A Velocity Microphone or equivalent. 15, 7½ and 40 ohm output impedances. Built-in powersupply. 12 watts Class A, undistorted output. Frequency range from 50 to 10,000 cycles. Has tone control, volume control, music-speech switch, radio and phonograph input. List price (less RCA tubes) \$76.95. Tubes \$5.84 extra.



RCA MICROPHONE MI-4010-A AND STAND MI-4068. Highest quality, low cost Velocity Microphone ever made available to sound engineers. Excellent frequency range. Highly favorable directional characteristics; high sensitivity and faithfulness of response. List price \$43.50... Studio floor stand accommodates all RCA microphones. Heavy base. Height adjustable from 37" to 67". List price \$18.75.

RCA WOOD Baffle MI-4428... a new RCA development for use with both 8" and 12" dynamic speakers. Semi-weatherproof, with high frequency equalizer. Distribution angle 90° horizontal, 50° vertical. Acoustically treated. List price \$22.50.



RCA STANDARD PORTABLE SOUND SYSTEM... embodies all sound amplification equipment qualities... plus new, exclusive improvements, setting higher standards of performance and dependability. For outdoor or indoor political meetings, orchestras, amusement parks, auditoriums, cabarets, colleges, restaurants, etc. Power output furnishes sufficient volume for auditoriums seating as many as 1600 persons. PG-98 \$179.50 list price, complete with RCA Radiotrons all in one case, operates on 110 AC, 50-60 cycles.



RCA LAPEL VELOCITY MICROPHONE MI-4001... a small, highly efficient unit for attachment to coat lapel of speaker. Has 30-foot cord permitting speaker to move over wide radius. Excellent for classrooms, lecture halls where charts or blackboards are used, cooking schools, style shows, sporting events, etc. List price \$44.35.

RCA ELECTRO DYNAMIC SPEAKER

MI-6243... with aluminum voice coil and greatly increased frequency range. Field coil enclosed in metal housing, forming base for mounting. Handles 10 to 15 watts of power continuously. Excellent low frequency response, smooth overall response. Specially suited for use with RCA Baffle MI-4428, also illustrated on this page. List price \$22.50.

See your RCA Sound distributor for latest RCA Sound Equipment Catalog, No. 210



Public Address Systems

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

AMPERITE presents...

The NEW RBn VELOCITIES



Distinguished in Quality, Design, and Construction

featuring...

Embodies the latest technique in microphone design

Compact. Streamline. Modern. All cast case achieves maximum ruggedness. Fitted with Switch, and new Coble Clamp.

Models RBHn (High impedance); RBMn (200 ohms).

\$42.00 List

With built-in Cable Connector having locking device. \$44.00 List.

NEW! Models RBSn, RSHn — EXCELLENT ALL-AROUND MICROPHONES FOR SPEECH and MUSIC. Slightly lower output and frequency range than above. APPEARANCE SAME AS ABOVE.

\$32.00 List

For switch, add \$1.00 list. For cable connector, add \$2.00 list.

A specially designed microphone built to Amperite standards, which can be used for both speech and music. No peaks. Flat response. Triple shielded. Shock absorber. Swivel bracket.

Models RAL (200 ohms); RAH (2000 ohms)

\$22.00 List

(Finishes: All microphones have the new Standard Gunmetal Finish. Chrome finish, extra. \$1.00 list.)

FREE! TO DEALERS AND SERVICE MEN: A Striking Window Decal, advertising your SOUND SERVICE, and displaying the New AMPERITE VELOCITY. Write for it now!

MAIL THIS COUPON NOW

Please send me your SOUND SERVICE window decal FREE.

Name _____

Address _____

City _____

Jobber Dealer Serviceman

R.R.T. **AMPERITE Co.** Cable Address: Alkem, New York 661 BROADWAY, N. Y.

AMPERITE Velocity **MICROPHONE**

submission to this neutral party. The same thing could be worked out with a dealers' list.

"Of course, this will entail quite a bit of work and also initiative on the part of someone. However, we feel that it would be well worth while and we would be very willing to assist in any way that we can."

Transformer Corp's decision

"One of the first things we decided upon in formulating our sales policy was *who* we were going to sell," explains F. H. Skrotzki, sales manager Transformer Corporation of America, 69 Wooster St., New York City. "We knew that any other decisions we might make in respect to discounts, etc., would have to be based upon the way we answered this vital question. Too many manufacturers in the past have tried to burn their candles at both ends—they sold the jobber with one hand and the jobber's customer with the other. Obviously then there could be only one decision as far as we were concerned—we would, and are, selling only through the jobber."

"In coming to this decision, we hit our first problem—how were we going to determine who is, and who is not, a jobber? Fortunately the answer was simple, contrary to what many manufacturers offer as an excuse for selling every Tom, Dick and Harry. In every part of the country are sales representatives who have had contact—intimate contact—with the legitimate jobbers in their territory. These men know from years of experience just who is, and who is not, entitled to consideration on a jobber basis. Their recommendations, carefully checked by us, guide us in determining whether or not the prospective customer is a jobber. If not—this prospective customer is then courteously referred to the jobber or dealer in his locality, and our jobber is advised of the inquiry."

"With this decision as our basis, it is then a simple matter when we come to discounts. A discount schedule was arranged which permits a reasonable profit to the jobber and a liberal margin for the dealer. All of our advertising, catalogues, literature, etc., is priced at list prices. Never do we mention a so-called 'net price.'"

Brush draws a line

"For the manufacturer of certain products a difficult situation arises when these products are sold to both a jobber and a manufacturer of sound equipment—in view of the fact that the latter wishes also to sell through

the jobber at a profit. List prices must be high enough to take care of a considerable spread of discounts," explains C. B. Scott, vice-president Brush Development Company, 1893 E. 40th St., Cleveland, Ohio.

"There is also the disagreeable situation which will not be readily ironed out of a lack of clean-cut divisions between manufacturer, jobber, dealer, etc. Every dealer considers himself a jobber, and every jobber who assembles public-address equipment considers himself a manufacturer, much to the annoyance of the real manufacturer who deserves the best attention and consideration."

"We feel that a sufficient willingness to co-operate on the part of the members of such organizations as the RMA and the Sales Managers' Club might eventually work out some method of classification. In the meantime there is nothing but chaos."

Amperite's 40% for dealers

"We have no complaints from jobbers," reports the Amperite Corporation, 561 Broadway, New York City. "since we have a very strict jobber policy—shipping only to legitimate jobbers and restricting the number of jobbers in any particular territory so that a man can really do a good job on our products."

"If all manufacturers of sound equipment would sell to jobbers only, allowing dealers only 40 per cent discount, the dealer would have to sell for list price. At the present time a good many sound manufacturers sell directly to dealers at jobbers prices and in that way disrupt the whole industry."

FRESH TUBES, RIGHT ANTENNAS SUGGESTED ON NETWORKS

★ Broadcast demonstrations over principal networks, to help radio listeners get their sets in shape for the big programs this Fall, are being presented by O. H. Caldwell, editor of RADIO TODAY, in cooperation with network officials. These broadcasts urge listeners to "call in your nearest radio man," for fresh tubes, receiver check-up, and proper antennas.

At the invitation of the Columbia Broadcasting System, first period was on Aug. 22, with plans for occasional Saturday nights hereafter, during the "Columbia Workshop" hour.

NBC programs scheduled are: Sept. 9, 9:30 p.m. E.D.S.T. "Getting Your Radio Ready for Fall." Sept. 18, 7 p.m., "Good Reception—Is Your Radio O.K.?"

2,000,000 FARM RADIOS

will be sold during the next twelve months
THAT MEANS
2,000,000 RADIO BATTERIES
 WILL BE SOLD!

Sell MONARK, THE SPECIAL RADIO BATTERY
for FARM RADIOS and FARM LIGHTING PLANTS

Give a good radio a chance to do its best! No radio—and no light plant—can give satisfactory performance with a makeshift battery. Auto batteries are built for quick, heavy discharge (through the starter) and constant slow charge (from the generator). They aren't right for radios and light plants. **MONARK SPECIAL RADIO BATTERIES** are.

Special RADIO BATTERY FEATURES

- Ample number extra-thick plates eliminates need for frequent recharging; sustained voltage permits constant maximum performance from the radio.
- Interlocking grids; specially cooked cedar separators; "pickled" plates; rigid inspections and tests, assure long, trouble-free life.
- Recycled—ready for immediate service.
- Built-in hydrometer
- One piece rubber case
- Wing-nut terminals
- Uncompromising Guarantee



Monark
Special Radio
BATTERIES

GENERAL OFFICES:
 4556 WEST GRAND AVENUE, CHICAGO

*Advertised Through Leading Farm Papers to 2,000,000 Well-to-Do Farmers
 "ESPECIALLY DESIGNED FOR RADIO AND GAS ENGINE DRIVEN GENERATORS"

MAIL THIS COUPON TODAY

MONARK BATTERY COMPANY,
 4556 West Grand Ave., Chicago.

Rush Full Details and Prices

Name.....
 Address.....
 Individual.....

WHAT SINGLE P. A. SYSTEM

Will Serve 98% of Dealer Demands?



for
RENTALS 110V. or 6V.
SALES 110V. or 6V.

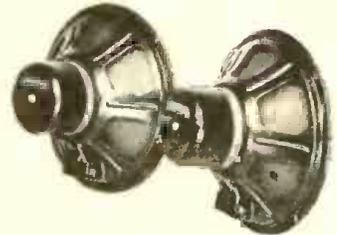
Portable or
 Fixed
 Installation



SYSTEM MP-420

WEBSTER-CHICAGO

Operates on either 110-V. AC or 6-V. DC 20 watts output . . . amplifiers and turn table built in 1 unit . . . two 12-in. Permanent Magnet Speakers . . . hand type dual diaphragm crystal microphone.



The "ONE" sound system that the dealer should own. Just the system for rentals or for demonstration. Because of flexibility many consumers prefer this system.

System MP-420 can be used on either 110-V. AC or 6-V. DC by plugging in the right power pack. It is thus equivalent to two complete systems. The plug-in type power pack is an exclusive Webster-Chicago development (Pat. Pending).

All equipment including tubes furnished with system. Complete price surprisingly low. See this system at your nearest jobber. Write for more complete information.

Webster-Chicago are old established manufacturers of P.A. Systems Sound Equipment and Accessories of all kinds. A full line of carefully engineered merchandise, priced right. The Sound line that all dealers should handle.

STRICT DEALER POLICY . . . FULLY LICENSED . . . TIME PAYMENT PLAN

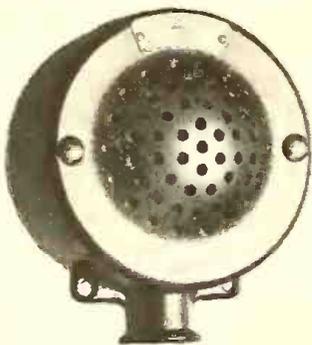
WEBSTER-CHICAGO
 Section S-9-3826 West Lake St.
 Chicago, Illinois

Please send me more information on Model MP-420.....
 I am also interested in sound systems Rentals.... Portables.... Fixed Systems.... Low Power.... High Power.... Institutional Systems.... Hotels.... Schools.... Inter-Office Communication Systems.... Factory Call Systems....

NAME.....
 STREET ADDRESS.....
 CITY..... STATE.....

DYNAMIC MICROPHONES

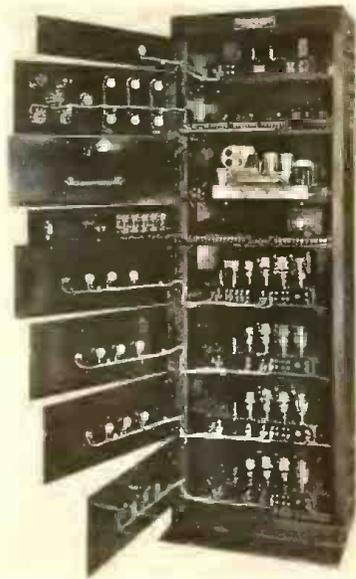
ARE INCREASING IN POPULARITY



because they

- have greater sensitivity
- are free from inductive pickup
- have no background noise
- can work with long lines
- are sturdiest ever produced
- are weatherproof
- are small in size
- are reasonable in price

CENTRAL CONTROL PANEL

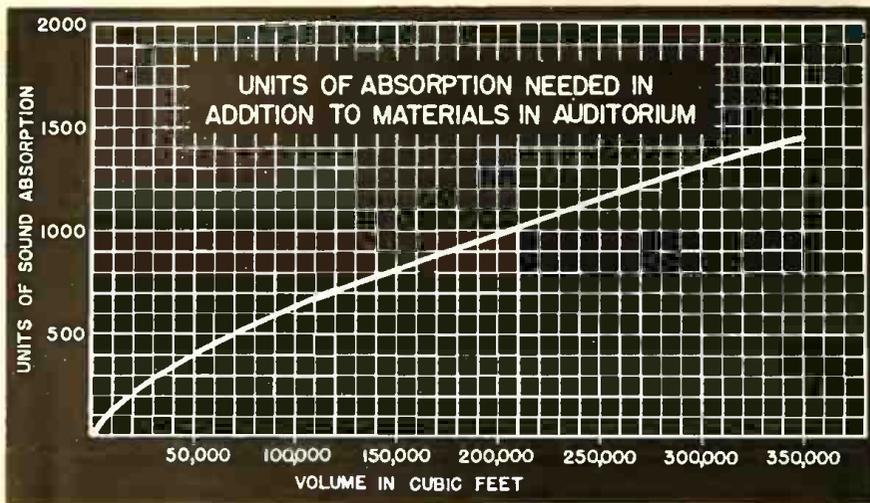


All panels hinged and parts accessible from the front. Ideal for Schools, Hotels and Hospitals. May be set flush with the wall, improving appearance. Fool-proof and convenient.

We solicit requests for special sound and amplifying equipment.

Send for our Sound Manual or Latest Bulletin 3013 on microphones.

RADIO RECEPTOR CO., Inc.
108 SEVENTH AVE., NEW YORK, N. Y.



CORRECTING ACOUSTICS

Practical advice for the sound man. Temporary solutions for disturbing reverberation

★ PROBABLY the least understood of all problems encountered by sound or servicemen installing public-address systems is the problem of acoustics. Yet, the successful operation of any public-address system in an auditorium depends entirely on the acoustical properties of the room. The mistaken opinion that a good public-address system will improve acoustical conditions has long ago been dropped by up-to-date and smart salesmen. Actually, the conditions are more often made worse by the sound apparatus. This applies to installations indoors—not outdoors, where reflection of sound is not a problem except for an occasional neighboring building.

The most important factor in the acoustics of an auditorium is the "reverberation," or the time taken for an ordinary sound to die out. If this time is too long, the sounds of the succeeding words uttered by a speaker will overlap and make it difficult for a listener to understand. For music, however, the overlapping of sounds is not so serious an objection; in some cases it may even be desired, particularly where the overlapping sounds are harmonious.

Reverberation is the multiple reflection of sound from hard plaster or brick walls, glass, ceilings and concrete floors. This must be eliminated to enable words or music from the public-address system to go directly from the speaker to the audience without encountering reflected words from the walls. Words mixed to-

gether cannot be understood. The public-address system increases the power of the spoken word, but it also increases the power of the reflected words, which results usually in increased confusion for the audience. Reverberation is controlled by placing sound-absorbing materials on the walls of the auditorium. The time of reverberation is thereby reduced and the acoustical condition improved.

Controlling reverberation

Since the time of reverberation is directly controlled by the amount of sound-absorbing material in the room, a very practical question arises as to the quantity of material needed to give the best effect. In other words, what is the "optimum" time for perfect acoustics? This question was answered first by obtaining an average opinion of a number of people regarding the good or bad acoustic conditions of a number of auditoriums. Then, on the basis of these opinions, the scientists formulated equations for good acoustics.

A study of auditoriums considered acoustically correct resulted in the well-known formula derived by W. C. Sabine: $t = \frac{.05v}{a}$ in which t = time of reverberation in seconds, v = volume of the auditorium in cubic feet, a = sound absorbing units. A "sound-absorbing unit" has been described as the amount of sound that will pass out an open window one foot square. Since this sound is not reflected back into the room, it is considered as be-

(To page 34)

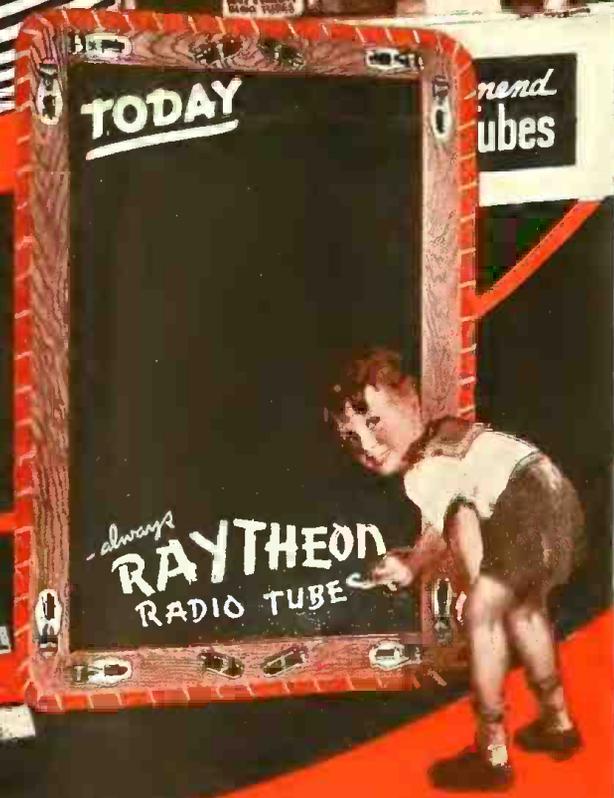


BACKS UP!

THROUGH THE YEARS IT HAS ALWAYS BEEN RAYTHEON'S POLICY TO PROTECT ITS DEALERS AND JOBBERS THROUGH A RIGID RETAIL PRICE SETUP. RAYTHEON'S TUBES ARE FAIRLY PRICED TO GIVE RAYTHEON DEALERS REAL PROFIT PER TUBE OVER OTHER TUBE LINES. BECAUSE OF RAYTHEON'S UNUSUALLY HEALTHY GROWTH, THE SALE OF RAYTHEON TUBES HAS NEVER BEEN "FORCED". RAYTHEON TUBES ARE NOT ADVERTISED AT CUT PRICES.

TO AID RAYTHEON DEALERS IN FULLY CAPITALIZING ON THE TREMENDOUS PUBLIC ACCEPTANCE OF RAYTHEON'S QUALITY AND NAME, OUTSTANDING SELLING HELPS ARE SUPPLIED RAYTHEON DEALERS, INCLUDING SIGNS, POSTERS, BANNERS, COUNTER CARDS, WINDOW DISPLAYS, NEWSPAPER MATS, REPLACEMENT CHARTS, TECHNICAL DATA SHEETS, ETC.

WRITE RAYTHEON TODAY FOR YOUR SUPPLY OF THESE AIDS TO GREATER TUBE PROFITS.



THE MOST COMPLETE LINE—ALL TYPES OF GLASS, OCTAL BASE, METAL AND AMATEUR TRANSMITTER TUBES

RAYTHEON PRODUCTION CORPORATION

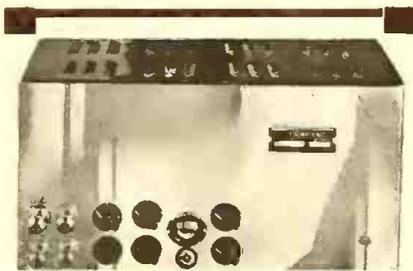
420 Lexington Ave., New York, N. Y.

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THE SENSATIONAL "30-60" 28 SOUND SYSTEMS IN ONE!

THE MASTERPIECE "30-60" is the only truly universal sound system being built today. It will cover an outdoor audience of 50,000 people—or 1,500 pairs of headphones in a hospital. It is the most flexible sound system ever designed in terms of inputs, outputs and power output of anything from one watt up to sixty-four honest man-sized watts at 2½ times LESS than customary total harmonic distortion. It has a dozen entirely new technical features—and such mechanical advantages as rack mounting, wall mounting and portable operation all in one unit!

Above all its tone is life itself such as you have never heard from any sound equipment before.

Any MASTERPIECE amplifier may be purchased on Easy Terms with a 5-Year Guarantee and a Free Trial under your own conditions. Send the coupon for full details.

McMURDO SILVER

MASTERPIECE AMPLIFIERS

FULL DETAILS FREE

MAIL THIS COUPON

McMURDO SILVER CORP., 3356 N. Paulina St., Chicago, U. S. A.	
Please RUSH me full details on MASTERPIECE amplifiers.	
Name	Address

CORRECTING ACOUSTICS

(Continued from page 32)

ing "absorbed" with 100 per cent efficiency.

Most commercial acoustical or sound-absorbing materials will have from 50 per cent to 90 per cent efficiency and thus leave very little sound for reflection. However, they must be thick (at least one-half inch; preferably one inch, in thickness) since thin materials will absorb high frequencies only. The absorption is accomplished by the friction of the sound waves with the material fibres, which friction changes the sound energy to some other form of energy—usually heat.

Making temporary corrections

Every public-address or sound man should be an embryonic acoustical engineer. He should be able to recognize a poor acoustical condition in an auditorium and should be able to make temporary recommendations that will permit successful operation of his equipment until a correct analysis can be made by an acoustical specialist. If time permits and a permanent acoustical installation is desired, he can contact a company that maintains a special acoustical

department. The most economical recommendation will be the result, with a permanent and architecturally suitable material.

If only a temporary correction is desired, the public-address man should be able to supply the necessary information. For example, a large mid-western university wished to broadcast the world series for the benefit of the students. The public-address system was set up in one of the halls the day before the first game. When it was turned on for trial purposes, it was obvious that no one would be able to understand the broadcast because of the excessive reverberation. A hasty consultation was held. One quick-thinking engineer recommended two inches of sawdust on the floor. A local mill supplied the sawdust, the excessive reverberation was eliminated and the broadcast was very successful.

Rock-wool, carpets, drapes

For the usual temporary correction, rock-wool blankets one inch in thickness, reinforced with wire lath and muslin, can be carried in stock and used again and again. Rock-wool is one of the most efficient sound absorbers, as well as being fireproof and sanitary. There are several companies who manufacture it. Another common material that is less efficient is insulating board. Carried in stock by most lumber companies, it can always be conveniently purchased, but the square footage necessary to correct the trouble will be triple the square footage for rock-wool blankets. Ordinary carpets, when lined with a thick felt pad, also contribute materially to the absorption. Heavy draperies, lined and interlined, hung in folds, are often used with moderate success.

Not only proper selection of a material that has good acoustical properties is necessary, but also, the amount to be installed is of prime importance. Tables and charts that specify the number of "absorbing units" for auditoriums of volumes normally encountered can be secured from many books that have been published on the subject. When using these curves, the engineer must know the sound-absorption factors of all the materials, such as plaster, wood, terrazzo, etc., with which most rooms are finished.

For greater convenience, an approximate formula has been developed that assumes these factors. With this formula $a = .29V^2$ only the volume of the auditorium is needed in order to give a fairly reliable figure as to the number of absorbing units

(To page 36)



Man!
what a
difference

Unit-Matched
made in my

OPERADIO
EQUIPMENT
PROFITS!

I make money on P.A. installations . . . and I find that by buying OPERADIO Unit-Matched Equipment I not only make more money but give my customers a better job. There is never any comeback or dissatisfaction when you buy UNIT-MATCHED Public Address Portable Units, Amplifiers, Microphones and Speakers from OPERADIO . . . the house that stands behind its products and always gives you a square deal.

Address Dept. RT. for Catalog No. 10

Ask About Our Convenient Time Payment Plan

OPERADIO
MANUFACTURING COMPANY
Unit-Matched P. A. Equipment at its Finest
ST. CHARLES, ILLINOIS





6,000,000 FARMERS KNOW SENTINEL!

It has been the outstanding farm radio line for 17 years.

It is being nationally advertised to 5,158,000 farmers in the leading farm magazines.

It is built by the company who pioneered farm radio.

It is designed by engineers who know the requirements of good farm radio.

It is known by the performance of hundreds of thousands of Sentinel Farm Radios already in service.

It brings "City" radio performance to the farmer for the first time.

It is priced to suit the farmer's purse.

It is the Accepted Farm Radio!

Sentinel
 RADIO CORPORATION
 2222 DIVERSEY PARKWAY CHICAGO ILL.
"THE PIONEER OF FARM RADIO"

Sell the farmer the radio he knows! The 1937 Sentinel Farm Radio line is even more outstanding this year than it has ever been. It brings "real" radio performance to the farm for the first time, with all the convenience, splendid tone, beauty of appearance of the finest city receivers at amazingly low prices. There's a profitable market of over 6,000,000 farmers that want to be sold this newest and finest of farm radios. Make this your job and build your profits with Sentinel! Mail the coupon for complete details.

- 2, 6 and 32 Volt Models
- Prices start as low as \$29.95, complete with batteries
- New Permanent Magnet Dynamic Speakers
- Tel-Eye Tuning
- New Console Cabinet
- Foreign Reception
- Attractive modern cabinets
- Distinctive new Oval Multi-colored Dial
- FarmPowr Gas Engine Generator and Wincharger Deal

The Sentinel Console is the newest thing in farm radio cabinets, exclusive with Sentinel. A miniature console that has taken the field by storm, priced at only \$34.95, radio's outstanding value.



MAIL THIS COUPON TODAY

SENTINEL RADIO CORPORATION
 2222 DIVERSEY PKWY., DEPT. R.T.-S., CHICAGO
 GENTLEMEN:

Please rush me complete details of the 1937 Sentinel Farm Radio Line.

Name

Address City State

**UNITS OF ABSORPTION NEEDED CAN BE SUPPLIED BY AMOUNTS
SHOWN OF THESE COMMON MATERIALS**

Volume of Room in Cu. Ft.	Units of Absorption Needed	Rock Wool Blankets (Sq. Ft.)	Heavy Carpets Lined (Sq. Ft.)	Insulating Board (Sq. Ft.)
10,000	134	149	550	450
20,000	214	237	880	720
30,000	279	310	1150	935
40,000	339	376	1390	1140
50,000	393	435	1520	1325
100,000	624	694	2560	2090
150,000	817	905	3330	2740
200,000	990	1100	4050	3330
250,000	1150	1270	4700	3850
300,000	1300	1440	5350	4350

units needed for several volumes. The units of absorption have been expressed in square feet of rock wool blankets, heavy carpets or insulating board, depending upon the material that can be most conveniently secured. It is doubtful that any of these materials can be rented for a few days. The best policy for those who specialize in public-address work is either to carry a stock sufficient to render service for smaller auditoriums or to make a contact with a manufacturer who can promptly supply the material when needed.

PARADISE DEPARTMENT

★ Price-shearing persons in the radio tube business are not believing their ears when they hear how things are in Anderson, Mo. National Union Radio Corp. dug up the story because that's the only kind of tube you can buy in the town.

A garage, two drug stores and a jewelry shop are in the radio biz along Anderson's aves. They're at each other's throats, some of them, when it comes to selling sets, but over the tube business there reigns a perfect peace. Dealers refuse to worry each other on that one score, creating what must surely be the only tube Paradise in all of America.

CORRECTING ACOUSTICS

(Continued from page 24)

needed to correct a bad condition. The chart accompanying this article is based on this formula. The public-address engineer can measure the length, width and height of the auditorium that is *very reverberant*, refer to the curve, and tell the number of absorbing units to add. Divide

the absorbing units by the efficiency of a material that can be purchased locally, to arrive at the square footage of material to use. Rock-wool blankets (1") have 90 per cent efficiency. If the auditorium has a volume of 70,000 cu. ft., 500 units will be needed. Divide 500 by .90 to get the square footage of rock-wool needed, which will be 550 sq. ft.

The accompanying table gives the

**INSURE LARGE RADIO PROFITS
WITH THE NEW 1937**

Freed-Eisemann

FAMOUS SINCE BROADCASTING BEGAN



An
Outstanding
Line
With List
Prices From

\$12.50

TO

\$49.95

STUDY THESE FEATURES—

- Model FE-62—Powerful 6-tube Superheterodyne Set.
- Large oval, full vision, multi-colored tuning dial.
- Incorporating Metal Tubes — Tone Control — Wave Band Switch.
- Self Contained Aerial — no ground needed.
- Two bands — Broadcast and American Short Wave — all police, aircraft, amateur.
- Handsome, rubbed walnut veneer, two tone cabinet.
- Width 13", Height 11", depth 7½".
- Works on either AC or DC current.

DISTRIBUTORS AND DEALERS — Write for catalog and wholesale prices on complete line.

FREED MANUFACTURING CO., Inc.
44 WEST 18th STREET NEW YORK, N. Y.

An **UNBEATABLE
TEAM in RADIO
SALES PROMOTION**

1. Continuous space advertising in **RADIO TODAY**, 20,000 circulation guaranteed.
2. Direct mail advertising — carefully planned mailings to **RADIO TODAY'S** verified mailing lists.

OVER WITH A

BANG

THE WESTON

MODEL 772

Super-Sensitive Analyzer

PRICE \$ **46** ⁵⁰/_{NET} TO DEALERS
IN U.S.A.



THE WESTON MODEL 771 CHECKMASTER

PRICE \$ **45** ⁰⁰/_{NET}

Compact . . . attractive . . . tests all present tubes—neon short check—voltage ranges for point-to-point testing—resistance ranges for continuity testing, etc. For counter and portable use.

TO DEALERS
IN U.S.A.



WESTON
Instruments

THE NEW WESTON ANALYZER . . . WITH SENSITIVITY OF 20,000 OHMS PER VOLT, MEETS WITH OVERWHELMING RESPONSE—*servicemen won't take less!*

Announced but one month ago, the new WESTON Model 772 Super-Sensitive Analyzer is sweeping the service field. With sensitivity of 20,000 ohms per volt . . . with resistance ranges usable up to 30 megohms . . . with current measurements as low as 1/2 microampere . . . with a wide range of usefulness, including *all* radio receivers, old or new; television sets, amplifiers, sound movies, P.A. systems and photo-cell circuits . . . with a big, super-sensitive WESTON Meter . . . and, above all, being WESTON built throughout, it's no wonder that servicemen, everywhere, are equipping with this new device. For there is nothing that compares with Model 772, except in laboratory instruments, and at laboratory prices.

Be sure you get full particulars on Model 772 before you buy any set tester. Also, be sure to get complete information on the WESTON Model 771 Checkmaster, the portable tube checker equipped for quick and dependable trouble shooting. Return the coupon today . . . Weston Electrical Instrument Corporation, 597 Frelinghuysen Ave., Newark, N. J.

Weston Electrical Instrument Corp.,
597 Frelinghuysen Ave.,
Newark, N. J.

Rush me bulletin on the new Super-Sensitive Analyzer,
and the Checkmaster.

NAME _____

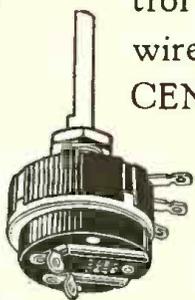
ADDRESS _____

CITY _____ STATE _____



OL' MAN CENTRALAB 'TAKES IT' EITHER WAY

... blistering heat, or excessive humidity ... it's all the same to a CENTRALAB Control. Millions of these Controls are "standing up" under unbelievably severe conditions ... so the next time a control goes "hay-wire" change to CENTRALAB ... and play safe.



Every Radio Service Man should be a member of the Institute of Radio Service Men

Centralab

Milwaukee, Wis.

BRITISH CENTRALAB, Ltd.
Canterbury Road, Kilburn
London, N.W. 6, England

CENTRALAB
68-70 Rue Amelot
Paris, France

VOLUME CONTROLS
FIXED RESISTORS
SOUND PROJECTION CONTROLS
WAVE CHANGE SWITCHES

QUALIFIED SERVICE MEN

IRSM outlines future tests for "Radioneers" First examinations during New York convention

★ "Radioneer"!

That's the new coined word that has been adopted to describe the radio serviceman who is able to meet the requirements of the National Radio Service Qualification Project.

Servicemen in the New York metropolitan area who aspire to become "Radioneers," will, during the Fourth Annual Convention and Trade Show of the Institute of Radio Service Men, at Hotel Pennsylvania, September 18-20, inclusive, voluntarily subject themselves to qualifying examinations in order to earn that right.

Ken Hathaway explains

The New York tests are to be the first of a series which will be given at convenient locations throughout the entire country as rapidly as possible.

Many leaders in various branches of the radio industry have long expressed the opinion that a qualification project would contribute substantially both to the industry at large and to the satisfaction of the radio public.

"After four long years," says Kenneth A. Hathaway, Executive Secretary of the Institute of Radio Service Men, "the service profession itself has produced the answer to an all-important question. It believes that the service industry should be staffed by well-qualified men; and further, that each competent man should also be a 'square shooter,' who is convinced that fair dealings in accordance with a code of fair practice will pay dividends alike to himself and the public.

Non-profit project

"The Institute of Radio Service Men, though responsible for the development of the Qualification Project from its inception, voluntarily relinquished control. It is now the sole responsibility of the National Radio Service Qualification Project, a non-profit corporation.

"This entity is charged with the duty of organizing and perpetuating the program. The mechanics have been simplified by the creation of two additional bodies, each with a specific job.

"The National Board of Radio

Service Standards gives the qualifying examination and certifies as to ability. Radio Service Registry, on the other hand, is in effect a trade organization and is concerned with industry trade practices and promotion.

"To become a 'Radioneer,' the serviceman must pass the examination of the National Board of Radio Service Standards and agree that he will be governed by the fair trade practices laid down by Radio Service Registry."

The extensive program of promotion, which National Radio Service Qualification Project has prepared, is designed, among other things, to acquaint the set owner with the advantages of making use of the new high standards existing in the service profession.

TECHNICIANS' GUILD URGES LICENSING OF SERVICEMEN

★ George W. Feldman, executive secretary of the Radio Technicians' Guild, with headquarters at Hotel Lenox, Boston, Mass., is working energetically for state licensing of radio servicemen. Regarding this movement, he writes:

"Now that election time is drawing near, the Radio Technicians' Guild is striving to get as many of the State Representatives as possible to sponsor a bill in our Legislature for the licensing of Radio Servicemen.

"The Guild members feel that this measure is the only way for the radio service industry to get out of the rut that it is now in, and they do not cherish the idea of a union which is bound to happen just as it did on the

(To page 44)

THE 12 EQUATIONS OF OHM'S LAW					
W =	E I	I ² R	$\frac{E^2}{R}$		
E =		IR	\sqrt{WR}		$\frac{W}{I}$
I =			$\frac{E}{R}$	$\sqrt{\frac{W}{R}}$	$\frac{W}{E}$
R =	$\frac{E}{I}$			$\frac{E^2}{W}$	$\frac{W}{I^2}$

I = CURRENT IN AMPERES E = VOLTAGE
R = RESISTANCE IN OHMS W = WATTS

SPRAGUE GIVES YOU THESE 5 FEATURES FOUND IN NO OTHER CONDENSERS

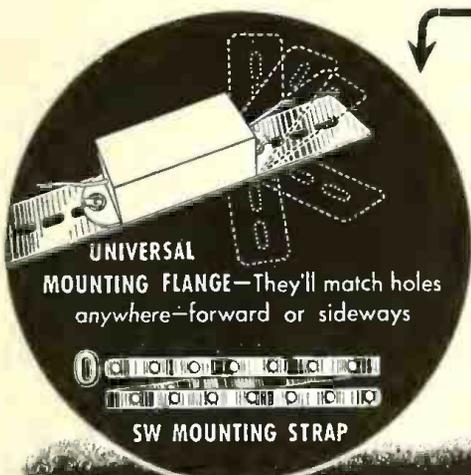
MOISTURE CAN'T GET IN!

Out goes humidity, the most common cause of condenser failure! All Sprague condensers now have a unique moisture-proof protection. The "600" Line Condensers are imprinted with a RED DOT for easy identification. Wax impregnation may be all right—the moisture proofing is perfect.



FULL 600 V. SURGE VOLTAGE

The 600 Volt rating on Sprague 600 Line Condensers is conservative. Servicemen themselves tell us they stand surges as high as 630 to 670 Volts without failure!



A UNIVERSAL MOUNTING FLANGE—FREE

Here is the handiest, most practical mounting flange yet! Mounts condensers properly in the old chassis holes, whatever their location. For multi-unit replacements, use the flange with our ST Mounting Strap.

CONDENSERS WITHIN A "CONDENSER"

Sprague is the only manufacturer who places a finished condenser in a specially sealed outside casing for greater durability and mechanical strength. This feature is found exclusively in our famous TC paper Tubulars.

ALL TERMINALS IMBEDDED

Eyelets connecting leads to condenser tabs are sealed inside the condenser. This insures stronger construction and prevents corrosion and electrolysis.

PLUS

THESE FEATURES YOU'D EXPECT TO FIND IN ANY GOOD CONDENSER

A COMPLETE LINE of 25 V.-50 V.-100 V.-200 V.-450 V. and 600 Line units for every radio need from the smallest of midget units to the highest capacities. Round — square — thin — flat — Lugs or Leads.

COMPETITIVE PRICES. Remember! It costs no more to use the best!

GUARANTEED MAXIMUM 10% POWER FACTOR. More and better filtering for your money.

EXTRA SAFETY FACTOR. No need to check surges.

A RADIO INTERFERENCE ELIMINATION PLAN—Write for details.

NEW! SPRAGUE "PINHEAD" MIKES

Just the thing to meet the rapidly growing need for extremely small, but reliable condensers! A year in the making—now ready—and they stand head and shoulders above ordinary small condensers. Conservatively rated at 525 volts, but actually will take surges as high as 560 to 580 volts. Will not breakdown. Sprague humidity proof sealing and many other features at no additional cost.



SPRAGUE PRODUCTS CO.

North Adams, Mass.

THE WORLD'S FINEST CONDENSERS—BY THE WORLD'S LARGEST CONDENSER MANUFACTURER

THE ULTIMATE IN SUPER-SENSITIVITY

- ① [★] NO CURRENT DRAIN
PLUS
- ② ^{★★} SELF CALIBRATION

MODEL
1250

TRIPLET VACUUM TUBE VOLTMETER



DEALER PRICE
\$33.34

★ Means Accuracy cannot be affected by the current drain of the instrument itself. Permanent accuracy of Triplet Vacuum Tube Voltmeter is assured by the self-calibrating bridge circuit used.

★★ The most important advancement in circuit design for precision electrical instruments in recent years.

ALL laboratories and engineers will immediately appreciate the significance of this remarkable instrument. Indispensable also in the servicing field for measuring electrical impulses either AC or DC of low magnitude such as the carrier wave of signal circuits, and particularly for television work.

The self-calibrating feature is automatic with the tube bridge circuit developed by Triplet Engineers (Pat. Pending). The initial operation of adjusting the bridge at the Zero level insures exact calibration independent of tube emission values or when replacing tubes.

Model 1250 is furnished with Triplet Tilting type twin instrument. One instrument indicates when bridge is in balance. The other is a three range voltmeter with scales reading in peak AC and DC voltages. Ranges are 2.5, 10 and 50 volts. Other ranges to order.

Model 1250 is complete with all necessary accessories including 1-84, 1-6C6, 1-76. Case is metal with black wrinklefinish, panels are silver and black.

DEALER PRICE \$33.34

THIS IS A TRIPLETT MASTER UNIT . . . See your jobber—write for more information

The Triplet Electrical Instrument Co.
199 Harmon Drive, Bluffton, Ohio

Without obligation please send me complete information on Triplet Vacuum Tube Voltmeter.

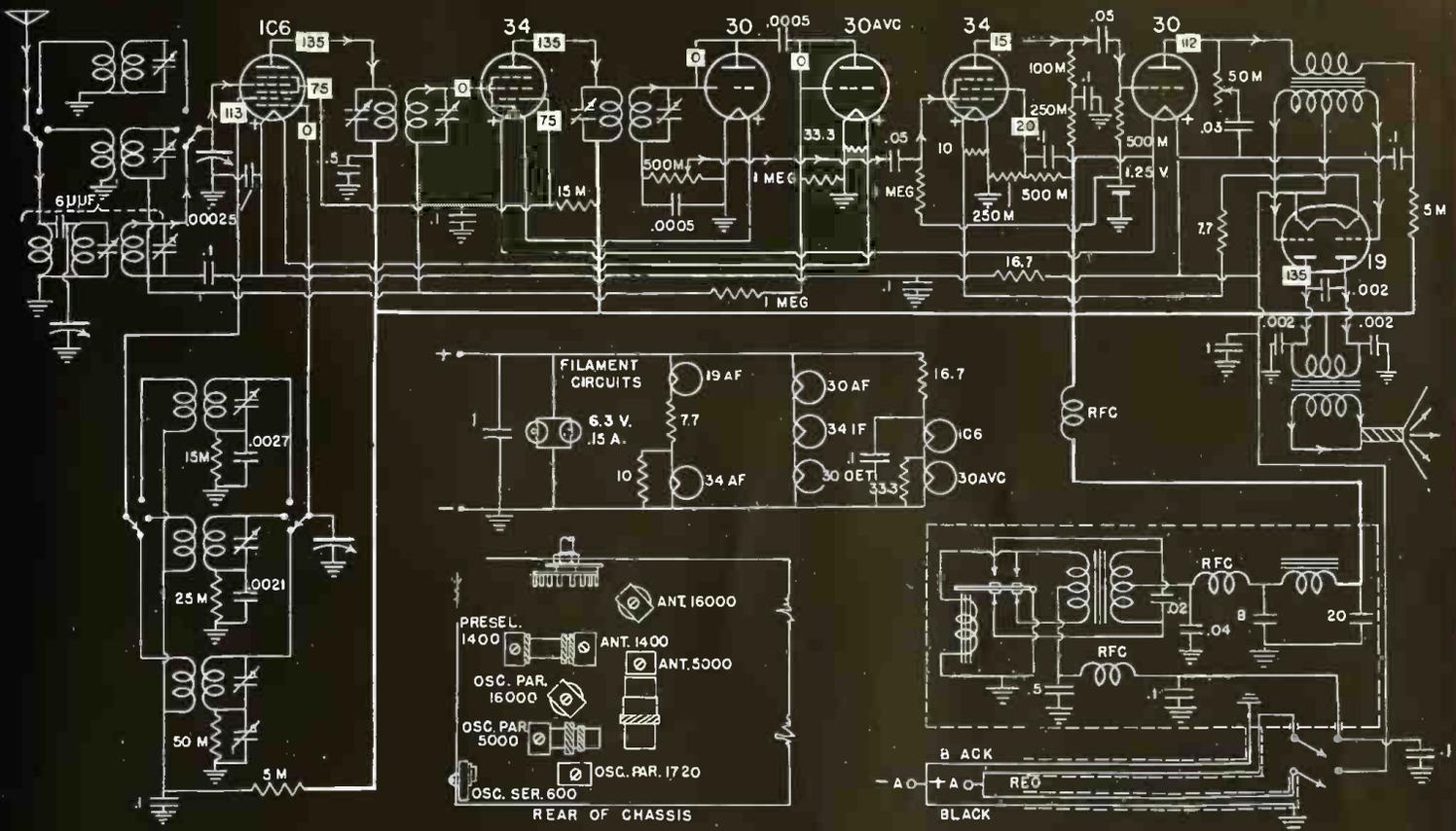
Name

Street Address

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



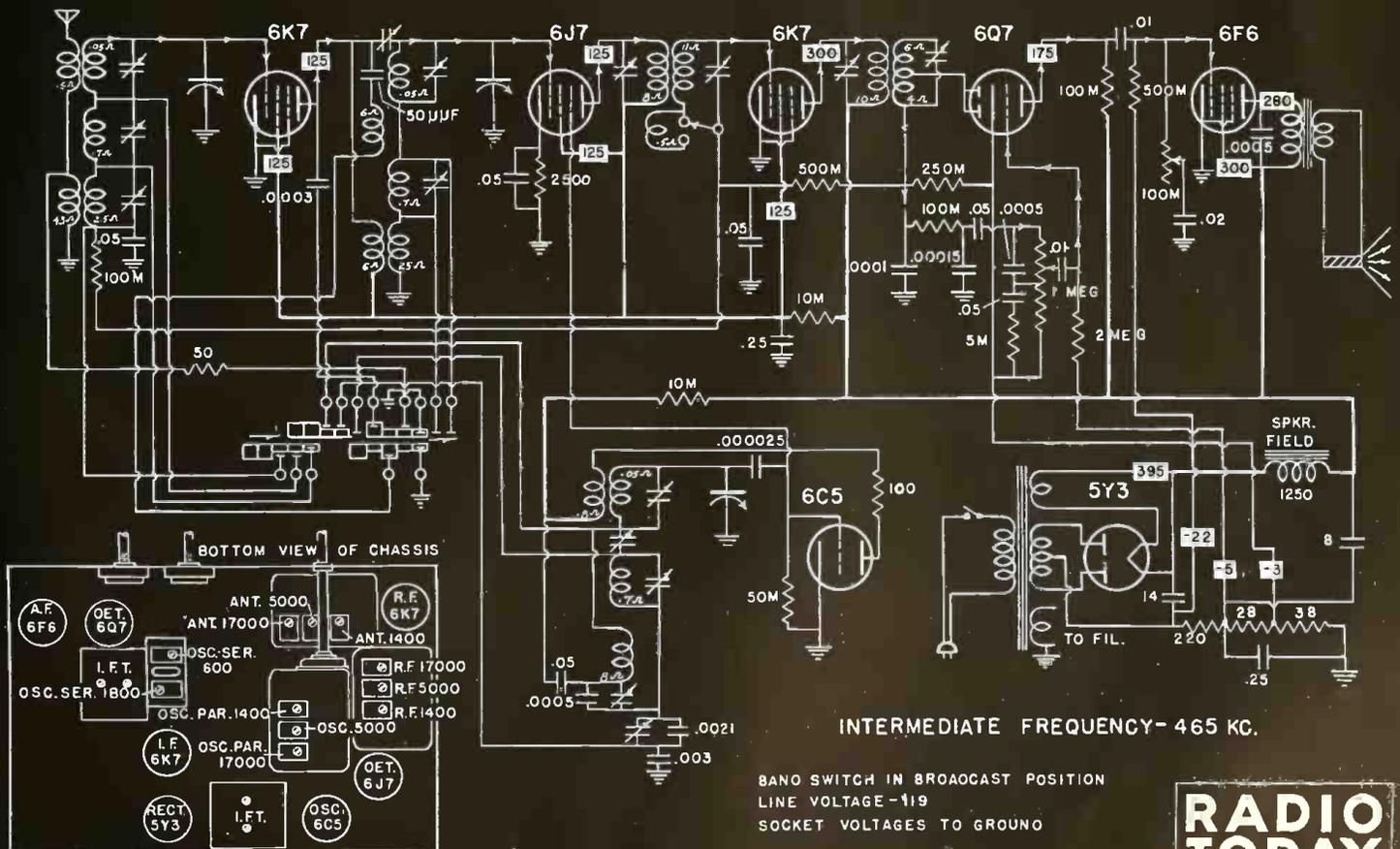
SENTINEL-ERLA MODEL 50B



INTERMEDIATE FREQUENCY 465 KC.

SOCKET VOLTAGES TO GROUND - BATTERY VOLTAGE 6.3

BELMONT MODEL 778 SERIES A

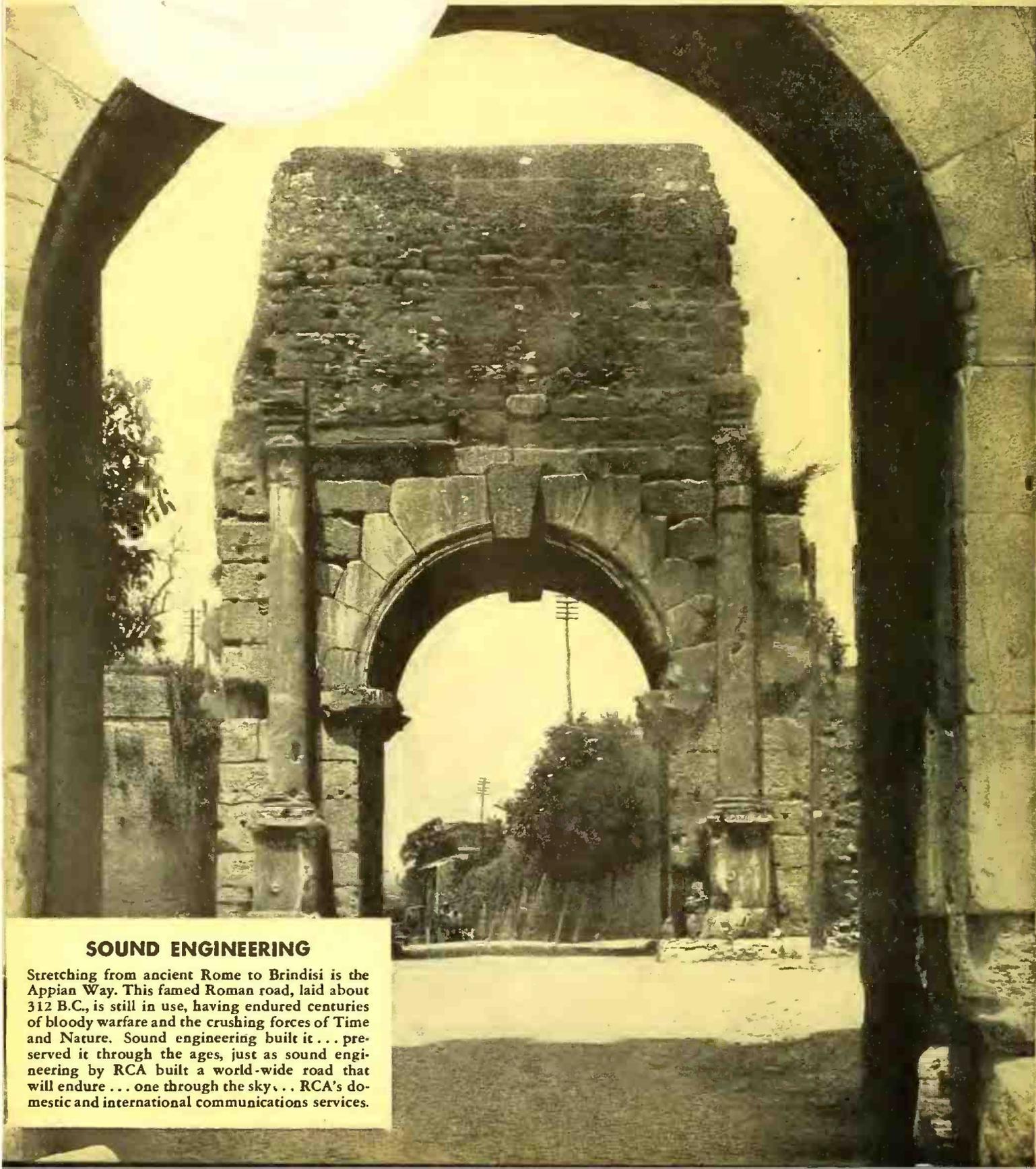


INTERMEDIATE FREQUENCY - 465 KC.

BAND SWITCH IN BROADCAST POSITION
LINE VOLTAGE - 119
SOCKET VOLTAGES TO GROUND

**RADIO
TODAY**

Roadwa



SOUND ENGINEERING

Stretching from ancient Rome to Brindisi is the Appian Way. This famed Roman road, laid about 312 B.C., is still in use, having endured centuries of bloody warfare and the crushing forces of Time and Nature. Sound engineering built it . . . preserved it through the ages, just as sound engineering by RCA built a world-wide road that will endure . . . one through the sky . . . RCA's domestic and international communications services.

ys that Endure

"VIA RCA"... these words atop message blanks are familiar to millions who, each year, depend on the swift service provided by RCA Communications, Inc. This giant radiotelegraph system spreads across land and sea, linking 11 American cities with 47 foreign countries. It is another RCA service; a rapid, unseen roadway through the sky!

When you employ this service, you know that while home may be a thousand miles away, fast communication brings it within a few minutes' reach. You know that time and distance and the raging seas can be conquered with winged words sent "Via RCA." To you—and the other millions who use this service—RCA owes its standing as a large conductor of the world's radiotelegraph business.

Transoceanic and domestic communications are but one of the diversified activities of RCA. This organization is engaged in *every* phase of radio. When all its services are surveyed, RCA's intimate knowledge of all radio becomes apparent. And, because RCA knows radio so completely, it has the confidence of the American people.

It is with warm feeling that RCA regards this confidence. It supplies the incentive for still greater achievement and service, and makes RCA dealers in every American city, town and hamlet *busy* dealers. For confidence spurs sales.

Remember—in radio RCA ranks first. The Radio Corporation of America has pioneered the large majority of radio's most noteworthy advances—is, at this very moment, experimenting with facsimile reproduction by radio—and the sound engineering of RCA will some day pioneer *sight!*

RCA MANUFACTURING CO., Inc. • RCA COMMUNICATIONS, Inc.
NATIONAL BROADCASTING CO., Inc. • RCA INSTITUTES, Inc.
RADIOMARINE CORPORATION OF AMERICA

Listen to "The Magic Key of RCA" on NBC Blue
Network every Sunday, 2:00 to 3:00 P. M., E. D. S. T.

Covering the World "Via RCA"

RCA Communications, Inc., offers direct radiotelegraph service between

11 AMERICAN CITIES

New York	New Orleans
Boston	Detroit
Philadelphia	Chicago
Baltimore	San Francisco
Washington	Los Angeles
	Seattle

—plus efficient, fast transfer service to
hundreds of communities

and

47 FOREIGN COUNTRIES

Argentina	Italy
Belgium	Japan
Brazil	Macao
Chile	("Via RCA" Manila)
China	Mexico
Colombia	Norway
Cuba	Panama
Curacao	Philippines
Czechoslovakia	Poland
Dominican Republic	Porto Rico
Dutch East Indies	Portugal
Dutch Guiana	Russia
Fiji Islands	Siam
("Via RCA" Honolulu)	("Via RCA" Manila)
France	Society Islands
French Indo-China	("Via RCA" Honolulu)
Germany	Spain
Great Britain	Sweden
Guatemala	Switzerland
Haiti	Syria
Hawaii	Turkey
Holland	Venezuela
Hong Kong ("Via RCA" Manila)	

—plus rapid transfer service to all other
points in the world!

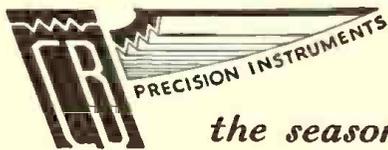
RADIO CORPORATION OF AMERICA

Radio City, New York

EVERYTHING IN RADIO

FOR SERVICE IN COMMUNICATIONS, BROADCASTING, RECEPTION

Again—it's CLOUGH-BRENGLE



that brings

the season's great advancements

SERVICE NOTES

(From page 38)

west coast, which will ultimately happen unless this bill goes through.

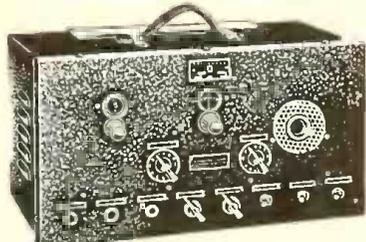
"Yes, the Guild realizes that 90 per cent of the servicemen are against such an act, not so much that they will have to pay a few dollars each annum for a license, but because they fear that they will not pass the examination.

"If such is the case, these men should not be in the service game, destroying the radio property of the public, for which they paid good money. The R.T.G. feels that such a bill will not only protect the legitimate radio servicemen, but the public as well, from a lot of former plumbers, etc., who not having anything else to do, decided to take up radio repairing. Perhaps this is where the expression originated that 'you don't have to be crazy to be a radio man—but it helps.'

"In other words, the Radio Technicians' Guild is out to protect the radio servicemen against themselves."

NEW 1937 SUPER-SERVICE LINE

MODEL OM-A R-F Oscillator with "INDUCTOR-SWEEP"



All-wave continuously variable signal generator with built-in fixed-sweep frequency modulator employing this new improved principle. Use with output meter as standard oscillator or any oscillograph. Hand calibrated accuracy, 1/2 of 1% **\$57.75**
Net with tubes.....

MODEL 81-A Frequency Modulator
Adds fixed-sweep frequency modulation to any signal generator without alterations or rewiring. Net with tubes.....**\$34.25**

MODEL CRA Cathode-Ray Oscillograph



Newly improved series with complete freedom from inter-action between controls. Amplifiers for both plates. Synchronizing circuit. All controls now on front panel of etched aluminum. Double the sensitivity of most instruments. Meets all government specifications and approved for their use. Net with 3-inch tube. **\$84.50**

MODEL 79-A Beat Audio Oscillator

Wide frequency range 150 milliwatts output at less than 5% distortion. Linear to 1 db at all frequencies. 6E5 tube indicates zero-beat. Net**\$53.75**

MODEL 95 Super-Unimeter

Reads capacity to 16 mfd and resistance to 20 megohms, plus a-c and d-c voltages on a total of twenty ranges, net.....**\$47.75**

MODEL 88 Vacuum-Tube Vm.

As vacuum-tube voltmeter reads on scale of 0-1.2 volts direct to tube grid. As peak voltmeter, 0-10 and 0-100 volts, net.....**\$42.50**

Time Payment Plan

Ask your jobber or write today for full details on the new C-B "Pay-As-You-Earn" Plan. Small down payment and convenient terms.

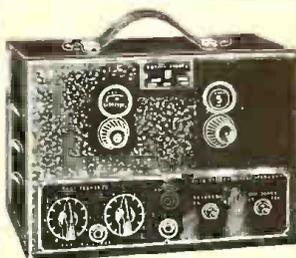
MODEL 99 R-F Oscillator



Output Calibrated in Microvolts

Now you can accurately measure receiver gain and sensitivity. Also introduces variable percentage of modulation feature. All metal tubes. Range 100 kc to 60 mc on fundamentals. Dial length 25 inches for each of six tuning bands. Accuracy guaranteed to 1/2 of 1%. Write today for new descriptive bulletin, net **\$43.90**

PRICE REDUCTION



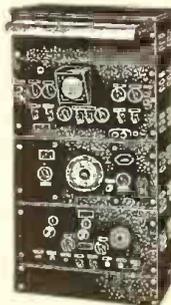
New Model OC
only \$29.95

C-B again leads in value. This popular instrument improved and yet lowered in price. Hand calibrated to an accuracy of 1/2 to 1%. All metal tubes. New convenient reference chart. Improved attenuators.

MODEL OD-A battery operated version of above instrument, less batteries, net.**\$29.95**

Complete Service Laboratories

Every instrument you need in one convenient, prestige building bench cabinet. Finished in C-B green with silver trim. Houses standard 19" rack panels, in which form all C-B Instruments are now available. Furnished complete with blank filler panels that may be removed later for addition of any desired instrument. Write today or see your jobber for full details.



SENTINEL 50B FARM SET

* The Sentinel model 50B, shown on page 41, is a seven tube battery-operated set with synchronous vibrator. Filament circuit is shown in an auxiliary diagram.

Set uses a pre-selector stage on the broadcast band. On the police and shortwave bands there is a small amount of coupling (not shown in diagram) between the grid terminal of oscillator coil and the grid terminal of antenna coil. This coupling (for neutralizing purposes) is in the form of a twisted-wire capacitance.

Alignment procedure in the following order: oscillator parallel—18,300 kc.; antenna—16,000 kc.; oscillator parallel—5,800 kc.; antenna—5,000 kc.; oscillator parallel—1,720 kc.; preselector and antenna—1,400 kc.; oscillator series—600 kc. while rocking gang.

Socket voltages to ground are given in white blocks on diagram. Note use of 2-volt tubes in series with shunt resistors in a few instances. On the whole circuit is quite conventional.

BELMONT 778 SERIES A

* Circuit diagram and chassis layout for the Belmont 778 (Series A) receiver shown on page 41. Set uses a tapped (not at center) i-f. transformer for varying selectivity.

(To page 59)

Clip and Mail Today for New C-B Catalog

The CLOUGH-BRENGLE CO.

2827 W. 19th St., Chicago, Ill.

Rush us full details on all Instruments in the new C-B SUPER-SERVICE Line.

Name

Address

The DEALER'S CHOICE for 1937— fast becoming the PEOPLE'S CHOICE, too!

*Early reports show astonishing
swing to* **Westinghouse**



TABLE MODEL, WR-209. Standard and Police Bands, Spot-lite Tuning; Spectrum Dial.

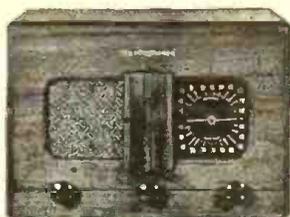
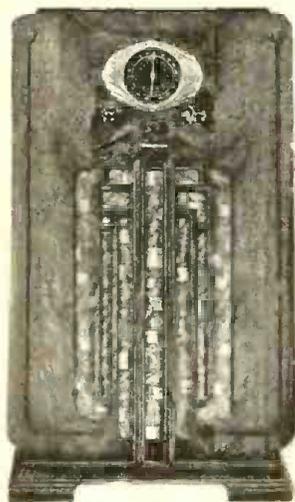


TABLE MODEL, WR-102. AC-DC. Standard and Police Bands.



CONSOLE, WR-310. Standard and Police Bands.



CONSOLE, WR-314. Weather, Police, Foreign and Standard Bands, Precision Tuner, Precision Eye, Precision Hand, Spectrum Dial.

Sales up all along the line

We promised you a Westinghouse landslide in 1937, and even this early in the campaign, our predictions are being borne out. State after state is reporting "sales up".

And why not? A pre-season poll of thousands of prospective radio buyers *told* us what the people wanted in a radio. We built the 1937 Westinghouse line accordingly. We built the *right* models, put in the *right* features, priced each set at the *right* level for profitable sales.

So, make the first move toward turning Westinghouse popularity into profits. For complete information, call your nearest Westinghouse Radio Distributor or write Merchandising Headquarters, Westinghouse Radio, 150 Varick St., New York, N. Y.

Feature Planks in the Winning Westinghouse Profit-Platform

Precision Tuner	Station Stabilizer	Three-Position Bass Tone Control
Precision Eye	Dual Selector Drive	Three-Position Treble Tone Control
Precision Hand	Auditorium Speaker	High Fidelity Control
All-Metal Tubes	Push-Pull Output	Beam Power Amplifier
Spectrum Dial	Low Volume Bass Compensation	
Spot-lite Tuning		

Westinghouse

Radio

SALES FEATURES and SPECIFICATIONS of 1936-7 RADIO SETS

The most complete and up-to-date listing of the new sets* ever published. Specifications include important data appearing only in *Radio Today*.

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial		Features	AVC	I.F. Peak
										Size	Ratio			
Air King Products Co., 27 Hooper St., Brooklyn, N. Y.—Air King														
11F	NS	CO	B.P.S,W	7-O	10 & 5	10	AC	Yes	CRT	8 1/4	45:9:1	.....	Yes	456
16F	NS	CO	B.P.S,W	10-O	10 & 5	10	AC	Yes	CRT	8 1/4	45:9:1	.....	Yes	456
21	NS	HT	B	4-G	5	.3	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
23A	NS	HT	B	5-G*	5	.3	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
26	NS	HT	B	5-G*	5	1	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
27	NS	HT	B,P	6-G*	5	1	AC-DC	No	No	3 3/4	1:1	.....	Yes	456
29	NS	HT	B	5-G*	5	1	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
214	NS	HT	B	4-G*	5	.8	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
260	NS	HT	B,S	6-G*	5 3/4	1	AC-DC	No	No	3 3/4	1:1	.....	Yes	456
522	NS	PO	B	5-G*	5	.3	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
524	NS	PO	B,P	5-C*	5	1	AC-DC	No	No	3 3/4	1:1	.....	No	T.R.F.
528	NS	PO	B,P	5-G	5	1	AC-DC	No	No	3 3/4	1:1	.....	Yes	456
3360	NS	HT	B,S	6-G*	5 3/4	1	AC-DC	No	No	3 3/4	1:1	.....	Yes	456
Ansley Radio Corp., 240 W. 23rd St., New York City—Ansley Dynaphone														
B-1	\$ 39.50	PO	B	4-G	6	0.25	Batt.	No	No	2 1/2	5:1	.....	No	456
D-7	59.50	PC	B	6-G	5	0.9	AC-DC	Yes	No	2 1/2	5:1	.....	No	456
D-9	79.50	PC	B,S	7-G*	6 1/2	0.9	AC-DC	Yes	No	2 1/2	5:1	.....	No	456
D-10	84.50	PC	B,S	7-G*	6 1/2	0.9	AC-DC	Yes	No	2 1/2	5:1	.....	No	456
D-17	125.00	PC	B,S	7-G*	12	0.9	AC-DC	Yes	No	2 1/2	5:1	.....	No	456
D-18	175.00	PCA	B,S	7-G*	12	0.9	AC-DC	Yes	No	2 1/2	5:1	.....	No	456
U-10	44.50	HT	B,S	8-G*	6 1/2	0.9	AC DC	No	No	2 1/2	5:1	.....	No	456
Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.—Automatic														
A5	NS	A	B	5-G	5	1.75	6V	NS	NS	2 1/4	6:1	.....	NS	480
C4	NS	HT	B,P	4-C*	5	0.9	AC-DC	NS	NS	4	1:1	.....	NS	NS
C41	NS	HT	B	4-C*	5	0.9	AC-DC	NS	NS	3 1/2	1:1	.....	NS	NS
D50	NS	HT	B	5-C*	5	1	AC-DC	NS	NS	3 1/2	1:1	8	NS	NS
D50A	NS	HT	B	5-G*	5	2.75	AC-DC	NS	NS	3 1/2	1:1	8	NS	NS
E6	NS	VT	B,S	6-G	6	3.5	AC	Yes	CRT	3 1/4	12:1	.....	NS	456
F10	NS	A	B	5-G	5	1.75	6V	NS	NS	3	6:1	.....	NS	480
J50	NS	A	B	5-G	5	1.75	6V	Yes	NS	2 1/4	6:1	.....	NS	480
J60	NS	A	B	6-G	5	1.75	6V	Yes	CRT	2 1/2	6:1	.....	NS	480
J80	NS	A	B	8-G	6	3.6	6V	Yes	NS	3	8:1	.....	NS	456
R61	NS	HT	B,P	6-C*	5	1	AC-DC	NS	NS	7	6:1	.....	NS	456
S6	NS	VT	B,P	6-C*	5	1	AC-DC	Yes	NS	3	6:1	.....	NS	456
S50	NS	HT	B,P	5-G	5	1	AC-DC	NS	NS	4	1:1	8	NS	NS
S50A	NS	HT	B,P	5-C*	5	2.75	AC-DC	NS	NS	4	1:1	8	NS	NS

Cabinet Style

A—Auto
C—Chassis only
CO—Console
HT—Horizontal table
PC—Phonograph combination
PCA—Automatic phonograph comb.
PCM—Manual phonograph comb.
PO—Portable
T—Table
VT—Vertical table

Visual tuning indicator

CRT—Cathode ray tuning
CT—Color tuning
ST—Shadow tuning

Wavebands

B—Broadcast (approx. 540-1700 kc.)
P—Police (approx. 1700-5000 kc.)
P₁—Police (Approx. 1600-3500 kc.)
S—Shortwave (Approx. 5000-18,000 kc.)
S₁—Medium shortwave (Approx. 2500-7000 kc.)
U—Ultra shortwave (Above 20,000 kc.)
W—Weather (Approx. 150-350 kc.)

Features

- Hi-fi or variable selectivity
- AFC or automatic frequency control
- Automatic volume range expansion
- Automatic tuning
- Acoustical control or compensation
- Iron-core i-f. coils
- Tone compensated volume control
- Overload control
- Dual audio channel

Tubes

*—Including ballast tube
G—Glass tube (old style)
O—Octal glass or "G" type
M—Metal (All metal except possibly rectifier and tuning indicator)
GM—Mainly glass, some metal
MG—Mainly metal, some glass
OM—Mainly octal glass, some metal

Power supply

AC—Alternating current
AC-DC—Either AC or DC operation
6V—6-volt battery
32V—32-volt farm system
Batt.—2-volt & B batteries

*Battery sets listed on page 30, July, RADIO TODAY.



MODEL 1900—19-tube AC-DC receiver; 5 bands from 6½ to 2,100 meters; giving HIGH FIDELITY and FULL SYMPHONIC volume against interference that ordinarily spoils reception.

THE 1937 HALSON featuring INTERFERENCE CONTROL

HALSON offers you a complete new line of 22 receivers—low in price but high in performance and customer-appeal. In every price-range, Halson has all of the features that you would expect and many that you will find only in Halson.

Halson is one of America's largest manufacturers of private brands—long recognized for advanced engineering—years ahead in improvements and quality.

An outstanding model—one that greatly minimizes the interference evil, even in the worst of noise areas—is the totally new, high output AC-DC receiver pictured above. A new type of selectivity-control, in conjunction with other new features of design, enables the 1900 Halson to cut through noise, local interference and atmospheric in an astonishing manner without noticeable sacrifice of fidelity.

Special Features of Model 1900

- SELECTIVITY CONTROL, manual and visual, with three positions: "Selective," "Normal" and "High Fidelity."
- STONE CONTROL, manual and visual, four positions.
- NOISE DELAY, quiet tuning between stations.
- AUTOMATIC VOLUME CONTROL DELAY, raising volume of very weak stations.
- BAND SELECTION, visual, in color on dial.
- POWER TUBES, four tubes in parallel-push-pull.
- SPEAKER, highly sensitive 12-inch dynamic.
- RF ASSEMBLY, in separate chassis, rubber mounted.
- COILS, separate set for each band.
- OSCILLATOR, separate tubes for oscillator and converter-modulator.
- TUNING, special tuning control and cathode ray tuning indicator.

Let us send you the full details of the entire Halson line. It will give you a merchandising advantage that you cannot get in any other line.

HALSON RADIO MFG. CO.
120 East 16th Street, New York City, N. Y.

Code: HALSONRADIO

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wave-bands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial Size	Dial Ratio	Features	AVC	I.F. Peak
Belmont Radio Corp., 1257 Fullerton Ave., Chicago, Ill.—Belmont														
401M	\$ 19.90	T	B	4-G	5	NS	AC	No	No	3	NS	.....	No	T.R.F.
566	39.90	A	B	5-GM	5 3/4	NS	6V	No	No	NS	NS	.....	Yes	465
586J	27.50	T	B,P	5-G	6	NS	AC	No	No	3	NS	.....	Yes	465
601F	26.50	T	B	6-G*	5 3/4	NS	AC-DC	Yes	No	3	NS	.....	Yes	465
666	49.50	A	B	6-M	5 3/4	NS	6V	Yes	No	NS	NS	.....	Yes	465
685B	39.90	T	B,P,S	6-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	465
778A	49.90	T	B,P,S	7-M	8	NS	AC	Yes	No	NS	NS	.....	Yes	465
787	59.50	CO	B,P,S	8-M	10	NS	AC	Yes	CRT	NS	NS	1	Yes	465
878	74.50	CO	B,P,S	8-M	10	NS	AC	Yes	CRT	NS	NS	1	Yes	465
880	64.00	A	B	8-G	8	NS	6V	Yes	No	NS	NS	.....	Yes	465
1170	99.50	CO	B,P,S	11-M	12	NS	AC	Yes	CRT	NS	NS	1	Yes	465
Bretting Radio Mfg. Co., 2177 Venice Blvd., Los Angeles, Calif.—Bretting 12														
12	\$155.00	T	B,P,S,U	12-G	12	18	AC	Yes	TM	5	11:1	.....	Yes	432
Climax Radio & Television Co., 511 S. Sangamon St., Chicago, Ill.—Climax														
A-7	NS	HT	B	4-G	5	0.3	AC-DC	No	No	4 1/2	1:1	.....	No	NS
A-7S	NS	HT	B,P	4-G	5	0.3	AC-DC	No	No	4 1/2	1:1	.....	No	NS
B-1	NS	HT	B	4-G	5	0.8	AC-DC	No	No	4 1/2	1:1	.....	No	NS
B-1S	NS	HT	B,P	4-G	5	0.8	AC-DC	No	No	4 1/2	1:1	.....	No	NS
C-10	NS	VT	B	5-G*	5	0.8	AC-DC	No	No	2 3/4	3 1/2-1	.....	No	NS
C-10S	NS	VT	B,P	5-G*	5	0.8	AC-DC	No	No	2 3/4	3 1/2-1	.....	No	NS
D-14	NS	VT	B	5-G*	5	0.8	AC-DC	No	No	3 1/4	3 1/2-1	.....	No	NS
D-14S	NS	VT	B,P	5-G*	5	0.8	AC-DC	No	No	3 1/4	3 1/2-1	.....	No	NS
E-2	NS	HT	B,P	5-G	5	0.8	AC-DC	No	No	4 1/2	6:1	.....	No	NS
F-3	NS	HT	B,P	5-G*	5	1	AC-DC	No	No	4 1/2	6:1	.....	No	NS
G-4	NS	HT	B,P	5-G*	5	1	AC-DC	No	No	4 1/2	6:1	.....	No	456
H-5	NS	HT	B,P	6-G*	5	2	AC-DC	No	No	4 1/2	6:1	.....	Yes	456
J-6	NS	HT	B,P,S	6-G*	5	2	AC-DC	No	No	4 1/2	6:1	.....	Yes	456
JE-7	NS	HT	B,P,S	7-G*	5	2	AC-DC	No	CRT	4 1/2	6:1	.....	Yes	456
K-6	NS	HT	B,S	4-G	6 1/2	1	6V	No	No	4 1/2	6:1	.....	Yes	456
L-91	NS	VT	B,P,S	6-G	6 1/2	3	AC	Yes	No	6	9:1	.....	Yes	456
M-8	NS	VT	B,P,S	6-G	6 1/2	3.5	AC	Yes	No	7 1/2	8:1	.....	Yes	456
ME-9	NS	HT	B,P,S	7-G	6 1/2	3.5	AC	Yes	CRT	7 1/2	8:1	.....	Yes	456
ME-17	NS	HT	B,P,S	7-G	6 1/2	3.5	AC	Yes	CRT	7 1/2	8:1	.....	Yes	456
D-8	NS	VT	B,P,S	5-G	6 1/2	2.0	6V	Yes	No	7 1/2	8:1	.....	Yes	456
Continental Radio & Television Corp., 325 W. Huron St., Chicago, Ill.—Admiral														
A126	\$ 32.50	HT	B,P,S	5-M	6 3/4	3	AC	Yes	No	6 1/2	15:1	.....	Yes	456
AM387	79.50	CO	B,P,S,W	8-M	12	6 1/2	AC	Yes	CRT	11	30:1	1	Yes	456
AM688	99.50	CO	B,P,S,W	10-M	12	13	AC	Yes	CRT	11	30:1	1,10	Yes	456
AM889	175.00	CO	B,P,S,W	16-MG	12&12	30	AC	Yes	CRT	11	30:1	1,7	Yes	456
AZ393	59.50	CO	B,P,S	6-M	8	3 1/2	AC	Yes	No	6 1/2	15:1	.....	Yes	456
B125	19.95	HT	B,S	5-G	6	2	AC	No	No	5 1/2	6 1/2-1	.....	Yes	456
B225	27.50	HT	B,S	6-G*	6	2	AC-DC	No	No	5 1/2	6 1/2-1	.....	Yes	456
M351	59.50	VT	B,P,S,W	8-M	6 1/2	6 1/2	AC	Yes	CRT	11	30:1	1	Yes	456
Z344	39.95	HT	B,P,S	6-M	6 3/4	3 1/2	AC	Yes	No	6 1/2	15:1	.....	Yes	456
Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio—Crosley														
117	\$117.50	CO	B,P,S	9-M	NS	NS	AC	Yes	ST	NS	NS	1,3,7	Yes	450
137	137.50	CO	B,P,S	10-M	NS	NS	AC	Yes	ST	NS	NS	1,3,7	Yes	450
167	167.50	CO	B,P,S	13-M	NS	NS	AC	Yes	No	NS	NS	1,2,3,7	Yes	450
250	25.00	VT	B,P	5-G	NS	NS	AC	Yes	No	NS	NS	.....	NS	450
251	25.00	HT	B,P	5-M	NS	NS	AC-DC	No	No	NS	NS	.....	NS	450
295	29.95	HT	B,P	5-G	NS	NS	AC	Yes	No	NS	NS	.....	NS	450
299	29.95	HT	B,P	5-M	NS	NS	AC-DC	No	No	NS	NS	.....	NS	450
349	34.95	HT	B,S	5-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
395	39.95	HT	B,S	5-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
449	44.95	VT	B,P,S	6-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
495	49.95	HT	B,P,S	6-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
499	49.95	CO	B,S	5-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
699	69.95	CO	B,P,S	6-M	NS	NS	AC	Yes	No	NS	NS	.....	Yes	450
899	89.95	CO	B,P,S	8-M	NS	NS	AC	Yes	ST	NS	NS	3	Yes	450
A-266	39.95	A	B	6-G	NS	NS	6V	No	No	NS	NS	.....	Yes	262
A-366	54.95	A	B	6-G	NS	NS	6V	Yes	No	NS	NS	.....	Yes	262
Fiver	19.99	VT	B,P	5-G	NS	NS	AC	No	No	NS	NS	.....	NS	450
Emerson Radio & Phonograph Corp., 111—8th Ave., New York, N. Y.—Emerson														
107-AC	\$ 39.95	HT	B,S	5-G	5 1/4	3	AC	Yes	No	3	6:1	.....	Yes	456
108	24.95	VT	B,P	5-G	5 1/4	1.3	AC-DC	No	No	2	3:1	.....	Yes	456
108-LW	29.95	VT	B,W	5-G	5	1.3	AC-DC	No	No	2	3:1	.....	Yes	132
119	39.95	HT	B,P,S	6-MG	8	1.5	AC-DC	Yes	No	3	6:1	.....	Yes	456
126	14.95	VT	B	5-G*	5	1	AC-DC	No	No	2	1:1	.....	No	.....
126-LW	19.95	HT	B,W	4-G	5	1	AC-DC	No	No	2	1:1	.....	Yes	132
411	14.95	VT	B	4-G	5	1	AC-DC	No	No	1	1:1	.....	No	.....
A-130	24.95	HT	B	6-G*	5 1/4	1	AC-DC	No	No	4	2:1	.....	Yes	456
A-132	19.95	HT	B	6-G*	5 1/4	1	AC-DC	No	No	4	2:1	.....	Yes	456
B-131	29.95	HT	B,S	6-G*	6 1/4	1.5	AC-DC	No	No	4	12:1	.....	Yes	456
C-134	69.95	VT	B,P,S	7-M	8	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-134-LW	74.95	VT	B,S,W	8-M	8	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-138	79.95	CO	B	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-138-LW	84.95	CO	B,S,W	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C142	89.95	CO	B,P,S	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-142-LW	94.95	CO	B,S,W	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-145	149.95	PC	B,P,S	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
C-145-LW	154.95	PC	B,S,W	8-M	12	5	AC	Yes	CRT	6 1/2	60:12:1	.....	Yes	456
D-139	99.95	CO	B,P,S	10-M	12	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	456
D-139-LW	104.95	CO	B,S,W	10-M	12	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	456
D-140	79.95	VT	B,P,S	10-M	8	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	456
D-140-LW	84.95	VT	B,P,S	10-M	8	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	456
D-146	129.95	CO	B,P,S	10-M	15	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	456
D-146-LW	134.95	CO	B,S,W	10-M	15	15	AC	Yes	CRT	6 1/2	60:12:1	1	Yes	466
E-128	39.95	A	B	6-G	5	3	6V	Yes	No	2	10:1	.....	Yes	172.5
F-133	44.95	HT	B,S,W	6-G*	6 1/4	1.5	AC-DC	Yes	No	3	12:1	.....	Yes	456
G-127	79.95	PC	B,S	6-G*	6 1/4	1.5	AC-DC	No	No	4	12:1	.....	Yes	456
J-106	29.95	HT	B	6-G*	5	1	AC-DC	No	No	3	1 1/2-1	.....	Yes	456
K-121	29.95	HT	B,P											

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial Size	Dial Ratio	Features	AVC	I.F. Peak
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Emerson Radio & Phonograph Corp. (Continued)

L-143-LW	64.95	PC	B,W	5-G	6½	3	AC	Yes	No	4	12:1	Yes	456
L-141	69.95	PC	B,S ₁	5-G	10	3	AC	Yes	No	4	12:1	....	Yes	456
L-144-LW	74.95	PC	B,W	5-G	10	3	AC	Yes	No	4	12:1	....	Yes	456
S-147	64.95	CO	B	6-M	12	5	AC	Yes	No	6¾	12:1	....	Yes	456

Fada Radio & Electric Co., 30-20 Thomson Ave., Long Island City—Fada

172	\$ 49.95	PO	B,S	6-MG	5	1	AC-DC	Yes	No	2½	60:12:1	1	Yes	456
211T	87.50	VT	B,P,S	11-M*	8	2	AC-DC	Yes	CRT	6	60:12:1	1	Yes	456
211C	109.50	CO	B,P,S	11-M*	12	2	AC-DC	Yes	CRT	6	60:12:1	1	Yes	456
211CK	129.50	CO	B,P,S	11-M*	12	2	AC-DC	Yes	CRT	6	60:12:1	1	Yes	456
212T	119.50	VT	B,P,S,U	12-M	10	15	AC	Yes	CRT	7	60:12:1	1	Yes	456
212C	149.50	CO	B,P,S,U	12-M	12	15	AC	Yes	CRT	7	60:12:1	1	Yes	456
212CK	169.50	CO	B,P,S,U	12-M	12	15	AC	Yes	CRT	7	60:12:1	1	Yes	456
216T	119.50	VT	B,P,S,U	16-M*	10	4	AC-DC	Yes	CRT	7	60:12:1	1	Yes	456
216C	149.50	CO	B,P,S,U	16-M*	12	4	AC-DC	Yes	CRT	7	60:12:1	1	Yes	456
216CK	169.50	CO	B,P,S,U	16-M	12	4	AC-DC	Yes	CRT	7	60:12:1	1	Yes	456
250W	34.95	HT	B,S ₁	5-G	6	3	AC	Yes	No	3¼	9:1	8	No	456
250V	39.95	HT	B,S ₁	5-G	6	3	AC	Yes	No	3¼	9:1	8	No	456
250T	39.95	HT	B,S ₁	5-G	6	3	AC	Yes	No	3¼	9:1	8	No	456
250C	49.95	CO	B,S ₁	5-G	6	3	AC	Yes	No	3¼	9:1	8	No	456
260B	19.99	HT	B	6-C*	5	1	AC-DC	No	No	2	1:1	8	No	456
260D	24.95	HT	B	6-C*	5	1	AC-DC	No	No	2	1:1	8	No	456
260G	24.95	HT	B	6-C*	5	1	AC-DC	No	No	2	1:1	8	No	456
260T	24.95	HT	B	6-C*	5	1	AC-DC	No	No	2	1:1	8	No	456
260V	24.95	HT	B	6-C*	5	1	AC-DC	No	No	2	1:1	8	No	456
262W	29.95	HT	B,S ₁	6-MG*	5	1	AC-DC	No	No	2	1:1	8	No	456
262D	29.95	HT	B,S ₁	6-MG*	5	1	AC-DC	No	No	2	1:1	8	No	456
262G	29.95	HT	B,S ₁	6-MG*	5	1	AC-DC	No	No	2	1:1	8	No	456
262T	29.95	HT	B,S ₁	6-MG*	5	1	AC-DC	No	No	2	1:1	8	No	456
262V	29.95	HT	B,S ₁	6-MG*	5	1	AC-DC	No	No	2	1:1	8	No	456
270T	59.95	HT	B,P,S	7-M	6½	3½	AC	Yes	CRT	6	60:12:1	1	Yes	456
270C	79.95	CO	B,P,S	7-M	12	3½	AC	Yes	CRT	6	60:12:1	1	Yes	456
270CK	99.95	CO	B,P,S	7-M	12	3½	AC	Yes	CRT	6	60:12:1	1	Yes	456
272W	39.95	HT	B,P,S	7-MG*	6	1	AC-DC	Yes	No	3¼	9:1	6	Yes	456
272V	44.95	HT	B,P,S	7-MG*	6	1	AC-DC	Yes	No	3¼	9:1	6	Yes	456
280T	49.95	HT	B,P,S	8-MG*	6	1	AC-DC	Yes	CRT	3¼	9:1	6	Yes	456
280C	59.95	CO	B,P,S	8-MG*	8	1	AC-DC	Yes	CRT	3¼	9:1	6	Yes	456
290T	87.50	VT	B,P,S	9-M	8	11	AC	Yes	CRT	6	60:12:1	1	Yes	456
290C	109.50	CO	B,P,S	9-M	12	11	AC	Yes	CRT	6	60:12:1	1	Yes	456
290CK	129.50	CO	B,P,S	9-M	12	11	AC	Yes	CRT	6	60:12:1	1	Yes	456

Fairbanks, Morse & Co., 2060 Northwestern, Indianapolis, Ind.—Fairbanks-Morse

12C6	\$149.95	CO	B,P,S,U,W	12-M	12	20	AC	NS	CRT	9	25:5:1	1	Yes	456
42CIB	49.95	CO	B	4-G	8	NS	Batt.	NS	No	5¼	2:1	8	No	456
42TOB	29.95	HT	B	4-G	6	NS	Batt.	NS	No	5¼	2:1	8	No	456
43CIB	59.95	CO	B	4-G	6	NS	6V	NS	No	5¼	2:1	....	No	456
43TIB	39.95	HT	B	4-G	6	NS	6V	NS	No	5¼	2:1	....	No	456
57T0	29.95	HT	H,P	5-O	6	2	AC	NS	No	5¼	2:1	....	Yes	456
58T1	39.95	HT	H,P	5-O	6	3	AC	NS	No	5¼	8:1	....	Yes	456
58T2	44.95	VT	B,P	5-O	6	3	AC	NS	No	5¼	8:1	....	Yes	456
58C1	49.95	CO	B,P	5-O	6	3	AC	NS	No	5¼	8:1	....	Yes	456
68T6	29.95	HT	H,P	6-G*	6	NS	AC-DC	NS	No	4¼	5:1	....	Yes	456
69T7	19.99	HT	B	6-G*	5	NS	AC-DC	NS	No	4¼	5:1	....	No	456
72C2	69.95	CO	B,P,S	6-OM	12	5	AC	NS	CRT	5¼	40:8:1	7	Yes	456
72C3	79.95	CO	B,P,S	6-OM	12	5	AC	NS	CRT	5¼	40:8:1	7	Yes	456
72T3	54.95	HT	B,P,S	6-OM	8	NS	AC	NS	CRT	5¼	40:8:1	7	Yes	456
73C3B	89.95	CO	B,P,S	7-G	8	NS	6V	NS	CRT	5¼	40:8:1	....	Yes	456
73T3B	69.95	HT	B,P,S	7-G	8	NS	6V	NS	CRT	5¼	40:8:1	....	Yes	456
91C4	99.95	CO	B,P,S,U	9-M	12	9	AC	NS	CRT	9	Var.	7	Yes	456
91C5	119.95	CO	B,P,S,U	9-M	12	9	AC	NS	CRT	9	Var.	7	Yes	456
91T4	79.95	VT	B,P,S,U	9-M	8	9	AC	NS	CRT	9	Var.	7	Yes	456

Freed Mfg. Co., Inc., 44 W. 18th St., New York, N. Y.—Freed-Eisemann

FE-48	NS	HT	B	4-G	5	NS	NS	No	No	NS	NS	....	No	T.R.F.
FE-55	NS	PO	B	5-G	6½	NS	AC-DC	Yes	No	NS	NS	....	Yes	456
FE-57	NS	HT	B	4-G	5	NS	AC	No	No	NS	NS	....	No	456
FE-58	NS	PO	B	5-G	5	NS	Batt.	Yes	No	NS	NS	....	Yes	456
FE-60	NS	HT	B,P ₁	6-G*	5	NS	AC-DC	Yes	No	NS	NS	....	Yes	456
FE-62	NS	HT	B,P ₁	6-GM*	5	NS	AC-DC	No	No	NS	NS	....	Yes	456
FE-70	NS	HT	B,S	7-MG*	6½	NS	AC-DC	Yes	CRT	NS	NS	....	Yes	456
FE-76	NS	HT	B,S	7-MG	6½	NS	AC	Yes	CRT	NS	NS	....	Yes	456

Galvin Mfg. Corp., 847 W. Harrison St., Chicago, Ill.—Motorola

50	\$ 39.95	A	B	6-G	5	3.5	6V	No	No	NS	NS	....	Yes	262
60	49.95	A	B	6-G	6	5	6V	Yes	No	NS	NS	....	Yes	262
60A	54.95	A	B	6-G	8	5	6V	Yes	No	NS	NS	....	Yes	262
80	67.50	A	B	8-M	8	10	6V	Yes	No	NS	NS	....	Yes	262
100	89.50	A	B	10-M	10	14	6V	Yes	No	NS	NS	....	Yes	262

Garod Radio Corp., 115 Fourth Ave., New York, N. Y.—Garod

250	\$ 37.75	HT	B,S	5-G	NS	2	AC	NS	No	5	NS	....	No	456
360	NS	VT	B,P,S	6-M	NS	2	AC	NS	No	5	NS	....	No	456
361	NS	VT	B,S,W	6-M	NS	2	AC	NS	No	5	NS	....	No	456
370	59.95	VT	B,P,S	7-M	8	NS	AC	Yes	NS	NS	NS	....	Yes	456
370C	57.95	HT	B,P,S	7-M	6	NS	AC	Yes	NS	NS	NS	....	Yes	456
370D	74.50	CO	B,P,S	7-M	10	NS	AC	Yes	NS	NS	NS	....	Yes	456
371D	NS	CO	B,S,W	7-M	10	NS	AC	Yes	NS	NS	NS	....	Yes	456
380	69.95	VT	B,P,S	8-M	8	5	AC	NS	CRT	7	NS	....	Yes	456
380D	85.50	CO	B,P,S	8-M	10	5	AC	Yes	CRT	NS	NS	....	Yes	456
381	NS	VT	B,S,W	8-M	NS	3	AC	NS	CRT	7	NS	....	Yes	456
381D	NS	CO	B,S,W	8-M	10	5	AC	Yes	CRT	NS	NS	....	Yes	456
620	37.75	HT	B,S	6-G*	NS	2	AC-DC	NS	CRT	7	NS	....	Yes	456
730	NS	VT	B,P,S	7-M*	NS	3	AC-DC	NS	CRT	7	NS	....	Yes	456
731	NS	VT	B,S,W	7-M*	NS	3	AC-DC	NS	CRT	7	NS	....	Yes	456
830D	NS	CO	B,P,S	7-M	10	NS	AC	Yes	NS	NS	NS	....	Yes	456
821	NS	VT	B,S,W	8-M*	NS	3	AC-DC	NS	CRT	7	NS	....	Yes	456
930	69.95	VT	B,P,S	10-M	NS	4	AC-DC	NS	CRT	7	NS	....	Yes	456
930D	85.50	CO	B,P,S	9-M	8	5	AC-DC	NS	CRT	7	NS	....	Yes	456
931	NS	VT	B,S,W	10-M	NS	4	AC-DC	NS	CRT	7	NS	....	Yes	456
931D	NS	CO	B,S,W	9-M	10	5	AC-DC	Yes	CRT	NS	NS	....	Yes	456
1240	89.50	VT	B,P,S,W	11-M	NS	5	AC-DC	NS	CRT	7	NS	....	Yes	456
1240E	109.95	CO	B,P,S,W	12-M	12	10	AC	Yes	CRT	NS	NS	....	Yes	456
1240LC	195.50	PC	B,P,S,W	12	12	10	AC-DC	Yes	CRT	NS	NS	Yes	456
1650	129.95	VT	B,P,S,U,W	17-M	NS	5	AC-DC	NS	CRT	7	NS	Yes	456



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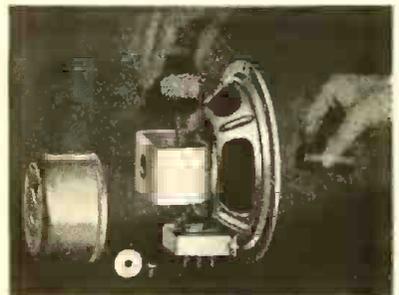
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SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cab- inet Style	Wave- bands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Con- trols	Vis- ual tun- ing	Dial		Fea- tures	A.V.C.	I.F. Peak
										Size	Ratio			
Garod Radio Corp., (Continued)														
1650H	159.95	CO	B.P.S.U.W	16-M	NS	5	AC-DC	Yes	CRT	7	NS	.....	Yes	456
1650LC	235.00	DC	B.P.S.U.W	16-M	NS	5	AC-DC	Yes	CRT	7	NS	.....	Yes	456
2150	NS	C	B.P.S.U.W	22-M	NS	5	AC-DC	NS	CRT	7	NS	1	Yes	456
4110	89.50	VT	B.P.S.W	11-M	NS	10	AC	NS	CRT	7	NS	1	Yes	456
4110E	109.95	CO	B.P.S.W	11-M	12	10	AC	Yes	CRT	7	NS	.....	Yes	456
4110LC	195.00	CO	B.P.S.W	11-M	12	10	AC	Yes	CRT	7	NS	.....	Yes	456
5140	128.00	VT	B.P.S.U.W	14-M	NS	15	AC	NS	CRT	7	NS	1	Yes	456
5140H	159.95	CO	B.P.S.U.W	14-M	12	15	AC	Yes	CRT	7	NS	.....	Yes	456
5140LC	217.50	PC	B.P.S.U.W	14-M	12	15	AC	Yes	CRT	7	NS	.....	Yes	456
5240	NS	C	B.P.S.U.W	25-M	NS	NS	AC	NS	NS	NS	NS	.....	NS	456
General Electric Co., 1285 Boston Ave., Bridgeport, Conn.—General Electric														
E50	\$ 24.95	HT	B.P ₁	5-M	6 1/2	3	NS	Yes	No	NS	6:1	.....	No	465
E51	32.95	HT	B.P	5-M	6 1/2	NS	AC-DC	NS	No	NS	5:1	.....	No	465
E52	22.50	HT	B.P ₁	5-M	6 1/2	3	NS	Yes	No	NS	6:1	.....	No	465
E61	29.95	VT	B.P	6-M	8	5	AC	Yes	No	NS	5:1	.....	Yes	465
E62	34.95	HT	B.P	6-M	6 1/2	5	AC	Yes	No	NS	5:1	.....	Yes	465
E68	44.95	CO	B.P	6-M	12	5	AC	Yes	No	NS	40:8:1	.....	Yes	465
E71	44.95	VT	B.P.S	7-M	8	5	AC	Yes	No	NS	40:8:1	.....	Yes	465
E72	44.95	HT	B.P.S	7-M	8	5	AC	Yes	No	NS	40:8:1	.....	Yes	465
E76	59.95	CO	B.P.S	7-M	12	5	AC	Yes	No	NS	40:8:1	.....	Yes	465
E79	99.95	PC	B.P.S	7-M	12	5	AC	Yes	No	NS	40:8:1	.....	Yes	465
E81	59.95	VT	B.P.S	8-M	8	10	AC	Yes	No	NS	10:8:1	.....	Yes	465
E86	74.95	CO	B.P.S	8-M	12	10	AC	Yes	No	NS	10:8:1	.....	Yes	465
E91	74.95	VT	B.P.S	9-M	8	10	AC	Yes	CT	NS	40:8:1	.....	Yes	465
E95	89.95	CO	B.P.S	9-M	12	10	AC	Yes	CT	NS	40:8:1	.....	Yes	465
E101	84.95	VT	B.P.S	10-M	8	10	AC	Yes	CT	NS	40:8:1	2	Yes	465
E105	99.95	CO	B.P.S	10-M	12	10	AC	Yes	CT	NS	40:8:1	2	Yes	465
E106	139.95	CO	B.P.S	10-M	12	10	AC	Yes	CT	NS	40:8:1	2	Yes	465
E126	150.00	CO	B.P.S.U	12-M	12	15	AC	Yes	CT	NS	40:8:1	2	Yes	465
E129	295.00	PC	B.P.S.U	12-M	12	15	AC	Yes	CT	NS	40:8:1	2	Yes	465
E155	195.00	CO	B.P.S.U.W	12-M	15	35	AC	Yes	CT	NS	40:8:1	2	Yes	465
General Household Utilities Co., 2638 No. Pulaski Rd., Chicago, Ill.—Grunow														
566	\$ 19.95	HT	B.P	5-G	8	2 1/2	AC	Yes	No	2 3/4	1:1	.....	No	465
1191	69.95	CO	B.P.S	11-M	12	7 1/2	AC	Yes	CRT	6	16:1	.....	Yes	465
1291	99.95	CO	B.P.S	12-M	12	7 1/2	AC	Yes	CRT	6	25:1	2.4	Yes	465
1297	139.95	CO	B.P.S	12-M	12	12	AC	Yes	CRT	6	25:1	2.4	Yes	465
1541	200.00	CO	B.P.S.W	15-M	12 & 6 & 6	18	AC	Yes	CRT	6	100:16:1	1, 2.4	Yes	465
Grebe Mfg. Co., Inc., 119 Fourth Ave., New York, N. Y.—Grebe														
250	\$ 37.75	HT	B.S	5-G	NS	2	AC	NS	No	5	NS	.....	No	456
360	NS	VT	B.P.S	6-M	NS	2	AC	NS	No	5	NS	.....	No	456
361	NS	VT	B.S.W	6-M	NS	2	AC	NS	No	5	NS	.....	No	456
370	59.95	VT	B.P.S	7-M	8	NS	AC	Yes	NS	NS	NS	.....	Yes	456
370C	57.95	HT	B.P.S	7-M	6	NS	AC	Yes	NS	NS	NS	.....	Yes	456
370D	74.50	CO	B.P.S	7-M	10	NS	AC	Yes	NS	NS	NS	.....	Yes	456
371D	NS	CO	B.S.W	7-M	10	NS	AC	Yes	NS	NS	NS	.....	Yes	456
380	69.95	VT	B.P.S	8-M	8	5	AC	NS	CRT	7	NS	.....	Yes	456
380D	85.50	CO	B.P.S	8-M	10	5	AC	NS	CRT	7	NS	.....	Yes	456
381	NS	VT	B.S.W	8-M	NS	3	AC	NS	CRT	7	NS	.....	Yes	456
381D	NS	CO	B.S.W	8-M	10	5	AC	Yes	CRT	NS	NS	.....	Yes	456
620	37.75	HT	B.S	6-G*	NS	2	AC-DC	NS	NS	NS	NS	.....	Yes	456
730	NS	VT	B.P.S	7-M*	NS	3	AC-DC	NS	CRT	7	NS	.....	Yes	456
731	NS	VT	B.S.W	7-M*	NS	3	AC-DC	NS	CRT	7	NS	.....	Yes	456
830D	NS	CO	B.P.S	7-M	10	NS	AC	Yes	NS	NS	NS	.....	Yes	456
831	NS	VT	B.S.W	8-M*	NS	3	AC-DC	NS	CRT	7	NS	.....	Yes	456
930	69.95	VT	B.P.S	9-M	NS	4	AC-DC	NS	CRT	7	NS	.....	Yes	456
930D	85.50	CO	B.P.S	9-M	NS	8	AC-DC	NS	CRT	7	NS	.....	Yes	456
931	NS	VT	B.S.W	10-M	NS	4	AC-DC	NS	CRT	7	NS	.....	Yes	456
931D	NS	CO	B.S.W	10-M	NS	4	AC-DC	NS	CRT	7	NS	.....	Yes	456
931D	NS	CO	B.S.W	9-M	NS	4	AC-DC	NS	CRT	7	NS	.....	Yes	456
1240	89.50	VT	B.P.S.W	11-M	NS	5	AC-DC	Yes	CRT	NS	NS	1	Yes	456
140E	109.95	CO	B.P.S.W	12-M	12	10	AC	Yes	CRT	NS	NS	.....	Yes	456
1240LC	195.50	PC	B.P.S.W	12	12	10	AC-DC	Yes	CRT	NS	NS	.....	Yes	456
1650	129.95	VT	B.P.S.U.W	17-M	NS	5	AC-DC	NS	CRT	7	NS	1	Yes	456
1650H	159.95	CO	B.P.S.U.W	16-M	NS	5	AC-DC	Yes	CRT	7	NS	.....	Yes	456
1650LC	235.00	DC	B.P.S.U.W	16-M	NS	5	AC-DC	Yes	CRT	7	NS	.....	Yes	456
2150	NS	C	B.P.S.U.W	22-M	NS	5	AC-DC	NS	CRT	7	NS	1	Yes	456
4110	89.50	VT	B.P.S.W	11-M	NS	10	AC	NS	CRT	7	NS	1	Yes	456
4110E	109.95	CO	B.P.S.W	11-M	12	10	AC	Yes	CRT	7	NS	.....	Yes	456
4110LC	195.00	CO	B.P.S.W	11-M	12	10	AC	Yes	CRT	7	NS	.....	Yes	456
5140	128.00	VT	B.P.S.U.W	14-M	NS	15	AC	NS	CRT	7	NS	1	Yes	456
5140H	159.95	CO	B.P.S.U.W	14-M	12	15	AC	Yes	CRT	7	NS	.....	Yes	456
5140LC	217.50	PC	B.P.S.U.W	14-M	12	15	AC	Yes	CRT	7	NS	.....	Yes	456
5240	NS	C	B.P.S.U.W	25-M	NS	NS	AC	NS	NS	NS	NS	.....	NS	456
Haltcrafters, Inc., 2611 S. Indiana St., Chicago, Ill.—Skyrider														
5T	\$ 29.50	T	B.P.S	5-G	5	3.5	AC	No	No	4	16:1	.....	Yes	465
S10	99.50	T	S.U	10-M	None	4	AC	Yes	No	5	21:1	.....	Yes	1600
S11	89.50	T	B.P.S.U	11-M	None	14	AC	Yes	CRT	5	21:1	.....	Yes	465
S12	99.50	T	B.P.S.W	11-M	None	14	AC	Yes	CRT	5	21:1	.....	Yes	1600
S14	44.50	T	B.P.S	7-G	5	3.5	AC	Yes	CRT	5	16:1	.....	Yes	465
Halson Radio Mfg. Corp., 120 E. 16th St., New York, N. Y.—Halson														
O5	NS	HT	B.P ₁	5-G*	5	1	AC-DC	No	No	2 3/4	1:1	.....	No	T.R.F.
5LE	NS	HT	B.W	5-G*	5	1	AC-DC	No	No	2 3/4	1:1	.....	No	T.R.F.
6L6	NS	HT	B.S.W	7-G	6	3	AC	No	CRT	4 1/2	10:1	.....	Yes	456
50R	NS	HT	B.P ₁	6-G*	5	1	AC-DC	Yes	No	2 3/4	9:1	.....	Yes	456
50RL	NS	HT	B.W	6-G*	5	1	AC-DC	Yes	No	2 3/4	9:1	.....	Yes	456
50X	NS	HT	B.S	6-GM*	5 1/2	1	AC-DC	Yes	No	4 1/2	30:6:1	.....	Yes	456
56U	NS	A	B	5-G	5 1/2	3	6V	Yes	No	4 1/2	6:1	.....	Yes	456
60L	NS	HT	B.S.W	7-G*	5 1/2	1	AC-DC	Yes	CRT	4 1/2	10:1	.....	Yes	456
60M	NS	HT	B.P ₁ S	7-G*	5 1/2	1	AC-DC	Yes	CRT	4 1/2	10:1	.....	Yes	456
100	NS													

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial		Features	AVC	I.F. Peak	
										Size	Ratio				
Harris Mfg. Co., 2422 W. 7th Street, Los Angeles, Cal.—Harris Electrotones															
500	\$ 99.50	PC	B	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
600	125.00	PC	B	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
700	135.00	PC	B	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
800	150.00	PC	B	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
900	149.50	PC	B,S ₁	7-M	8	4½	AC	Yes	No	3	4:1	Yes	Yes	465	
1000	174.50	PC	B,S ₁	7-M	8	4½	AC	Yes	No	3	4:1	Yes	Yes	465	
501W	114.95	PC	B,S ₁	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
701W	174.50	PC	B,S ₁	7-M	8	6	AC	Yes	No	3	4:1	Yes	Yes	465	
1201W	198.50	PC	B,S ₁	7-M	12	6	AC	Yes	No	4½	12:1	Yes	Yes	465	
Howard Radio Co., 1731 Belmont St., Chicago, Ill.—Howard															
58	\$ 29.95	HT	B,S	5-G	5	1.5	AC-DC	No	No	3	6:1	Yes	Yes	465	
68T	44.95	HT	B,P,S	6-GM	8	2.5	AC	Yes	CRT	6	16:1	Yes	Yes	465	
68C	64.95	CO	B,P,S	6-GM	12	3	AC	Yes	CRT	6	16:1	Yes	Yes	465	
HA6	44.95	A	B	6-GM	6	4	6V	Yes	No	2½	6:1	Yes	Yes	465	
Grand	295.00	CO	B,P,S,W	19-G	12	12	AC	Yes	ST	6	60:20:1	1.9	Yes	465	
International Radio—4th & William Sts., Ann Arbor, Mich.—Kadette															
21	\$ 19.95	HT	B	5-G	5	NS	AC-DC	No	No	5½	2:1	No	T.R.F.		
22	19.95	HT	B	5-G	5	NS	AC-DC	No	No	5½	2:1	No	T.R.F.		
23	19.95	HT	B	5-G	5	NS	AC-DC	No	No	5½	2:1	No	T.R.F.		
36	NS	VT	B,S	6-G	6½	NS	AC	Yes	No	4½	6:1	Yes	448		
40	10.00	HT	B	3-G	5	NS	AC-DC	No	No	NS	1:1	No	T.R.F.		
41	11.50	HT	B	3-G	5	NS	AC-DC	No	No	NS	1:1	No	T.R.F.		
43	12.50	HT	B	3-G	5	NS	AC-DC	No	No	NS	1:1	No	T.R.F.		
44	12.50	HT	B	3-G	5	NS	AC-DC	No	No	NS	1:1	No	T.R.F.		
66X	19.95	HT	B,P ₁	6-G	5	NS	AC-DC	No	No	4	1:1	8	No	448	
76	14.95	HT	B	6-G	5	NS	AC-DC	No	No	4	1:1	8	No	448	
86	22.50	VT	B,P ₁	6-G	5	NS	AC-DC	No	No	4	1:1	8	No	448	
87	29.95	HT	B,S	7-G	6½	NS	AC-DC	No	No	4½	6:1	1	Yes	448	
88	NS	T	B,S	7-M	8	NS	AC	Yes	ST	6½	40:16:1	1	Yes	448	
96	24.95	HT	B,P ₁	6-G	6½	NS	AC-DC	No	No	4½	6:1	8	Yes	448	
360	NS	CO	B,S	6-G	6½	NS	AC	Yes	No	4½	6:1	1	Yes	448	
880	NS	CO	B,S	7-M	10	NS	AC	Yes	ST	6½	40:16:1	1	Yes	448	
Classic	29.50	HT	B	6-G	5	NS	AC-DC	No	No	4	1:1	Yes	448		
Karadfo Corp., 740 Washington Ave., No., Minneapolis, Minn.—Karadio															
55	\$ 54.50	A	P	5-G	6	2	6V	NS	NS	NS	6:1	Yes	Yes	456	
67-S	54.50	A	B,P ₁	5-G	6	4.6	6V	NS	NS	NS	6:1	Yes	Yes	456	
75	29.50	A	B	5-G	6	2.3	6V	NS	NS	NS	6:1	Yes	Yes	456	
76	39.50	A	B	5-G	6	2.6	6V	NS	NS	NS	6:1	Yes	Yes	456	
77	49.50	A	B	5-G	6	4.6	6V	NS	NS	NS	6:1	Yes	Yes	456	
77-X	59.50	A	B	5-G	8	4.6	6V	NS	NS	NS	6:1	Yes	Yes	456	
Laurehk Radio Mfg. Co., Adrian, Mich.—Musique															
L-5-S	\$ 32.50	VT	B,S	5-M	6½	3	AC	Yes	No	3	NS	Yes	Yes	456	
L-5-C	49.50	CO	B,S	5-M	10	3	AC	Yes	CRT	6	NS	Yes	Yes	456	
L-14-T	19.50	HT	B	4-M	5½	2.5	AC	No	No	2½	NS	No	T.R.F.		
L-55-T	22.50	HT	B	5-M	5½	3	AC	No	No	2½	NS	No	T.R.F.		
Majestic Radio & Television Co., 600 W. Adams St., Chicago, Ill.—Majestic															
65	NS	VT	B,P,S	6-O	5	AC	Yes	CRT	NS	NS	16:1	Yes	NS		
66	NS	HT	B,P,S	6-O	6½	5	AC	Yes	CRT	NS	16:1	Yes	NS		
75	NS	VT	B,P,S	7-O	8	6	AC	Yes	CRT	NS	16:1	Yes	NS		
76	NS	HT	B,P,S	7-O	8	6	AC	Yes	CRT	NS	16:1	Yes	NS		
85	NS	VT	B,P,S	8-O	8	8	AC	Yes	CRT	NS	16:1	Yes	NS		
86	NS	HT	B,P,S	8-O	8	8	AC	Yes	CRT	NS	16:1	1	Yes	NS	
650	NS	CO	B,P,S	6-O	10	6	AC	Yes	CRT	NS	16:1	1	Yes	NS	
750	NS	CO	B,P,S	7-O	10	7½	AC	Yes	CRT	NS	16:1	1	Yes	NS	
850	NS	CO	B,P,S	8-O	12	10	AC	Yes	CRT	NS	16:1	1	Yes	NS	
1050	NS	CO	B,P,S,U	10-O	12	12	AC	Yes	CRT	NS	16:1	1	Yes	NS	
1250	NS	CO	B,P,S,U,W	12-O	15	15	AC	Yes	CRT	NS	16:1	1	Yes	NS	
Montgomery-Ward Co., Chicago, Ill.—Airline															
C43	\$ 48.95	CO	B,P,S	8	NS	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS	
C253	38.95	HT	B,P,S	8	NS	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS	
C407	32.95	CO	B,P,S	7-M	8	NS	AC	Yes	CRT	NS	NS	NS	Yes	NS	
C408	49.95	CO	B,P,S	8-M	10	NS	AC	Yes	CRT	NS	NS	NS	Yes	NS	
C411	64.95	CO	B,P,S	11-M	11	NS	AC	Yes	CRT	NS	NS	NS	Yes	NS	
C412	70.95	CO	B,P,S	10	8	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS	
C413	81.95	CO	B,P,S	13	12	12	AC	Yes	CRT	NS	NS	NS	Yes	NS	
C429	37.95	CO	B,S	6	NS	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS	
C432	40.95	CO	B,S	7	NS	NS	32V	Yes	No	NS	NS	NS	Yes	NS	
P362	C439	30.95	HT	B,S	6	NS	NS	Batt.	NS	No	NS	NS	Yes	NS	
P462	C229	27.95	VT	B	6	NS	NS	32V	Yes	No	NS	NS	Yes	NS	
P662	C249	27.95	HT	B,P,S	7-M	6	NS	AC	Yes	CRT	NS	NS	Yes	NS	
	C415	14.95	HT	B,P	5	NS	NS	AC	NS	No	NS	NS	Yes	NS	
	C416	19.95	HT	B,P,S	6-GM	6	NS	AC	NS	No	NS	NS	Yes	NS	
	C418	39.95	HT	B,P,S	8-M	8	NS	AC	Yes	CRT	NS	NS	3	Yes	NS
	C425	8.95	HT	B	5	5	NS	AC	No	No	NS	NS	Yes	NS	
	C240	20.95	HT	B	5	6	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS
	C347	50.95	HT	B,P,S	7	NS	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS
	C427	60.95	CO	B,P,S	7	NS	NS	Batt.	Yes	No	NS	NS	NS	Yes	NS
Noblitt-Sparks Industries, Inc., Columbus, Ind.—Arvin															
407	\$ 19.45	HT	B,P	4-G	5	1.3	AC-DC	No	No	NS	1:1	No	T.R.F.		
417	19.95	VT	B,P	4-G	5	3.5	AC	No	No	4½	1:1	Yes	Yes	456	
467	24.95	HT	B,P	4-G	5	3.5	AC	No	No	4½	1:1	Yes	Yes	456	
507	29.95	HT	B,S ₁	5-G	5	1.3	AC-DC	No	No	2½	1:1	Yes	Yes	456	
517	34.95	VT	B,S	5-G	6	3.5	AC	Yes	No	6	NS	Yes	Yes	456	
517B	39.95	CO	B,S	5-G	6	2	6V	Yes	No	6	NS	Yes	Yes	456	
527	49.95	CO	B,S	5-G	6	3.5	6V	Yes	No	6	NS	Yes	Yes	456	
527B	54.95	CO	B,S	5-G	6	3.5	6V	Yes	No	6	NS	Yes	Yes	456	
537	59.95	VT	B,P,S	6-O	8	3.5	6V	Yes	No	6	NS	Yes	Yes	456	
617B	69.95	VT	B,P,S	6-O	8	3.5	6V	Yes	No	7	60:12:1	Yes	Yes	456	
627	74.50	CO	B,P,S	6-O	10	3.5	6V	Yes	No	7	60:12:1	Yes	Yes	456	
627B	84.50	CO	B,P,S	6-G	10	2	6V	Yes	No	7	60:12:1	Yes	Yes	456	
927	99.50	CO	B,P,S	9-O	12	8	AC	Yes	CRT	8	12:1	Yes	Yes	456	
1127	150.00	CO	B,P,S	11-O	12	8	15	AC	Yes	CRT	8	12:1	9	Yes	456
Pacific Radio Corporation, 1479 W. Adams Blvd., Los Angeles, Cal.—Jackson-Bell															
206	NS	HT	B	4-G	5	2	AC	No	No	2½	1:1	No	T.R.F.		
226	NS	HT	B,P	4-G	5	2	AC	No	No	2½	1:1	No	T.R.F.		
406	NS	HT	B,S ₁	5-G	5	3	AC	Yes	No	2½	6:1	Yes	Yes	456	



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SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial Size	Dial Ratio	Features	AVC	I.F. Peak
Pacific Radio Corporation Los Angeles, Calif. (Continued)														
456	NS	HT	B	5-G	5	3	AC	Yes	No	2 3/4	1:1	.....	No	456
506	NS	HT	B,P,S	5-G	5	3	AC	Yes	No	3 3/4	6:1	.....	Yes	456
506M	NS	HT	B	5-M	5	3	AC	Yes	No	3 3/4	6:1	.....	Yes	456
606	NS	HT	B,P,S	6-G	6	3	AC	Yes	No	4 3/4	10:1	.....	Yes	456
606U	NS	VT	B	6-G	6	3	AC	Yes	No	4 3/4	10:1	.....	Yes	456
606M	NS	VT	B,P,S	6-M	6	3	AC	Yes	No	4 3/4	10:1	.....	Yes	456
606UM	NS	VT	B	6-M	6	3	AC	Yes	No	4 3/4	10:1	.....	Yes	456
556	NS	HT	B,P,S	5-M	5	3	AC	Yes	No	4 3/4	10:1	.....	Yes	456
Pacific Radio Corp., 844 W. Adams St., Chicago, Ill.—Pacific														
41	\$ 22.75	HT	B,P ₁	5-C*	5	1.2	AC-DC	No	No	5	NS	.....	No	T.R.F.
61	26.25	HT	B,P ₁	6-G*	5	1.2	AC-DC	No	No	5	NS	.....	Yes	456
102B	39.95	A	B	6-M	6	4	6V	Yes	No	NS	NS	.....	Yes	262 1/2
320	36.25	VT	B,P,S	5-G	6	3	AC	No	No	6	12:1	.....	Yes	465
481	38.75	T	B,P ₁	4-G	6	2	6V	No	No	6 1/2	NS	.....	Yes	465
681	48.75	VT	B,P,S	6-G	6	1.6	6V	Yes	No	6	12:1	.....	Yes	465
681	71.25	CO	B,P,S	6-G	8	1.6	6V	Yes	No	6	12:1	.....	Yes	465
6320	38.75	VT	B,P,S	6-M	6	4.5	AC	Yes	No	6	12:1	.....	Yes	465
6320XE	38.75	HT	B,P,S	3-G*	6	2	AC-DC	Yes	CRT	6	12:1	.....	Yes	465
7370	57.75	CO	B,P,S	8-M	6	4.5	AC	Yes	CRT	8	20:1	7	Yes	465
7370	82.75	HT	B,P,S	8-M	12	4.5	AC	Yes	CRT	8	20:1	7	Yes	465
14370	117.25	CO	B,P,S	14-M	12	14	AC	Yes	CRT	8	20:1	1.7	Yes	465
Z1	19.95	T	B,P ₁	5-G*	5	1.2	AC-DC	No	No	5	NS	.....	No	T.R.F.
Z2	24.95	T	B,P ₁	6-G*	5	2	AC-DC	No	No	5	NS	.....	Yes	456
Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa.—Philco														
37-60B	\$33.50	VT	B,P	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-60F	42.50	CO	B,P	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-61B	37.50	VT	B,P	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-61F	49.95	CO	B,P	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-84B	20.00	VT	B	4-0	NS	NS	AC	No	No	NS	NS	.....	No	470
37-89B	39.95	VT	B,P ₁	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-89F	50.00	CO	B,P ₁	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-116X	195.00	CO	B,P,S	15-0	NS	NS	AC	Yes	No	NS	NS	1.2,4,5,7	Yes	470
37-116X	175.00	CO	B,P,S	15-0	NS	NS	AC	Yes	No	NS	NS	1,2,5,7	Yes	470
37-602C	29.95	HT	B	5-0	NS	NS	AC-DC	No	No	NS	NS	.....	Yes	470
37-602C	25.00	HT	B	4-0	NS	NS	AC	No	No	NS	NS	.....	No	470
37-604C	39.95	VT	B,S	5-0	NS	NS	AC-DC	No	No	NS	NS	.....	Yes	470
37-610B	42.50	VT	B,P,S	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-610J	59.95	CO	B,P,S	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-610T	45.00	HT	B,P,S	5-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-611B	47.50	VT	B,P,S	5-0	NS	NS	AC-DC	Yes	No	NS	NS	.....	Yes	470
37-611F	59.95	CO	B,P,S	5-0	NS	NS	AC-DC	Yes	No	NS	NS	.....	Yes	470
37-611J	65.00	CO	B,P,S	5-0	NS	NS	AC-DC	Yes	No	NS	NS	.....	Yes	470
37-611T	49.95	HT	B,P,S	5-0	NS	NS	AC-DC	Yes	No	NS	NS	.....	Yes	470
37-620B	52.50	VT	B,P,S	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-620J	69.95	CO	B,P,S	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-630T	62.50	HT	B,P,S	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-630X	79.95	CO	B,P,S	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-640B	69.95	VT	B,P,S	7-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-640MX	95.00	CO	B,P,S	7-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-640X	89.95	CO	B,P,S	7-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-641B	69.95	VT	B,P,S	7-0	NS	NS	AC-DC	Yes	ST	NS	NS	.....	Yes	470
37-641X	89.95	CO	B,P,S	7-0	NS	NS	AC-DC	Yes	ST	NS	NS	.....	Yes	470
37-641MX	95.00	CO	B,P,S	7-0	NS	NS	AC-DC	Yes	ST	NS	NS	.....	Yes	470
37-650B	79.95	VT	B,P,S	8-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-650X	100.00	CO	B,P,S	8-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-660B	89.95	VT	B,P,S	9-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-660X	115.00	CO	B,P,S	9-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-665B	99.50	VT	B,P,S	9-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-665X	125.00	CO	B,P,S	9-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-670B	99.50	VT	B,P,S	11-0	NS	10	AC	Yes	ST	NS	NS	.....	Yes	470
37-670X	139.50	CO	B,P,S	11-0	NS	10	AC	Yes	ST	NS	NS	.....	Yes	470
37-675X	169.50	CO	B,P,S	12-0	NS	10	AC	Yes	ST	NS	NS	.....	Yes	470
37-675X	150.00	CO	B,P,S	12-0	NS	10	AC	Yes	ST	NS	NS	1.2,4	Yes	470
37-690	375.00	CO	B,P,S	20-0	NS	15	AC	Yes	ST	NS	NS	1.2	Yes	470
816	39.95	A	B	6	NS	NS	6V	Yes	No	NS	NS	1.2,4,5,7	Yes	260
817	49.95	A	B	6	NS	NS	6V	Yes	No	NS	NS	.....	Yes	260
818	59.95	A	B	6	NS	NS	6V	Yes	No	NS	NS	.....	Yes	260
818K	59.95	A	B	6	NS	NS	6V	Yes	No	NS	NS	.....	Yes	260
819	69.95	A	B	7	NS	NS	6V	Yes	No	NS	NS	.....	Yes	260
37-2620B	55.00	VT	B,P,S,W	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-2620J	72.50	CO	B,P,S,W	6-0	NS	NS	AC	Yes	No	NS	NS	.....	Yes	470
37-2650B	85.00	VT	B,P,S,W	8-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-2650X	105.00	VT	B,P,S,W	8-0	NS	NS	AC	Yes	ST	NS	NS	.....	Yes	470
37-2670X	99.50	VT	B,P,S,W	11-0	NS	10	AC	Yes	ST	NS	NS	.....	Yes	470
37-2670X	139.50	CO	B,P,S,W	11-0	NS	10	AC	Yes	ST	NS	NS	.....	Yes	470
Pierce Airo Co., 510 Sixth Ave., New York, N. Y.—DeWald														
517	\$ 29.95	A	B	5-G	5	3	6V	Yes	No	4	6:1	.....	Yes	456
518	18.90	HT	B,P	5-G*	5	1	AC-DC	No	No	3 1/2	1:1	.....	No	T.R.F.
520	26.55	VT	B,P	5-G	6	3 1/2	AC	No	No	3 1/2	6:1	.....	Yes	456
521	17.95	HT	B	5-G*	5	1	AC-DC	No	No	3 1/2	1:1	.....	No	T.R.F.
522	NS	NS	B,P	5-G	6	1 1/2	Batt.	No	No	4	8:1	.....	Yes	456
610	47.95	NS	B,P,S	6-M	6	3 1/2	AC	Yes	No	4	8:1	.....	Yes	456
611	44.95	VT	B,P,S	6-MG	6	1	AC-DC	Yes	No	4	8:1	.....	Yes	456
617	44.95	A	B	6-G	6	3	6V	Yes	No	2	8:1	.....	Yes	175
618	37.25	HT	B,P,S	6-G*	6	1	AC-DC	Yes	No	5	8:1	.....	Yes	456
619	27.50	T	B,P	6-G*	5	1	AC-DC	No	No	5	1:1	.....	Yes	456
620	35.75	HT	B,S	6-G	6	3 1/2	AC	Yes	CRT	5	6:1	.....	Yes	456
621	35.75	HT	B,S	6-G*	6	1	AC-DC	Yes	No	5	8:1	.....	Yes	456
621	25.75	HT	B,P	6-G*	5	1	AC-DC	Yes						

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cab- inet Style	Wave- bands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Con- trols	Vis- ual tun- ing	Dial		Fea- tures	AVC	I.F. Peak
										Size	Ratio			
Pilot Radio Corp. (Continued)														
Y43	NS	VT	B.S	4-G	6	3	AC	Yes	No	3	NS	....	No	456
Y48	NS	VT	B.S	4-G	6	2	DC	Yes	No	3	NS	....	No	456
X73	NS	VT	B.P.S	7-G	6	2	Batt.	Yes	No	4 1/2	95:12:1	....	Yes	456
103	NS	VT	B.S	5-G	6	3	AC	Yes	No	3	NS	....	Yes	456
X114	99.50	VT	B.P.S	11-M	10	12	AC	Yes	No	4 3/4	80:1	....	Yes	456
193	54.50	HT	B.P.S	5-M	8	3	AC	Yes	No	5 1/2	95:12:1	....	Yes	456
C-193	77.50	CO	B.P.S	6-M	12	3	AC	Yes	CRT	3 1/2	95:12:1	....	Yes	456
203	37.50	VT	B.S	5-G	5	1	AC-DC	Yes	No	3	NS	....	Yes	456
253	NS	VT	B.P.S	5-G	8	8	6V	Yes	No	4 1/2	95:12:1	....	Yes	456
2253	NS	VT	B.P.S	5-G	8	8	32V	Yes	No	4 1/2	95:12:1	....	Yes	456
293	74.50	VT	B.P.S	7-M	8	3	AC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
298	79.50	VT	B.P.S	7-M	8	3	DC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
C-293	99.90	CO	B.P.S	7-M	12	3	AC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
C-298	104.90	CO	B.P.S	7-M	12	3	DC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
304	94.50	VT	B.P.S,U	11-M	10	4	AC-DC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
C-304	135.50	CO	B.P.S,U	11-M	12	4	AC-DC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
364	112.50	VT	B.P.S,U	12-M	10	10	AC	Yes	CRT	4 1/2	95:12:1	....	Yes	456
393	67.50	VT	B.P.S	7-M	8	3	AC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
P-393	159.50	PC	B.P.S	7-M	12	3	AC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
403	NS	VT	B.S	5-M	6	3	AC	Yes	No	5 1/2	NS	....	Yes	456
C-403	NS	CO	B.S	6-M	12	3	AC	Yes	CRT	5 1/2	95:12:1	....	Yes	456
423	NS	HT	B.P.S	7-M	6	1	AC-DC	Yes	No	4 1/2	95:12:1	....	Yes	456

Radio Bar Co. of America, 7100 McKinley St., Los Angeles, Calif.—Radio Bar

107	\$ 89.50	Has Philco 37- 84 Chassis												470
504	140.00	Has Philco 37-610 Chassis												470
507	177.50	Has Philco 37-610 Chassis												470
510	329.50	Has Philco 37-650 Chassis												470
515	429.95	Has Philco 37-650 Chassis												470
528	252.50	Has Philco 37-620 Chassis												470
536	284.95	Has Philco 37 640 Chassis												470
550	795.00	Has Philco 37-670 Chassis with Automatic Phonograph												470
550	895.00	Has Philco Automatic Dial Tuning												470

Models available with antique white trim finish—\$10 additional

Radolek Co., 601 W. Randolph St., Chicago, Ill.—Radolek

K16702	\$ 42.50	VT	B.S	5-G	NS	NS	Batt.	NS	No	5 1/2	NS	....	NS	NS
K16706	44.50	VT	B.P.S	6-G	6	NS	AC	Yes	No	5 1/2	NS	....	Yes	NS
K16720	58.45	CO	B.P.S	7-GM	12	NS	AC	Yes	CRT	8 1/2	NS	1	Yes	NS
K16721	39.95	VT	B.P.S	7-GM	8	NS	AC	Yes	CRT	8 1/2	NS	....	Yes	NS
K16722	35.95	C	B.P.S	7-GM	10	NS	AC	Yes	CRT	8 1/2	NS	....	Yes	NS
K16723	69.95	C	B.P.S	10-MG	12	15	AC	Yes	CRT	8 1/2	NS	1	Yes	NS
K16724	49.95	VT	B.P.S	10-MG	8	NS	AC	Yes	CRT	8 1/2	NS	1	Yes	NS
K16725	46.95	C	B.P.S	10-MG	12	NS	AC	Yes	CRT	8 1/2	NS	1	Yes	NS
K16726	34.95	CO	B.S	5-GM	5 1/2	NS	AC-DC	Yes	No	NS	NS	....	Yes	NS
K16727	26.95	VT	B.S	5-GM	5 1/2	NS	AC-DC	Yes	No	4	NS	....	Yes	NS
K16728	22.95	C	B.S	5-GM	5 1/2	NS	AC-DC	Yes	No	NS	NS	....	Yes	NS
K16747	39.50	HT	B.P.S	5-M	6 1/2	NS	AC	Yes	No	6 1/4	NS	....	Yes	NS
K16750	125.00	CO	B.P.S,W	10-M	12	10	AC	Yes	CRT	11	NS	5	Yes	NS
K16751	90.00	C	B.P.S,W	10-M	12	10	AC	Yes	CRT	11	NS	5	Yes	NS
K16752	225.00	CO	B.P.S,U	17-MG	12&12	30	AC	Yes	CRT	11	NS	1.5	Yes	NS
K16753	180.00	C	B.P.S,U	17-MG	12&12	30	AC	Yes	CRT	11	NS	1.5	Yes	NS
K16770	69.95	CO	B.P.S	8-MG	12	5	AC	Yes	CRT	4	NS	....	Yes	NS
K16771	54.95	HT	B.P.S	8-MG	8	5	AC	Yes	CRT	4	NS	....	Yes	NS
K16772	49.50	CO	B.P.S	8-MG	12	5	AC	Yes	CRT	4	NS	....	Yes	NS
K16773	59.95	CO	B.S	6-GM	8	NS	32V	Yes	No	6	NS	1	Yes	NS
K16774	39.95	HT	B.S	6-GM	8	NS	32V	Yes	No	6	NS	1	Yes	NS

RCA Manufacturing Co., Inc., Front & Cooper Sts., Camden, N. J.—RCA-Victor

										"Magic Voice"		"Magic Eye"		
6K	\$ 49.95	CO	B.P	6-M	12	4.5	AC	Yes	No	4	10:1	6.7	Yes	460
6K2	59.95	CO	B.P.S	6-M	12	4.5	AC	Yes	No	6 1/2	50:10:1	7	Yes	460
7K	79.95	CO	B.P.S	7-M	12	4.5	AC	Yes	No	6 1/2	50:10:1	6.7	Yes	460
8K	89.95	CO	B.P.S	8-M	12	4.5	AC	Yes	CRT	6 1/2	50:10:1	6.7	Yes	460
9K	99.95	CO	W.B.P.S	9-M	12	4.5	AC	Yes	CRT	4 1/2	100:20:1	6.7	Yes	460
9K2	129.95	CO	W.B.P.S,U	9-M	12	9	AC	Yes	CRT	4 1/2	100:20:1	5.6,7	Yes	460
10K	150.00	CO	W.B.P.S,U	10-M	12	9	AC	Yes	CRT	4 1/2	100:20:1	1.5,6,7	Yes	460
13K	175.00	CO	W.B.P.S,U	13-M	12	30	AC	Yes	CRT	4 1/2	100:20:1	1.5,6,7	Yes	460
15K	199.50	CO	W.B.P.S,U	15-M	12	30	AC	Yes	CRT	4 1/2	100:20:1	1.5,6,7	Yes	460
4T	20.00	VT	B	4-G	6	2.5	AC	No	No	....	1:1	6.7	No	460
5T	29.95	VT	B.P	5-G	8	4.5	AC	Yes	No	4	10:1	6.7	Yes	460
6T	39.95	VT	B.P	6-M	8	4.5	AC	Yes	No	4	10:1	6.7	Yes	460
6T2	49.95	VT	B.S	6-M	8	4.5	AC	Yes	No	6 1/2	50:10:1	7	Yes	460
7T	59.95	VT	B.S	7-M	8	4.5	AC	Yes	No	6 1/2	50:10:1	6.7	Yes	460
8T	69.95	VT	B.S	8-M	8	4.5	AC	Yes	CRT	6 1/2	50:10:1	6.7	Yes	460
9T	89.95	VT	W.B.P.S	9-M	8	9	AC	Yes	CRT	4 1/2	100:20:1	6.7	Yes	460
10T	109.95	VT	W.B.P.S	10-M	8	9	AC	Yes	CRT	4 1/2	100:20:1	1.6,7	Yes	460
7-U	99.95	PC	B.S	7-M	12	4.5	AC	Yes	CRT	6 1/2	100:50:1	7	Yes	460
9-U	239.00	PC	B.P.S,W,U	9-M	12	9	AC	Yes	CRT	4 1/2	100:20:1	6.7	Yes	460
9-U2	290.00	PC	B.P.S,W,U	9-M	12	9	AC	Yes	CRT	4 1/2	100:20:1	6.7	Yes	460
D-22-A	600.00	PC	B.P.S,W,U	22-M	12&12	25	AC	Yes	CRT	4 1/2	50:10:1	3.7	Yes	460
4X	27.95	VT	B	4-G	5	0.8	AC-DC	No	No	3 3/4	1:1	6	No	460
4X3	24.95	VT	B	4-G	5	0.8	AC-DC	No	No	3 3/4	1:1	6	No	460
4X4	22.95	VT	B	4-G	5	0.8	AC-DC	No	No	3 3/4	1:1	6	No	460
5X	32.95	HT	B.P	5-G	5	0.9	AC-DC	No	No	3 3/4	6:1	6	Yes	460
5X3	29.95	HT	B.P	5-G	5	0.9	AC-DC	No	No	3 3/4	6:1	6	Yes	460
5X4	27.95	HT	B.P	5-G	5	0.9	AC-DC	No	No	3 3/4	6:1	6	Yes	460
7X	49.95	VT	B.P.S	7-M	8	1.5	AC-DC	Yes	No	6 1/2	50:10:1	6.7	Yes	460

Remler Co., Ltd., 2101 Bryant St., San Francisco, Cal.—Remler

28	\$ 34.90	HT	B	6-M*	5	1.5	AC-DC	Yes	No	4	10:1	....	No	450
40	29.90	PO	B.P	4-G	5 1/2	2.5	AC	Yes	No	4	10:1	....	No	450
41	36.90	PO	B.P	5-M	5 1/2	3	AC	No	No	4	10:1	....	No	450
45	49.90	HT	B.P.S	7-M	8	3	AC	Yes	No	4	40:1	6	Yes	450
51	19.90	PO	B	4-G	5	3	AC	No	No	2 1/2	1:1	....	No	T.R.F.
60	29.90	HT	B.S	5-G	5	3	AC	Yes	No	4	5:1	....	Yes	450
64	39.90	HT	B.P.S	6-M	8	3	AC	Yes	No	4	10:1	....	Yes	450
71	59.90	HT	B.P.S	8-M	8	3	AC	Yes	No	10 1/2	40:8:1	6	Yes	450
89	84.50	HT	B.P.S	12-M	8.5	8	AC	Yes	CRT	10 1/2	40:8:1	1.6	Yes	450

Sears, Roebuck & Co., Chicago, Ill.—Silvertone

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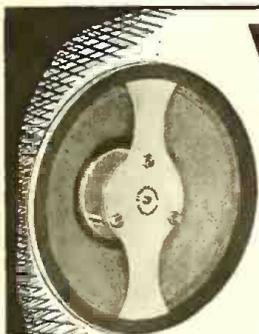
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SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial		Features	AVC	I.F. Peak
										Size	Ratio			
Sears, Roebuck & Co. (Continued)														
21	29.95†	VT	B	4-O	6	NS	6V	NS	No	4	NS	Yes	NS	NS
22	27.50††	VT	B.S.	7*	6	NS	Batt.	Yes	No	4	20:1	Yes	NS	NS
24	34.95††	VT	B.S.W	7*	6	NS	Batt.	Yes	No	4	NS	Yes	NS	NS
25	42.50††	VT	B.P.S	9*	6	NS	Batt.	Yes	No	4	50:10:1	Yes	NS	NS
28	42.50††	HT	B.P.S	6-O	6	NS	6V	Yes	No	4	17:1	Yes	NS	NS
42	32.50††	CO	B	6*	6	NS	Batt.	Yes	No	4	NS	Yes	NS	NS
44	44.50††	CO	B.S.W	7*	6	NS	Batt.	Yes	No	4	NS	Yes	NS	NS
46	52.50††	CO	B.P.S	9*	8	NS	Batt.	Yes	No	4	NS	Yes	NS	NS
48	49.95††	CO	B.P.S	6	6	NS	6V	Yes	No	4	17:1	Yes	NS	NS
49	38.50	CO	BS	6	6	NS	32V	Yes	No	4	NS	Yes	NS	NS
50	69.50†	CO	B.P.S.W	10	10	NS	6V	Yes	CRT	4	NS	1	Yes	NS
61	16.50	HT	B	5	6	NS	AC	NS	No	4	NS	Yes	NS	NS
84	29.95	CO	B.P.S	8	8	NS	AC	Yes	No	4	17:1	Yes	NS	NS
85	42.50	CO	B.P.S	8	8	NS	AC	Yes	CRT	4	NS	1	Yes	NS
86	49.90	CO	B.P.S	10	10	NS	AC	Yes	CRT	6	50:10:1	1.7	Yes	NS
88	79.50	CO	B.P.S.W	13	12	NS	AC	Yes	No	7	NS	1.2,7	Yes	NS

†With storage battery. ††With dry batteries.

Sentinel Radio Corp., 2222 Diverserly Pky., Chicago, Ill.—Sentinel-Erla

46AC	\$ 64.95	CO	B.P.S	7-MG	12	5	AC	Yes	No	6	11:1	Yes	465	465
46ACE	69.95	CO	B.P.S	8-MG	12	5	AC	Yes	CRT	6	11:1	Yes	465	465
46AT	49.95	HT	B.P.S	7-MG	10	10	AC	Yes	No	6	11:1	Yes	465	465
46ATE	54.95	HT	B.P.S	8-MG	10	10	AC	Yes	No	6	11:1	Yes	465	465
47ACE	110.00	CO	B.P.S.W	11-M	10	10	AC	Yes	CRT	6 1/2	210:18:1	1	Yes	465
47ATE	90.00	HT	B.P.S.W	11-M	10	10	AC	Yes	CRT	6 1/2	210:18:1	1	Yes	465
52AC	49.95	CO	B.P.S	5-G	6	6	AC	Yes	No	6	11:1	Yes	465	465
52ACE	54.95	CO	B.P.S	5-G	6	6	AC	Yes	CRT	6	11:1	Yes	465	465
52ACT	39.95	CO	B.P.S	5-G	6	6	AC	Yes	No	6	11:1	Yes	465	465
52AT	29.95	HT	B.P.S	5-G	6	6	AC	Yes	No	6	11:1	Yes	465	465
52ATE	39.95	HT	B.P.S	6-G	6	6	AC	Yes	CRT	6	11:1	Yes	465	465
57ACE	89.95	CO	B.P.S	8-MG	12	8	5 1/2 AC	Yes	CRT	7	16:1	1	Yes	465
57ATE	69.95	HT	B.P.S	8-MG	12	8	5 1/2 AC	Yes	CRT	7	16:1	1	Yes	465
69UT	18.95	HT	B.P.	5-G*	5	5	AC	No	No	3	10:1	Yes	465	465
70AC	19.97	CO	B.P.	5-G	6	6	2.5 AC	No	No	4 1/2	10:1	Yes	465	465
70AT	24.95	HT	B.P.	5-G	5	5	2.5 AC	No	No	4 1/2	10:1	Yes	465	465

McMurdo-Silver Corp., 3354 No. Paulina St., Chicago, Ill.—Masterpiece

NS	CO	B.P.S,U,W	20-M	18	32	AC	Yes	CRT	9	50:10:1	1,3	Yes	456	456
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Shelley Radio Co., 1841 So. Flower St., Los Angeles, Cal.—Shelley

5	\$ 17.95	HT	B	5-M	5	NS	NS	No	No	3	NS	Yes	No	460
6	21.95	HT	B	5-G	5	NS	NS	No	No	3 1/4	NS	Yes	AVC	460
34	13.95	HT	B	4-G	5	NS	NS	No	No	3	NS	Yes	No	460
48	39.95	HT	B.P.S	8-M	6	NS	NS	Yes	No	NS	NS	Yes	No	460
65	27.95	A	B	5-G	5	NS	NS	Yes	No	NS	NS	Yes	Yes	460
67	39.95	A	B	7-M	6	NS	NS	Yes	No	NS	NS	Yes	Yes	460

Simplex Radio Co., W. Monroe & King Sts., Sandusky, Ohio—Simplex

CA	23.50	PO	B	4-G	5	0.75	Batt.	No	No	2	1 1/2:1	Yes	No	456
D	27.45	HT	B.S	7-G*	6 1/2	1	AC-DC	Yes	CRT	6 1/2	8:1	Yes	Yes	456
D Dlx.	29.45	VT	B.S	7-G*	6 1/2	1	AC-DC	Yes	CRT	6 1/2	8:1	Yes	Yes	456
D Con.	37.45	CO	B.S	7-G*	6 1/2	1	AC-DC	Yes	CRT	6 1/2	8:1	Yes	Yes	456
DB	34.95	HT	B.S	6-O	6 1/2	1	6V	Yes	CRT	6 1/2	8:1	Yes	Yes	456
DB Dlx.	36.95	VT	B.S	6-O	6 1/2	1	6V	Yes	CRT	6 1/2	8:1	Yes	Yes	456
DB Con.	44.95	CO	B.S	6-O	6 1/2	1	6V	Yes	CRT	6 1/2	8:1	Yes	Yes	456
JA	18.95	HT	B	4-G	5	0.75	Batt.	No	No	2	1 1/2:1	Yes	No	456
NT	49.95	VT	B.P.S	10-G	8	18	AC	Yes	CRT	7	8:1	Yes	Yes	456
NT Con.	69.95	CO	B.P.S	10-G	12 1/2	18	AC	Yes	CRT	7	8:1	Yes	Yes	456
NTH	49.95	VT	B.P.S	9-G	8	18	AC-DC	Yes	CRT	7	8:1	Yes	Yes	456
NTH Con.	69.95	CO	B.P.S	9-G	12 1/2	18	AC-DC	Yes	CRT	7	8:1	Yes	Yes	456
Q	39.95	A	B	6-G	5	0.75	6V	No	No	2	1 1/2:1	Yes	Yes	175
TA	32.95	A	B	4-G	5	0.75	6V	No	No	2	1 1/2:1	Yes	Yes	456
Z	12.45	HT	B	4-G*	5	0.75	AC-DC	No	No	2	1 1/2:1	Yes	No	456
Z Dlx.	13.25	HT	B	4-G*	5	0.75	AC-DC	No	No	2	1 1/2:1	Yes	No	456
ZS	13.45	HT	B.P	4-G*	5	0.75	AC-DC	No	No	2	1 1/2:1	Yes	No	456
ZS Dlx.	14.25	HT	B.P	4-G*	5	0.75	AC-DC	No	No	2	1 1/2:1	Yes	No	456

Sparks-Withington Co., Jackson, Mich.—Sparton

											"Photochromatic Dial"	"Tone Expansion"		
517	NS	VT	BS	5-G	6	3	AC	Yes	No	4	6:1	Yes	Yes	456
517B	NS	VT	BS	5-G	6	3	AC	Yes	No	4	6:1	Yes	Yes	456
517W	NS	VT	BS	5-G	6	3	AC	Yes	No	4	6:1	Yes	Yes	456
537	NS	VT	B.P.S	5-O	6	3	AC	Yes	No	5	6:1	Yes	Yes	456
557	NS	HT	BS	5-G	6	3	AC	Yes	No	5	6:1	Yes	Yes	456
556	NS	CO	BS	5-G	8	3	AC	Yes	No	4	6:1	Yes	Yes	456
577	NS	CO	B.P.S	5-M	8	3	AC	Yes	No	5	6:1	Yes	Yes	456
617	NS	VT	B.P.S	6-O	8	3	AC	Yes	No	5	6:1	Yes	Yes	345
667	NS	CO	B.P.S	6-O	10	3	AC	Yes	No	5	6:1	Yes	Yes	245
867	NS	CO	B.P.S	8-M	10	5	AC	Yes	CRT	6	45:15:1	Yes	Yes	456
987	NS	CO	B.P.S	9-OM	12	5	AC	Yes	CRT	6	45:15:1	3	Yes	456
1167	NS	CO	B.P.S,W	11-OM	12	7	AC	Yes	CRT	6	45:15:1	1,3	Yes	456
1567	NS	CO	B.P.S,W	15-OM	12	15	AC	Yes	CRT	6	45:15:1	1,3	Yes	456
1867	NS	CO	B.P.S,W,U	18-OM	15&6&6	20	AC	Yes	CRT	6	45:15:1	1,3,9	Yes	456

Stewart Warner Corp., 1826 Diverserly Ave., Chicago, Ill.—Stewart-Warner

											"Copper Photo-Tone Speaker"			
1425	NS	CO	B.P.	5-M	8	2	AC	Yes	No	4	NS	Yes	No	NS
1441	NS	T	B.P.	5-G	5 1/4	2	AC	Yes	No	4	NS	Yes	No	NS
1451	NS	T	B.P.S	6-M	8	3.4	AC	Yes	No	6	25:1	Yes	Yes	NS
1455	NS	CO	B.P.S	6-M	12	3.4	AC	Yes	No	6	25:1	Yes	Yes	NS
1461	NS	T	B.P.S	7-M	8	NS	AC	Yes	No	6	60:12:1	Yes	Yes	NS
1465	NS	CO	B.P.S	7-M	12	3.4	AC	Yes	No	6	60:12:1	Yes	Yes	NS
1475	NS	CO	B.P.S	8-M	12	6	AC	Yes	CRT	6	60:12:1	Yes	Yes	NS
1485	NS	CO	B.P.S	10-MG	12	16	AC	Yes	CRT	7	60:12:1	Yes	Yes	NS
1495	NS	CO	B.P.S,W	12-MG	12 & 10	20	AC	Yes	CRT	7	60:12:1	Yes	Yes	NS
1671	NS	T	B.P	5-G	5 1/4	2	AC	Yes	No	4	NS	Yes	No	NS
1685	NS	CO	B.P											

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wave-bands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial		Features	AVC	I.F. Peak
										Size	Ratio			
Stromberg Carlson Mfg. Co., (Continued)														
130R	84.50	HT	B.P.S.	8-M	8 1/4	2.5	AC	Yes	CRT	4	50:1	Yes	Yes	465
130L	89.50	CO	B.P.S.	7-M	8 3/4	2.5	AC	Yes	CRT	4	50:1	Yes	Yes	465
130M	107.50	CO	B.P.S.	8-M	10 1/4	2.5	AC	Yes	CRT	4	50:1	Yes	Yes	465
140H	99.50	HT	B.P.S.	9-M	8 3/4	6	AC	Yes	CRT	6	50:1	1.5	Yes	465
140K	135.00	CO	B.P.S.	9-M	10 1/4	6	AC	Yes	CRT	6	50:1	1.5	Yes	465
140L	149.50	CO	B.P.S.	9-M	10 1/4	6	AC	Yes	CRT	6	50:1	1.5	Yes	465
140P	199.50	PC	B.P.S.	9-M	10 1/4	6	AC	Yes	CRT	6	50:1	1.5	Yes	465
145L	197.50	CO	B.P.S.W	10-M	10 1/4	9	AC	Yes	CRT	8	80:1	1.5	Yes	465
145P	299.50	PC	B.P.S.W	10-M	10 1/4	9	AC	Yes	CRT	8	80:1	1.5	Yes	465
150L	NS	CO	B.P.S.U.W	12-M	10 1/4	15	AC	Yes	CRT	8	80:1	1.5	Yes	465
160L	NS	CO	B.P.S.U.W	14-M	10 1/4	30	AC	Yes	CRT	8	80:1	1.5	Yes	465
160P	NS	PC	B.P.S.U.W	14-M	10 1/4	30	AC	Yes	CRT	8	80:1	1.5	Yes	465
180L	NS	CO	B.P.S.U.W	17-M	10 1/4	30	AC	Yes	CRT	8	80:1	1.5	Yes	465

Trav-Ler Radio & Television Corp., 1036 W. Van Buren St., Chicago, Ill.—Trav-Ler

41	\$ 17.95	HT	B	4-G	5	3	AC-DC	No	No	NS	NS	NS	NS	T.R.F.
135M	NS	HT	B.P.S.	6-M	6 1/2	1	AC	Yes	No	6	20:1	Yes	Yes	456
173	74.95	CO	B.S1	5-G	6 1/2	2	Batt.	Yes	No	6	NS	Yes	Yes	456
149M	NS	CO	B.S	6-G	6 1/2	3	AC	No	CRT	5	6:1	Yes	Yes	456
431	14.95	HT	B.P	4-G*	5	.9	AC-DC	No	No	4	NS	8	NS	T.R.F.
442	17.95	T	B	4-G	5	1	AC-DC	No	No	4	NS	8	NS	T.R.F.
512	26.95	T	B	5-M	5	1	AC-DC	No	No	NS	NS	8	NS	456
521	18.95	T	B.P	5-G*	5	1	AC-DC	No	No	NS	NS	8	NS	T.R.F.
522	21.95	T	B.S1	5-G	5	.9	AC-DC	No	No	NS	8:1	Yes	Yes	456
542	42.50	VT	B.S	5-G	6 1/2	1.8	Batt.	Yes	No	4	NS	Yes	Yes	456
542	39.95	A	B	5-G	5 1/2	4	6V	No	No	NS	NS	Yes	Yes	456
549	25.25	HT	B.S1	5-G	6 1/2	3	AC	No	No	5	6:1	Yes	Yes	456
550	25.25	HT	B.S1	6-G	6	1	AC-DC	No	No	5	6:1	Yes	Yes	456
635	35.95	HT	B.P.S	6-M	6 1/2	3	AC	Yes	No	6	20:1	Yes	Yes	456
635M	38.95	HT	B.P.S	7-M	6 1/2	3	AC	Yes	CRT	6	20:1	Yes	Yes	456
636	33.95	HT	B.P.S	6-G	6 1/2	2	AC-DC	Yes	No	6	20:1	Yes	Yes	456
636M	36.95	HT	B.P.S	7-G	6 1/2	4	AC-DC	Yes	CRT	6	20:1	Yes	Yes	456
642	44.95	A	B	6-G	6 1/2	4	6V	No	No	NS	NS	Yes	Yes	456
733	59.50	VT	B.S	7-G	6 1/2	2	Batt.	Yes	No	6	NS	Yes	Yes	456

Troy Radio Mfg. Co., 1144 So. Olive, St., Los Angeles, Cal.—Troy

55Std.	NS	HT	B	4-G	5	NS	AC	No	No	NS	NS	NS	NS	T.R.F.
6A	NS	HT	B	4-G	5	NS	AC	No	No	2 1/2	1:1	NS	NS	T.R.F.
40	NS	HT	B	5-G*	NS	NS	AC	Yes	No	4	6:1	Yes	Yes	465
45	NS	HT	B.P	5-G	5	NS	AC	Yes	No	4	6:1	Yes	Yes	465
65	NS	CO	B.P	5-G	5	NS	AC	Yes	No	4	6:1	Yes	Yes	465
75	NS	HT	B	5-G	8	NS	AC	Yes	No	4	6:1	Yes	Yes	465
75	NS	CO	B	5-G	8	NS	AC	Yes	No	4	6:1	Yes	Yes	465
75PC	NS	PC	B	5-G	8	NS	AC	Yes	No	4	6:1	Yes	Yes	465
95	NS	HT	B.P.S	9-M*	6 1/2	NS	AC	Yes	CRT	4 1/2	8:1	Yes	Yes	465
95	NS	CO	B.P.S	9-M*	12	NS	AC	Yes	CRT	4 1/2	8:1	Yes	Yes	465

United American Bosch Corp., 3664 Main St., Springfield, Mass.—American-Bosch

										"Automatic Maestro"				
515	NS	HT	B.P	5-G	6	2.3	AC	Yes	No	4 1/2	10:1	Yes	Yes	465
604	NS	HT	B.P	5-G*	5	3 1/4	AC-DC	No	No	2 1/2	4 1/2:1	Yes	No	465
605	NS	HT	B.S1	5-M	6	3	AC	Yes	No	4	7:1	Yes	Yes	465
605C	NS	CO	B.S1	5-M	14	3	AC	Yes	No	4 1/2	7:1	Yes	Yes	465
610	NS	HT	B.S1	6-M*	6	1	AC-DC	Yes	No	3 1/2	10:1	Yes	Yes	465
620	NS	HT	B.P.S	7-M*	6	1	AC-DC	Yes	No	4 1/2	21:1	Yes	Yes	465
625	NS	CO	B.P.S	7-M*	14	1	AC-DC	Yes	No	5 1/2	25:1	Yes	Yes	465
640	NS	HT	B.P.S	6-M	6	3	AC	Yes	No	4 1/2	21:1	Yes	Yes	465
650	NS	CO	B.P.S	6-M	14	3.5	AC	Yes	No	5 1/2	25:1	Yes	Yes	465
660C	NS	CO	B.P.S	7-M	14	3.3	AC	Yes	No	5 1/2	100:1	Yes	Yes	465
660T	NS	HT	B.P.S	7-M	8	3.3	AC	Yes	No	5 1/2	100:1	Yes	Yes	465
670C	NS	CO	B.P.S.W	9-M	14	8	AC	Yes	ST	7 1/4	100:1	Yes	Yes	465
670S	NS	CO	B.P.S.W	9-M	14	8	AC	Yes	ST	7 1/4	100:1	Yes	Yes	465
680	NS	CO	B.P.S.W	13-M	15	20	AC	Yes	ST	7 1/4	100:1	Yes	Yes	465

United Motors Service, 3044 W. Grand Blvd., Detroit, Mich.—Delco

										"Robot Eye"				
R-1115	NS	T	B.P	5-G	8 1/2	2.5	AC	No	No	4	NS	NS	NS	NS
R-1116	NS	T	B.P.S	6-OM	7	4.5	AC	Yes	No	6	NS	NS	NS	NS
R-1117	NS	CO	B.P.S	7-M	12	4.5	AC	Yes	CRT	6	NS	NS	NS	NS
R-1118	NS	CO	B.P.S	7-M	12	15	AC	Yes	CRT	7	NS	NS	NS	NS
R-1119	NS	CO	B.P.S.W	12-M	10 & 10	23	AC	Yes	CRT	7	NS	NS	NS	NS
R-2050	NS	T	B	5-G	6	1	Batt.	No	No	6	NS	NS	NS	NS
3205	NS	T	B.P	5-G	6	1.5	32V	Yes	No	3	NS	NS	NS	NS
R-3208	NS	T	B.P.S.W	9-G	6	1	32V	Yes	CRT	6	NS	NS	NS	NS
R-3209	NS	CO	B.P.S.W	9-G	10	1	32V	Yes	CRT	7	NS	NS	NS	NS
R-6011	NS	T	B.P.S	6-G	6	2	6V	Yes	No	6	NS	NS	NS	NS
R-6012	NS	CO	B.P.S	7-G	8	2	6V	Yes	No	7	NS	NS	NS	NS

Universal Battery Company, 3410 So. LaSalle St., Chicago, Ill.—Universal

802	\$ 36.00	A	NS	5-G	5	NS	6V	No	No	NS	NS	Yes	Yes	175
803	43.50	A	NS	5-G	5	NS	6V	Yes	No	NS	NS	Yes	Yes	175
5010	29.50	HT	B	5-O	6	0.7	AC-DC	Yes	No	4	12:1	Yes	Yes	465
6110	42.00	VT	B.P.S	6-O	6	3.0	AC	Yes	No	5	10:1	Yes	Yes	465
6310	60.00	CO	B.P.S	6-O	6	3.0	AC	Yes	No	5	10:1	Yes	Yes	465
8210	65.00	VT	B.P.S	8-O	6	3.0	AC	Yes	CRT	7	28:1	Yes	Yes	465
8410	81.00	CO	B.P.S	8-O	12	3.0	AC	Yes	CRT	7	28:1	Yes	Yes	465

Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago, Ill.—Wells-Gardner

										Arcadia				
20F672	NS	CO	B.P.S	10-G	8	1.4	Batt.	Yes	No	7	16:1	1	Yes	456
25H608	NS	VT	B.S	5-G	8	0.350	6V	Yes	No	4	16:1	Yes	Yes	456
25H678	NS	CO	B.S	5-G	8	0.350	6V	Yes	No	4	16:1	Yes	Yes	456
26G604	NS	HT	B.S	6-G	6	0.4	Batt.	No	No	4	16:1	Yes	No	456
27Q622	NS	HT	B.P.S	7-G	8	1.1	6V	Yes	No	7	16:1	Yes	Yes	456
27Q672	NS	CO	B.P.S	7-G	8	1.1	6V	Yes	No	7	16:1	Yes	Yes	456
27P622	NS	HT	B.S	14-M	8	0.17	32V	No	No	7	16:1	Yes	Yes	456
27P678	NS	CO	B.S	14-M	8	0.17	32V	No	No	7	16:1	Yes	Yes	456
30EL674	NS	CO	B.P.S	11-M	12	8	AC	Yes	CRT	9	16:1	1	Yes	456
32DL676	NS	CO	B.P.S	13-M	12 & 12	20	AC	Yes	CRT	9	16:1	1	Yes	456
35K620	NS	HT	B.P.S	5-M	6	2	AC	Yes	NS	4	16:1	Yes	Yes	NS
35KL620	NS	HT	B.P.S	6-M	6	2	AC	Yes	CRT	4	16:1	Yes	Yes	456
35KL678	NS	CO	B.P.S	6-M	6	2	AC	Yes	CRT	4	16:1	Yes	Yes	456
37LL622	NS	HT	B.P.S	8-M	8	3	AC	Yes	CRT	7	16:1	1	Yes	456
37LL672	NS	CO	B.P.S	8-M	12	3	AC	Yes	CRT	7	16:1	1	Yes	456
46K1	NS	A	B	6-M	6	6	32V	Yes	No	NS	12:1	Yes	Yes	175
46L1	NS	A	B	6-G	5									

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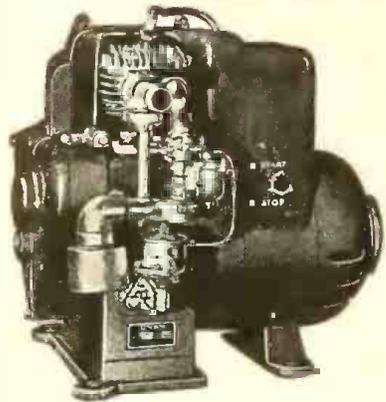
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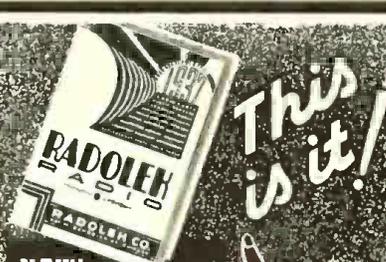
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D. W. ONAN & SONS

565 Royalston Ave. Minneapolis, Minn.

SALES FEATURES & SPECIFICATIONS OF 1937 SETS

Model No.	List Price	Cabinet Style	Wavebands	No. of Tubes	Spkr Size	Watts Audio Power	Power Supply	Tone Controls	Visual tuning	Dial		Features	AVC	I.F. Peak
										Size	Ratio			
Westinghouse Elec. Supply Co., 150 Varick St., New York, N. Y.—Westinghouse														
WR102	NS	HT	B.P.	5-G*	5	1	AC-DC	No	No	3	4:1	.....	No	465
WR116	NS	HT	B.P.S	7-M*	6	1	AC-DC	Yes	No	4 1/2	25:1	.....	Yes	465
WR209	NS	HT	B.P.	5-G	6	2	AC	Yes	No	3 1/2	7:1	.....	Yes	465
WR210	NS	HT	B.S.	5-MG	6	2	AC	Yes	No	4 1/2	7:1	.....	Yes	465
WR211	NS	HT	B.P.S	6-M	6	2.5	AC	Yes	No	4 1/2	25:1	.....	Yes	465
WR212	NS	HT	B.P.S	8-M	8	3.3	AC	Yes	CRT	6	60:18:1	.....	Yes	465
WR214	NS	VT	B.P.S.W	10-M	8	6	AC	Yes	CRT	7	60:18:1	.....	Yes	465
WR310	NS	CO	B.S.	5-MG	14	2.5	AC	Yes	No	4 1/2	7:1	.....	Yes	465
WR311	NS	CO	B.P.S	6-M	14	3.3	AC	Yes	No	5 1/2	25:1	.....	Yes	465
WR312	NS	CO	B.P.S	8-M	14	3.3	AC	Yes	CRT	6	60:18:1	.....	Yes	465
WR314	NS	CO	B.P.S.W	10-M	14	6	AC	Yes	CRT	7	60:18:1	.....	Yes	465
WR315	NS	CO	B.P.S	12-M	12	20	AC	Yes	CRT	7	60:18:1	1.2	Yes	465
WR316	NS	CO	B.P.S	7-M	14	1	AC	Yes	No	5 1/4	25:1	.....	Yes	465
Wilcox-Gay Corporation, Charlotte, Mich.—Wilcox-Gay														
A-11	\$ 19.95	HT	B.P	5-G	5	3	AC	No	No	4	NS	.....	Yes	175
A-15	27.95	VT	B.P.S	6-G*	6 1/2	1.75	AC-DC	No	No	6	NS	.....	Yes	175
A-16	22.50	HT	B.P	5-G	5	3	AC	No	No	6	NS	.....	Yes	175
A-17	36.95	VT	B.P.S	6-G*	6 1/2	1.75	AC-DC	Yes	No	6	NS	.....	Yes	175
A-18	39.95	HT	B.P.S	6-M	8	5	AC	Yes	CRT	6	NS	.....	Yes	175
A-19	49.95	CO	B.P.S	6-M	12	5	AC	Yes	CRT	6	NS	.....	Yes	175
A-20	69.95	CO	B.P	8-GM	12	6	AC	Yes	CRT	7	NS	.....	Yes	175
A-21	99.95	CO	B.S.	11-M	12	22	AC	Yes	CRT	8	NS	.....	Yes	175
A-22	24.95	VT	B	4-G	6 1/2	0.4	Batt.	No	No	6	NS	.....	No	175
A-23	39.95	CO	B	4-G	8	0.4	Batt.	No	No	6	NS	.....	No	175
A-24	37.95	VT	B.P.	4-G	6 1/2	3	Batt.	No	No	6	NS	.....	No	175
A-25	49.95	CO	B.P.	4-G	8	3	Batt.	No	No	6	NS	.....	No	175
Zenith Radio Corporation, 3620 Iron St., Chicago, Ill.—Zenith														
5S-119	\$ 44.95	HT	B.P.S	5-0	6	3	AC	Yes	No	6	36:1	.....	Yes	456
5S-126	39.95	T	B.P.S	5-0	6	3	AC	Yes	No	6	36:1	.....	Yes	456
5S-127	39.95	T	B.P.S	5-0	6	3	AC	Yes	No	6	36:1	.....	Yes	456
5S-150	52.95	CO	B.P.S	5-0	8	3	AC	Yes	No	6	36:1	.....	Yes	456
5S-151	59.95	CO	B.P.S	5-0	10	3	AC	Yes	No	6	36:1	.....	Yes	456
5S-161	64.95	CO	B.P.S	5-0	10	3	AC	Yes	No	8	36:1	.....	Yes	456
6-D-116	29.95	VT	B.P	6-0*	5	1.5	AC-DC	Yes	No	4	9:1	1	Yes	456
6-D-117	34.95	VT	B.P	6-0*	5	1.5	AC-DC	Yes	No	4	9:1	1	Yes	456
6-D-118	39.95	VT	B.P	6-0*	5	1.5	AC-DC	Yes	No	4	9:1	1	Yes	456
6-S-128	59.95	T	B.P.S	6-0	8	4	AC	Yes	No	8	110:1	1	Yes	456
6-S-137	64.95	HT	B.P.S	6-0	8	4	AC	Yes	No	8	110:1	1	Yes	456
6-S-147	84.95	CO	B.P.S	6-0	10	4	AC	Yes	No	8	110:1	1	Yes	456
6-S-152	69.95	CO	B.P.S	6-0	10	4	AC	Yes	No	8	110:1	1	Yes	456
6-S-157	79.95	CO	B.P.S	6-0	10	4	AC	Yes	No	8	110:1	1	Yes	456
7-D-119	54.95	HT	B.P.S	7-0*	6	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-126	44.95	T	B.P.S	7-0	6	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-127	49.95	T	B.P.S	7-0*	6	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-138	59.95	T	B.P.S	7-0*	8	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-148	84.95	CO	B.P.S	7-0*	10	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-151	69.95	CO	B.P.S	7-0*	8	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-162	79.95	CO	B.P.S	7-0*	10	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
7-D-168	79.95	CO	B.P.S	7-0*	10	1.5	AC-DC	Yes	No	4	36:1	1	Yes	456
8-S-129	74.95	T	B.P.S	8-0	8	5	AC	Yes	No	4	110:1	1	Yes	456
8-S-147	84.95	HT	B.P.S	8-0	NS	NS	AC	NS	NS	NS	NS	NS	NS	NS
8-S-154	89.95	CO	B.P.S	8-0	12	5	AC	Yes	ST	8	110:1	1.5	Yes	456
10-S-130	84.95	T	B.P.S	10-0	8	12	AC	Yes	ST	8	110:1	1	Yes	456
10-S-147	119.95	CO	B.P.S	10-0	12	12	AC	Yes	ST	8	110:1	1	Yes	456
10-S-153	99.95	CO	B.P.S	10-0	10	12	AC	Yes	ST	8	110:1	1	Yes	456
10-S-155	119.95	CO	B.P.S	10-0	12	12	AC	Yes	ST	8	110:1	1.5	Yes	456
10-S-156	109.95	CO	B.P.S	10-0	12	12	AC	Yes	SY	8	110:1	1.5	Yes	456
10-S-157	109.95	CO	B.P.S	10-0	12	12	AC	Yes	ST	8	110:1	1	Yes	456
10-S-160	139.95	CO	B.P.S	10-0	12	12	AC	Yes	ST	8	110:1	1.5	Yes	456
12-U-158	149.95	CO	B.P.S	12-0	12	17	AC	Yes	ST	9 1/2	110:1	1.5	Yes	455
12-U-159	175.00	CO	B.P.S	12-0	12 & 6	17	AC	Yes	ST	9 1/4	110:1	1.5	Yes	456
16-A-61	295.00	CO	B.P.S.W	16-0	12 & 6	30	AC	Yes	ST	7	100:1	1	Yes	456
16-A-63	295.00	CO	B.P.S.W	16-0	12 & 6	30	AC	Yes	ST	7	100:1	1	Yes	456
1000Z	750.00	CO	B.P.S.U.W	25-G	12&12&6	50	AC	Yes	ST	10	100:20:1	1	Yes	485
Zephyr Radio Co., 13139 Hamilton St., Detroit, Mich.—Zephyr														
41X5	\$ 24.95	B	B	4-MG	4	1	AC-DC	Yes	No	6	4:1	.....	Yes	T.R.F.
61X5	29.95	HT	NS	6-G*	6 1/2	1	AC-DC	Yes	No	7	4:1	.....	Yes	456
63X8	44.95	HT	NS	8-G*	6	1	AC-DC	Yes	CRT	7	4:1	.....	Yes	456
AA	31.25	PO	B	4-G	3	NS	Batt.	No	No	2	1:1	.....	Yes	T.R.F.
A5	33.95	A	B	5-G	4 1/2	1	6V	No	No	2	4:1	.....	Yes	456
B102	45.50	A	B	6-G	6	NS	6V	Yes	No	NS	NS	.....	Yes	456
DBC	42.50	CO	NS	5-G	5 1/2	1 1/2	Batt.	Yes	No	5	4:1	.....	Yes	456
DBL	29.95	HT	NS	5-G	5 1/2	1 1/2	Batt.	Yes	No	5	4:1	.....	Yes	456
DC	42.50	CO	NS	5-GM	5 1/2	1	AC-DC	Yes	No	5	4:1	.....	Yes	456
DD	31.95	VT	NS	5-GM	5 1/2	1	AC-DC	Yes	No	5	4:1	.....	Yes	456
DDDB	36.00	VT	NS	5-G	5 1/2	1 1/2	Batt.	Yes	No	5	4:1	.....	Yes	456
DL	29.95	HT	NS	5-GM	5 1/2	1 1/2	AC-DC	Yes	No	5	4:1	.....	Yes	456
GB	47.50	VT	NS	6-G	6	1 1/2	6V	Yes	No	9	6:1	.....	Yes	456
GB32	49.95	VT	NS	6-G	6	1 1/2	32V	Yes	No	9	6:1	.....	Yes	456
GBC	71.50	CO	NS	6-G	10	1 1/2	6V	Yes	No	9	6:1	.....	Yes	456
GBC32	74.50	CO	NS	6-G	10	1 1/2	32V	Yes	No	9	6:1	.....	Yes	456
GR	42.95	VT	NS	7-GM	6	6	AC	Yes	CRT	9	6:1	.....	Yes	456
GRC	66.95	CO	NS	7-GM	12	6	AC	Yes	CRT	9	6:1	.....	Yes	456
J80	52.50	A	B	6-G	6 1/2	NS	6V	Yes	No	NS	NS	.....	Yes	456
NT	58.75	VT	NS	7-GM	8	15	AC	Yes	CRT	9	6:1	1	Yes	456
NTC	80.50	CO	NS	7-GM	12	15	AC	Yes	CRT	9	6:1	1	Yes	456
RKSD	22.95	HT	NS	5-G*	5 1/2	1	AC-DC	No	No	2	1:1	Yes	T.R.F.
Z	13.90	HT	B	4-G*	5 1/2	1	AC-DC	No	No	2	1:1	Yes	T.R.F.



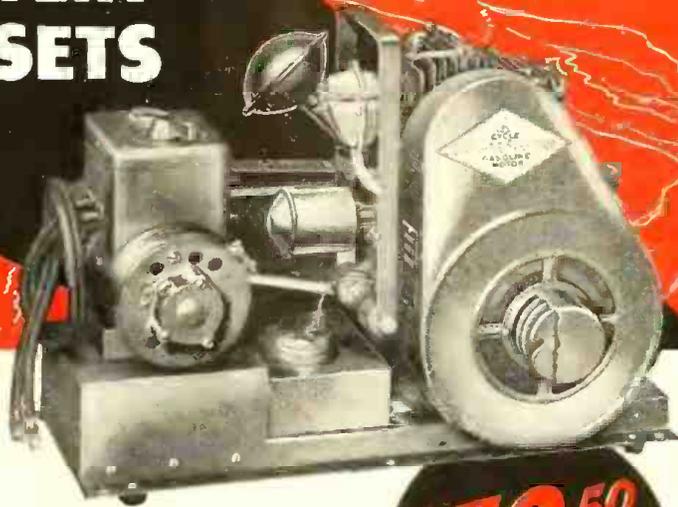
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TUNG-SOL
Tone-flow radio Tubes

SERVICE NOTES

(From page 44)

The B+ line is shown in extra heavy lines, path of signal indicated by arrowheads. The coil switch is rotary in operation although schematic indicates linear motion—position shown is broadcast band. Detailed discussion and drawing of coil system shown on page 70.

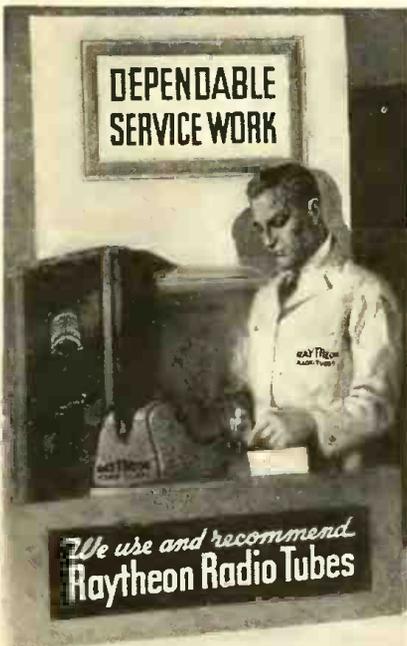
I.F. is aligned at 465 kc. in sharp selectivity positions. Next broadcast band is aligned at 600, 1,400 and 600. Shortwave band trimmed at 17,000 and 6,000. Finally the police band is aligned at 1,800 and 5,000 kc. Trimmer locations and frequencies are shown on page 44.

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★ According to Robert F. Herr, manager Philco parts division, right now is an ideal time for the serviceman to "get his house in order" for what will undoubtedly be the biggest service season he has ever had.

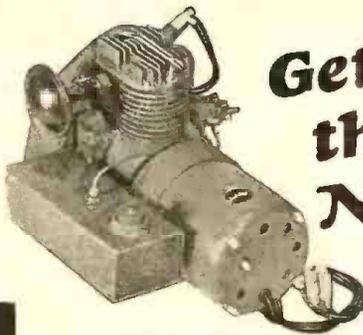
"First of all, take stock of your shop, its location, appearance, equipment and attention value to the passerby. Some may see fit to move to new quarters in anticipation of big-

(To page 60)



WINDOW OR STORE DISPLAY

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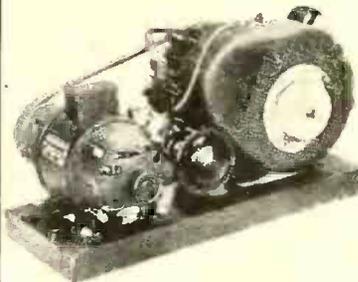
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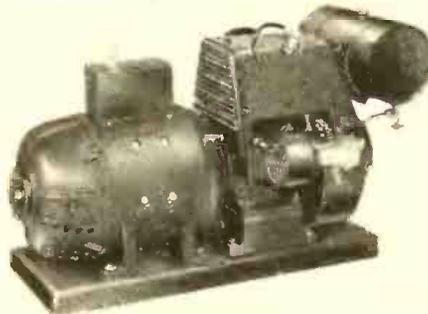
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300 watts 110 volts AC. The lowest priced "city" light plant on the market, \$79.95 list! Operates standard AC appliances. Ideal for PA work. In addition to supplying 110 volts AC, also has DC winding for charging 6 volt batteries. Kick-pedal starting! Filter available.



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32 volts DC 800 watts, self-excited, push-button starting, \$149.50 list. Powered by Smoothflo Lauson Engine. Same, but 110 volts, \$157.50. 110 volts DC 1,500 watts, \$267.50 list. "Gold Crown" AC plants: 110 volts, 60 cycles, 600 watts \$165.00 list, 1,000 watts \$240.00 list, 1,500 watts, \$390.00 list. The most economical plants for large wattage requirements.

PIONEER POWER PLANTS

Other Pioneer Products

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"The World's Best Value"

KADETTE RADIOS

INTERNATIONAL RADIO CORPORATION, ANN ARBOR, MICHIGAN, U.S.A.

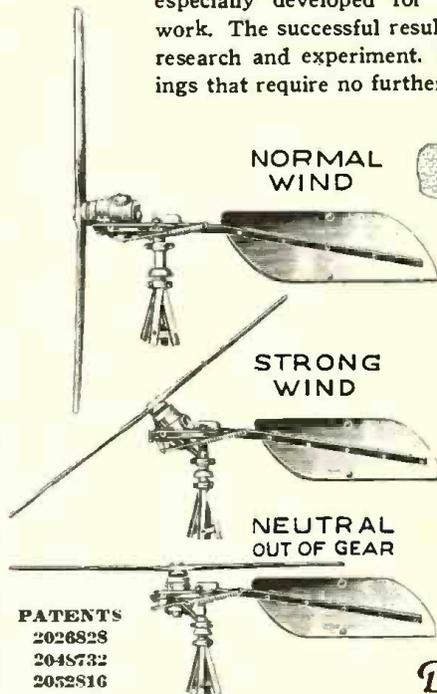
GOVERNED POWER!

The Wind Successfully Harnessed At Last With the GYROMATIC 6-VOLT WINDCHARGER

The success and life of any wind-charger depends upon the efficiency of its governing device. The GYROMATIC patented principle of control efficiently, actually and visibly governs propeller speed under all conditions.

SIMPLE, STURDY CONSTRUCTION MADE POSSIBLE BY THIS PRINCIPLE REQUIRES LESS THAN HALF THE PARTS USED BY OTHERS

New Delco Remy Generator especially developed for windcharger work. The successful result of years of research and experiment. Sealed bearings that require no further lubrication.



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write for details of NEW COUPON PLAN. There is an established demand for GYROMATIC WIND-CHARGERS. Why not coupon the best?

Exporters

write for details of our special export deal.

Retail Dealers

Ask how to get Highway Demonstrator that makes farm sales easy.

Dunn Manufacturing Co.
Clarinda, Iowa, U.S.A.

SERVICE NOTES

(From page 59)

ger business. Others may want to overhaul, dress up and improve their present places of business. In any case, during this breathing spell before the Fall rush, it's a splendid time to check over your equipment, tools, hardware, test apparatus, stationery and bookkeeping methods."

Next, Mr. Herr recommends that all servicemen check up on their stocks of common service parts, such as resistor, condensers, cones, volume controls, aerials, etc. "For extra profits," he says, "be sure to have on hand such popular accessory items as shadowmeters, headphone kits, extension speakers, noise-elimination equipment. Don't lose any chance for extra profit by not having on hand what your customer asks for, ready to install for him while the fancy strikes him."

Finally, Mr. Herr urges servicemen to map out a definite budget for advertising and "promotion." Plan a regular "ad" in your local paper and movie theater, and be sure to send out cards or handbills frequently to your mailing list, as well as distributing them in your neighborhood to let new and old residents know you are on the job.

MEASURING VOLTAGE DROP ACROSS HIGH RESISTANCE

By H. K. BRADFORD*

★ The accurate measurement of voltages at places in circuits carrying little or no current, and being supplied through high resistance, has been a stumbling block in the progress of the serviceman. It would seem that cathode-ray equipment now being offered for the solution of all such problems would be the answer, but we find that the servicemen at present are not using this apparatus extensively. In the interest of accuracy and a very moderate cost, a good substitute method is justified.

A preliminary explanation of the principles which serve to make such measurements possible will help the builder of the apparatus in its construction as well as in its proper use.

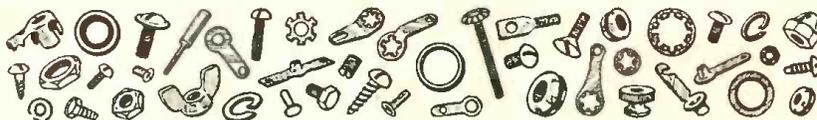
On connecting two storage batteries in parallel, if the voltage of one of them is slightly higher than that

*President, Capitol Radio Research Laboratories.

(To page 62)

RADIO HARDWARE

Save time and money by ordering many items from one source. We carry in stock all the standard and many special items of radio hardware for manufacturers of receivers—speakers—sound equipment and parts. Radio parts jobbers will find our prices on bulk and assortments very attractive.



MACHINE SCREWS & NUTS
TUBULAR RIVETS
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METAL TAPPING SCREWS
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ESCUTCHEON SCREWS
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RUBBER GROMMETS

Bulletin No. 50 available to manufacturers and parts jobbers

FEDERAL SALES CO., 26 S. JEFFERSON, CHICAGO

TWO PRECISION TESTERS

FOR THE PRICE OF ONE

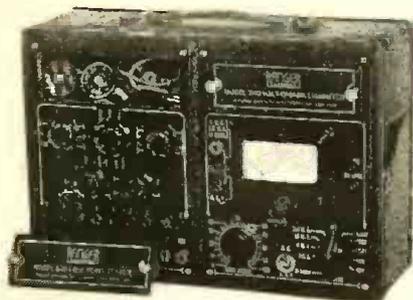
EACH RANGER-EXAMINER COMBINATION puts together in one case two (2) units of test equipment every serviceman needs in his everyday work. The savings effected in design and in using this exclusive Ranger-Examiner grouping permits offering these combinations of two Precision Testers at prices you would normally expect to pay for one.

Each item is precision built throughout by the oldest company in the service equipment field. Their past contacts with the trade as well as with every advancement in the field of radio make them fully acquainted with the needs of the service profession. From the standpoint of sheer merit Ranger-Examiner testers are becoming popular favorites with radio servicemen.



Combination Free Point Tester and Multimeter

Model 640-740



Model 640 Free Point Tester has five (5) sockets. Panel includes automatic switch type and single action jacks.

Model 740 Volt Ohm Milliammeter Unit has a Triplett Precision Instrument scale reading 10-50-250-500-1000 AC and DC volts at 1000 ohms per volt. 1-10-50-250 MA; low ohms 0-300; high ohms to 250,000 at 1.5 volts. Rheostat adjustment.

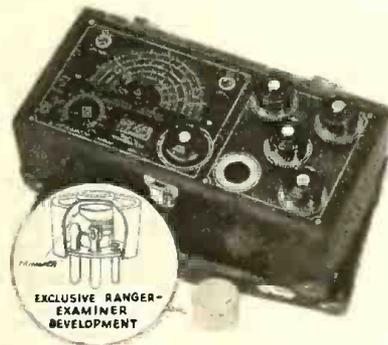
Model 640-740 is contained in the standard size metal carrying case above described. Dealer Price \$27.00

Additional Combinations

Using the same standard size metal carrying case the following additional combinations may be had; the testers in all cases being identical with foregoing descriptions and complete with necessary accessories.

Model 540-740 Signal Generator and Multimeter Dealer Price \$36.00
 Model 440-740 Tube Tester and Multimeter Dealer Price \$37.50

Direct Reading Signal Generator — Model 557



Model 557 has the same features as described for Signal Generator Model 540 except that it is installed in a black leatherette carrying case and is an integral part of the case. The five individually calibrated coils are nested on the side as shown, handy for instant use. The attractive panel is silver and black baked on. Dealer Price \$18.00

Model 554-A is the same as Model 557 but not direct reading. Calibrated graphs included for accuracies under 1 per cent on any band. Dealer Price \$14.40

Combination Tube Tester and Signal Generator Model 440-540



Model 440-540 has the two separate Testers installed in a sturdy metal carrying case for shop or field use.

COMPLETE DEALER PRICE **\$33.60**

Model 440 Tube Tester checks all type tubes. Conditions of tubes read GOOD-BAD directly on instrument scale while load values are applied. Circuit designed to indicate inter element shorts and leakages. Illuminated dial AC instrument for line volts adjustment, also shows when tester is connected to power supply.

Model 540 Signal Generator uses plug-in type coils. Five frequency bands cover 110 to 20,000 kc. All readings are direct on fundamentals. Each coil is individually calibrated by peaking with trimmer condensers. Accuracy, within one per cent (1%) on both intermediate and broadcast and 3 per cent on short wave bands. Completely shielded. Attenuation and stability are outstanding features. Complete with coils, two type 30 tubes, batteries and necessary accessories.

Model 440-540 consists of these two instruments installed in a sturdy metal case with built-in compartments having snap-on covers for accessories, finished in electro black baked enamel, panels in silver and black. Every essential feature is incorporated in these outstanding instruments. No extravagance. No added unnecessary cost. To see one — to use one — means you will be glad to own this outstanding tester.

Other Ranger-Examiner Models

DC Pocket Volt-Ohm-Milliammeter-Model 735. Contained in sturdy black molded case with silver and black panel, rounded corners. Ranges are 15-150-750 volts; 1.5-15-150-MA; 1/4-1000 low ohms; 0-100,000 high ohms at 1.5 volts. Provision for external batteries to be used for higher resistance measurements.

Has Triplett D'Arsonval precision instrument accurate to 2 per cent. Selector switch for all ranges. Provides for all DC measurement requirements of the serviceman.

Size is 3" x 5 1/4" x 2 3/4" thick — is easily carried in the pocket, and handy for the laboratory.

Dealer Price \$10.80



See them at your Jobber — Write



READRITE METER WORKS

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Without obligation please send me more information on
Ranger Examiner Combination

Name

Address

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

SERVICE NOTES

(From page 60)

of the other, the higher one will charge the lower one and discharge itself until the voltages are exactly equal. At this point no current will flow between the batteries. Further, we all know that if we connect a condenser across a battery bank of 180 volts, it will charge until its voltage is exactly equal to that of the battery at which time the charging current will stop.

Now from these facts if we supply a voltage to a point in a circuit under measurement which is exactly equal to the voltage already existent at that point, and if we are able to measure the voltage which is being supplied, we know that we are also obtaining a measure of the voltage in question.

The instrument is shown in Fig. 1. The circuit is extremely simple requiring average parts that the serviceman already has on hand. It consists of a DC voltage supply from a power pack (or batteries) amounting to 250 to 300 volts. Across this is a 75,000 to 100,000 ohm potentiometer R, with a voltmeter (DC—

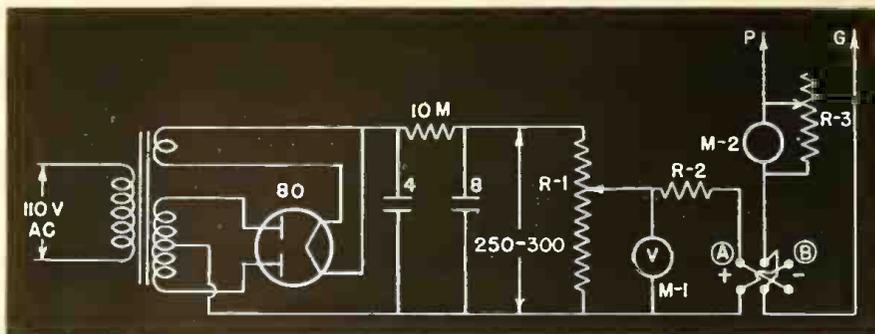


Fig. 1. Currentless voltage measuring device complete with power supply. Values of parts given in text.

0/10/50/300 volts or whatever is available) connected from the sliding contact to the negative terminal. The slider is also connected to a protective resistor R-2 (50,000 ohms) with the voltage supply connected through a polarity reversing switch to the test circuit in which there is placed a micro-ammeter or milliammeter (preferably 500 microamperes, other wise as sensitive as available). The latter meter is shunted with a variable shunt which will turn to "open" and has a maximum value of 1,000 to 50,000 ohms.

To determine the exact DC bias voltage on a 1st r-f. tube while being a-v-c controlled, connect test prod G to the chassis of the receiver, throw

the switch to position B, adjust both R-1 and R-3 to zero, and place test prod P at point X in the circuit Fig. 2. Now move R-1 up the scale slightly and open R-3, until a large deflection is obtained on the micro-ammeter or milliammeter, M-2. Now continue adjustment of R-1 until the reading of M-2 is zero. Continue to increase the sensitivity of the meter M-2 to maximum while adjusting R-1. When a point is reached when M-2 reads exactly zero with R-3 open, the voltage at point X with respect to ground will be as indicated on the meter M-1. A little practice with the instrument will enable you to make such measurements very

(To page 65)

SERVICE MEN SAY SYLVANIA!

Service men are telling their customers to put in Sylvania tubes . . . Here's why!

• "Competition in this business is tough!" pointed out one dealer. "The customer must be pleased! That's why I always tell my customers to 'stick to Sylvania!'"

"I know it's a quality tube . . . one of the best. I know it's gone through 80 separate tests before it ever left the factory. Sylvania gives a definite written guarantee with each tube. That means I can guarantee it 100%. Sylvania protects me and I protect my customers. And I've never had a 'kick-back' yet!"

Stock Sylvania tubes now! Make sure of your customer good-will and profits. You can get full sales and technical information by writing to the Hygrade Sylvania Corp., Emporium, Pa.

SYLVANIA
THE SET-TESTED RADIO TUBE



Announcing

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REG. U.S. PAT. OFF.

Metallized

VOLUME CONTROLS

for Radio Service and Amateur Use

1. "Knee Action" Contact

Made by 5 separate silver plated phosphor bronze springs.

2. No "Jumping"

No jumping or shifting of points of contact. Each contactor invariably follows the same smooth "path" across the resistance element.

3. No Obstructions

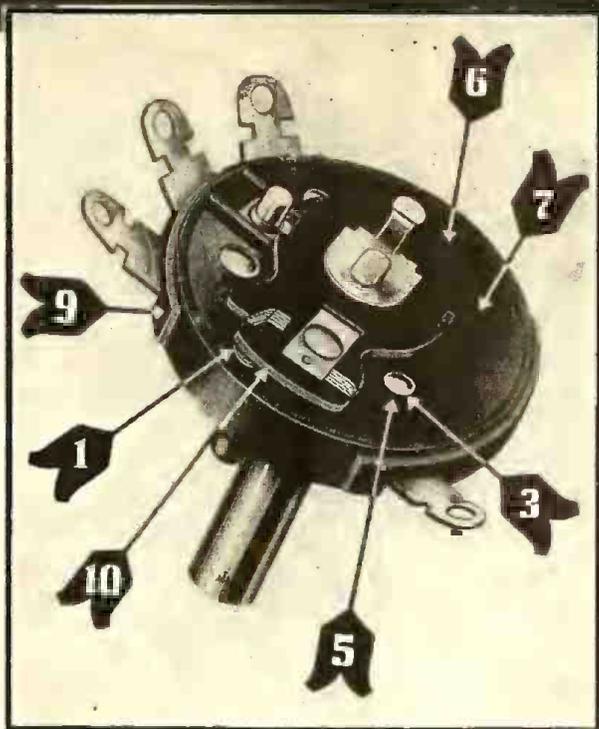
IRC contact method on tapped controls eliminates obstructions in path of contactor. Smoother adjustment—no noise.

4. Dust-Proof Case

No openings or slots in covers.

5. Corrosion-Proof

All electrical contacts are proofed against corrosion and oxidation.



6. Metallized Type Resistance Element

Permanently BONDED to moisture-proof Bakelite base.

7. Moisture-Proof

The Bakelite base of the resistance element CANNOT absorb moisture—nor will moisture damage the Metallized type resistance coating.

8. Small—But Not Too Small

Minimum size for universal application and maximum performance.

9. Protected Terminals

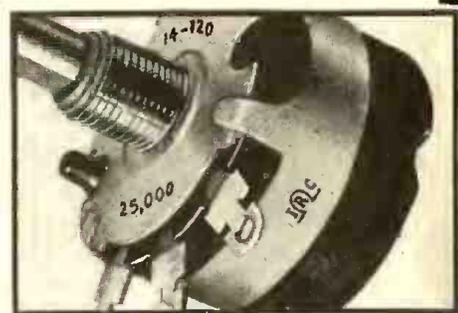
Deeply set in molded Bakelite casing.

10. Amazingly Smooth

Smoothly, yet firmly, the 5 contactors glide over the hard wear-proof surface.

with the **10 MOST IMPORTANT FEATURES EVER OFFERED IN A VOLUME CONTROL**

The world's best known maker of fine resistance units scores again! For several years IRC Volume Controls have been supplied to leading radio and electrical manufacturers. Now, in a complete range of types, they are offered for service and amateur use as the outstanding replacement control development in the history of radio! Featured by leading jobbers. See them—try them—write today for catalog.



Actual size illustration of IRC Type "C" Volume Control with switch.

INTERNATIONAL RESISTANCE COMPANY
401 NORTH BROAD STREET • PHILADELPHIA

FLASH—MORE BIG NEWS!

NEW Type BT-2 (2-watt) INSULATED Metallized Resistors now ready

List Price 30c

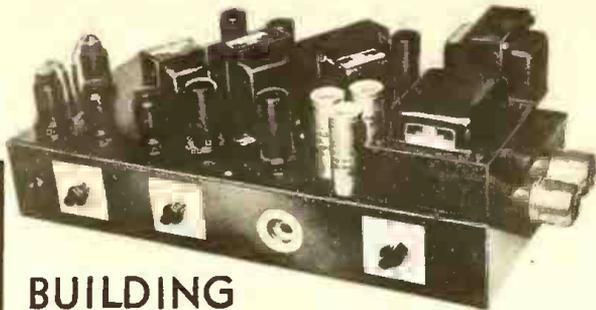
NEW LOW PRICES on both 1/2-watt and 1-watt

INSULATED Metallized Resistors effective Sept. 1

1/2-watt (Type BT-1/2) List 17c

1-watt (Type BT-1) List 20c





BUILDING AMPLIFIERS IS PROFITABLE! - and Easy

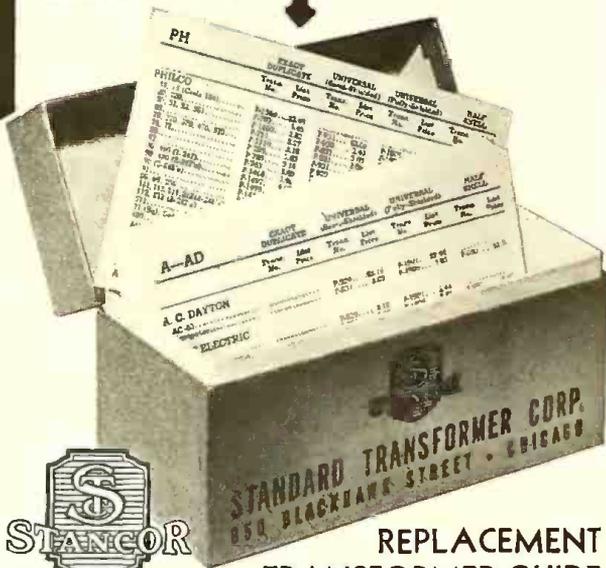
FEATURES

- 18 Watts Output
- New Electric Eye
- All Metal Tubes
- Operates 1 to 4 speakers
- Two Input Channels
- Mixing System
- Full - Range Tone Control
- Plug-in Connections for speakers
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BUILD the STANCOR 18-Watt general purpose amplifier. Hundreds are doing it. Your jobber can supply the circuit and the chassis base with all holes punched, all tube sockets mounted, all transformers and chokes especially designed for this kit, two speaker output sockets, two input sockets, electric eye socket and built-in shelf for resistors. He can also supply all transformers and chokes at a very low price. All other parts are standard, inexpensive, and easily obtainable.

Write or wire for literature, prices and liberal discounts.

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Don't hunt through page after page of catalogs for the right transformer for that replacement job—all the information is here, printed on cards in a handy card file—listing the right transformer for any receiver. It's FREE to users of Stancor Transformers. Mail the coupon.

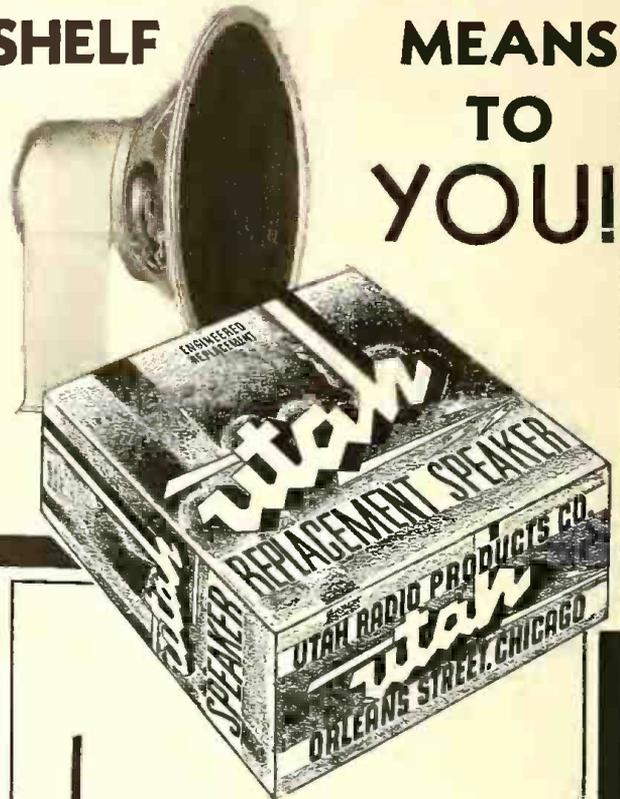
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866 Blackhawk Street, Chicago, Ill.
A LARGE PERCENTAGE OF AMERICAN RADIOS ARE BUILT WITH STANCOR TRANSFORMERS

STANDARD TRANSFORMER CORP.
866 Blackhawk Street, Chicago, Illinois
Please send me Stancor Replacement Guide.
 I am enclosing Stancor Top or
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It means instant service on replacement speakers because your jobber stocks only twenty scientifically designed models which give you perfect replacement for any set you will ever be called upon to service.

The UTAH carton also means that behind the product it contains there is fifteen years' experience in building quality replacement parts.

UTAH also makes the best in replacement Vibrators, Transformers, Chokes, Volume Controls, Tone Controls, Resistors, Jacks, Jack Switches, Push Button Switches and Plugs.

UTAH RADIO PRODUCTS COMPANY
ORLEANS STREET, CHICAGO
"15 YEARS OF LEADERSHIP"

SERVICE NOTES

(From page 62)

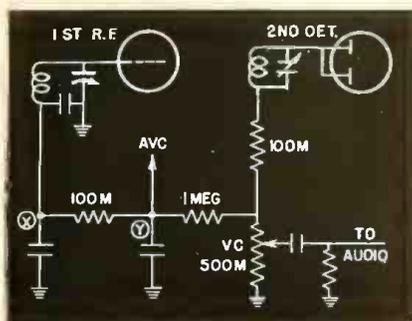


Fig. 2. Measuring AVC voltages accurately.

quickly. The potential at Y should be the same if the station selector dial is not changed.

It is often desirable to measure the DC voltage actually being applied to the plate of a resistance coupled amplifier tube with a plate load resistance of 500,000 ohms or more. With this instrument an accuracy equal to that of the voltmeter is possible on this test.

Connect G to the cathode of the tube under test as in Fig. 3. Be sure that R-1 and R-3 are set at zero preceding all tests to prevent burning out M-2. R-2 is primarily to protect M-2 from inadvertent shorting of the test prods. For the test in Fig. 3, the instrument switch is turned to A and R-1 and R-2 are adjusted as before, for zero current through M-2. The actual voltage M-1 will be the actual plate voltage of the tube from plate to cathode and with reference to the characteristics of the tube you can quickly determine whether this voltage is sufficient for proper operation of the tube.

The problem of determining the exact grid voltage of a tube biased (To page 66)

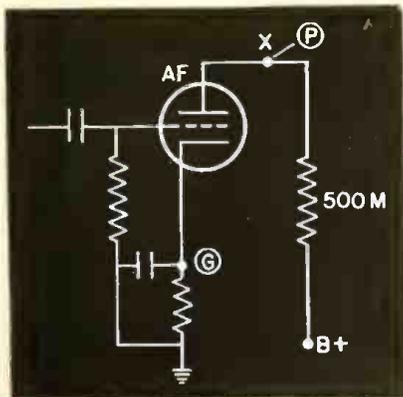


Fig. 3. Plate voltage in high-resistance circuit is easily and correctly measured with the voltage balancing device.

Sell GREBE RADIOS

and you'll SELL as you never sold before!



Model 5140—One of GREBE'S outstanding engineering accomplishments. 14 tube AC—Push-pull, Beam Power. 15 Watt output, High Fidelity. 5 Bands: 5 to 2060 meters, continuous.

GREBE sets in your showroom will create a maximum of business, plus a maximum of customer good-will. And GREBE'S 1937 line is a money maker, too. A marvelous line—with everything your customers want—all the latest advances in radio engineering—all of the features that give SELLING POWER to a modern line.

GREBE offers you 40 models, including 16 AC sets, from 5 to 24 tubes, and as many AC-DC models. Included also is a line of battery models. The 14-tube all-wave high fidelity super pictured above is available in a 16-tube AC-DC with the same specifications. And the small sets! How they sell!

● CHECK your present lines against the following specifications and features of GREBE. Unless you have all of these up-to-date features, you haven't got a real 1937 line. GREBE gives you ALL of them.

- Centro-Master Automatic Control Unit.
- Beam Power Output Tubes.
- Automatic Volume Control.
- Automatic Tone Control.
- Automatic Frequency Control.
- Automatic Equatone Bass Compensation.
- Improved Vision Master, for visual tuning.
- Polychromatic Dial Scale. Individually colored and separately lighted wave bands.
- Prizmatone High Fidelity.
- Uni-Control Two-speed Free Wheeling Tuning.
- Automatic Equatone Bass Compensation.
- Band Spread Magna-dial and second hand.
- Automatic Band Indicator.
- Separate Bass Boosting Amplifier.
- Iron Core I.F. Transformers.
- Automatic Interstation Noise Suppression.
- Individual Coil System. Separate coils for each wave band.
- Code Interference Filters.
- Radio Frequency Preselectors.
- Beat Frequency Oscillator.
- Continuously Variable Tone Control.
- Bass Accentuating Control.
- Noise Reducing Control.
- Separate AVC Amplifier.
- High Image Frequency Suppressor.
- Multiple Rectifiers.
- Electrostatically Shielded Transformers.
- Special Line Filters.
- Improved Ballast Tubes.
- Specially Designed High Voltage Condensers.
- Oversized Power Transformers.
- Panel Controlled Phonograph Jack.
- Dead End Switches—Eliminate losses.
- Double Spaced Non-Microphonic Variable Condensers.
- Octal Tube Sockets for metal or G-type tubes.
- Multi-purpose Tubes.
- Variable Selectivity.
- Peak Power Output 60 Watts.
- Audio Frequency Range, 30 to 8,000 cycles.
- Hairline Selectivity.
- Ultra Sensitivity for both Domestic and Foreign Reception.
- Diode Detection.
- Rubber Cushioned Condenser Mountings.
- Cushioned Floating Chassis.
- Oversized High Fidelity Electro Dynamic Speaker.

Distributors: Some territories are open. Write or wire for full information.

GREBE will have an exhibit at Hotel Lexington, 48th St. & Lexington Ave., New York, during the period of the N. Y. Radio Show.

If you want real merchandising power and a name that has made history in radio, send this coupon. Or, WIRE, at once.

GREBE Manufacturing Co., Inc. RT
119 Fourth Avenue, New York.

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The BIG CONDENSER FIGHT Begins!



WATCH THAT TOBE FLEXIDON! HE'S LIKE TWO CONDENSERS IN ONE!

G'WAN THE UP-AND-COMER IS TOBE TUBIDON.. AND HE WORKS FOR LESS MONEY!

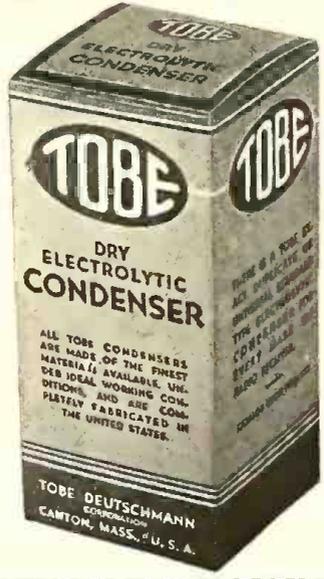
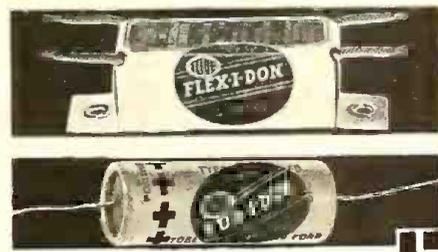
"TOBE" TUBIDON vs "TOBE" FLEXIDON

We consider TOBE TUBIDON and TOBE FLEXIDON such ultra-fine condensers that we just can't imagine how either can lose in this big fight for condenser supremacy. But the answer is up to you... compare their advantages: TOBE TUBIDON is tubular-shaped, up to 525 volts, self-supporting, easier to install, and lower in cost. TOBE FLEXIDON is rectangular-shaped, up to 525 volts, space-saving design... with the big feature of flexibility (the fact that if one section breaks down, it is necessary to replace *only* the broken section.)

Which do you favor in this big hattle? Note how they shape up... read the exact specifications. Remember that both are topnotchers... thoroughly moisture-proof, double-jacketed, asphalt impregnation and heavy wax seal, added protection against developing open circuit or high resistance contact... all the features horn of skillful manufacture and long experience.

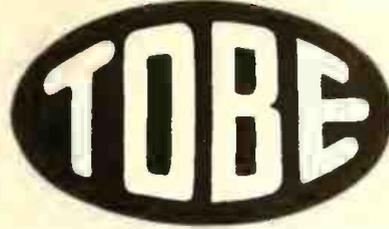
HOW THEY SHAPE UP...

	TUBIDON	FLEXIDON
VOLTS	35-50-200-525	200-525
MFD.	35v.—5 to 50 50v.—5 to 25 200-525v.—1 to 16	1 to 16 (single) (multiplies up to triple eight)
MAXIMUM SIZE	2-1/4" x 1"	3-1/4" x 1 3/8" x 1 1/8"
MINIMUM SIZE	2-1/4" x 1/2"	2-1/8" x 7/8" x 7/8"
TYPE LEADS	solid bore tinned copper wire	insulated tinned copper wire
LEAD LENGTHS	2-1/2"	6"
MOUNTING	self supporting by leads	metal eyeletted tabs
PRICE (typical 8 mfd., 475v.)	\$.75	\$.95



SEE THE CONTESTANTS IN PERSON AT ALL GOOD RADIO JOBBERS

Ask for them by their nicknames, TOBE TUBIDON and TOBE FLEXIDON. And, if you wish to receive our complete illustrated TOBE CATALOG fill in the coupon below, and mail today.



ELECTROLYTIC CONDENSERS

Skillfully Manufactured at Canton, Mass.

TOBE DEUTSCHMANN CORP.
Dept. J-11; Canton, Massachusetts

Please send FREE OF CHARGE full technical description of TOBE TUBIDON and TOBE FLEXIDON, including your complete TOBE catalog.

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Complete • Compact • Impressive!
RADIO SERVICE LABORATORY



• This modern unit attracts business and facilitates the speedy, efficient handling of it. Saves time and space. Neat—comprehensive—business-like. Webber's complete line of Portable Radio Testing Instruments are engineered by the famous staff that designed this Laboratory, and manufactured with the same consummate skill. Write for catalog.

EARL WEBBER COMPANY, Mfrs.
 1217 W. Washington Blvd. Chicago, Ill.



SERVICE NOTES

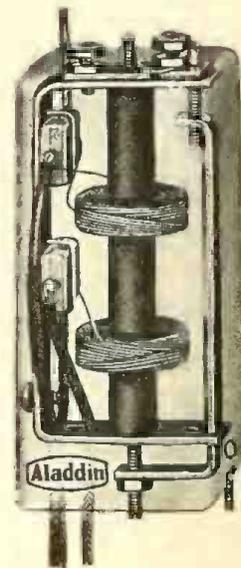
(From page 66)

IRON-CORE TUNING, POLYIRON I-F TRANSFORMER

★ Many of the new 1936 receivers employ iron-core or permeability tuning, where tuning is brought about by the movement of special-iron cores in the fields of their respective coils, together with the substitution of fixed capacitors, instead of the variable trimmers heretofore in general use.

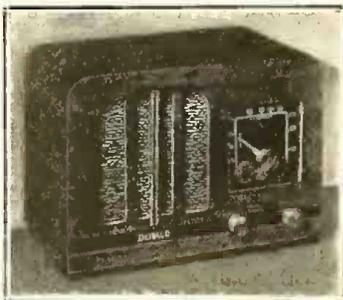
An example is the latest Aladdin Polyiron-core i-f transformer, which has been designed to meet four specific requirements: 1. Stability, secured through limiting and selecting various materials comprising the device. 2. Economy. The capacitors are anchored securely to the frame within the shield, the terminals being so formed that they serve as an anchor for both the natural leads and the coded hook-up leads. 3. Adaptability. The basic structure is unchanged, both primary and secondary being tuned from the top of the 0.375-in. aluminum shield. 4. Performance, improved under extreme

conditions of temperature, humidity, vibration and shock. Gain and selectivity is adequate for present-day circuits where tube characteristics limit the gain which is economically obtainable in current production practice.



The illustration shows the Model L transformer made by Aladdin Radio Industries, 466 West Superior St., Chicago, Ill.

(To page 70)



Model 518
 List . . . \$18.90

5 tubes; 2-band, 75-550 meters; full range dynamic speaker; duo-colored aeroplane dial; incorporating metal tube.

Model 620
 List . . . \$35.75
 6 tubes; 2-band, 18-555 meters; automatic volume control; tone control; magic eye; full range dynamic speaker; large duo-colored aeroplane dial.



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HI-QUALITY SINCE 1921!

FIFTEEN NEW MODELS

2-, 3- and 4-band . . . 15 to 2,000 meters

Listing from \$17.95 to \$95.00

• Stressing dependability in **PERFORMANCE** and **BEAUTY** of appearance. Jobbers and dealers, write for our proposition.

PIERCE-AIRO, INC.

514 SIXTH AVENUE

New York City

Licensed by R.C.A. and Its Affiliates



Model 618
 List . . . \$37.25

6 tubes; 3-band, all-wave; automatic volume control; tone control; large duo-colored aeroplane dial; full range dynamic speaker.

Model 619
 List . . . \$27.50

6 tubes; 2-band, 75-550 meters; full range dynamic speaker; large duo-colored aeroplane dial; tone control; incorporating metal tube.



FROM
TRANSMITTER

TO *Antenna*

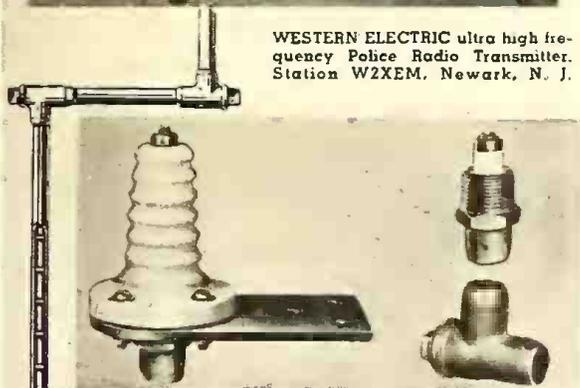
A Complete Installation with
**ISOLANTITE COAXIAL
TRANSMISSION LINE**



WESTERN ELECTRIC ultra high frequency Police Radio Transmitter. Station WZXEM. Newark, N. J.



National Newark and Essex Bank Building. Showing location of transmitter and antenna connected by ISOLANTITE COAXIAL TRANSMISSION LINE.



In the rapidly developing technique of radio communication engineers recognize the coaxial transmission line as the most efficient means of conducting radio frequency energy from point to point and from transmitter to antenna.

ISOLANTITE INC. has been closely identified with this development and now announces A COMPLETE COAXIAL TRANSMISSION LINE SYSTEM for ultra high frequency and broadcasting stations.

Write for our complete bulletin on this product. ISOLANTITE INC., 233 Broadway, N. Y. C. Factory at Belleville, N. J.

Sold only through Graybar Electric Company and Manufacturers of transmitting equipment

Isolantite
CERAMIC INSULATORS

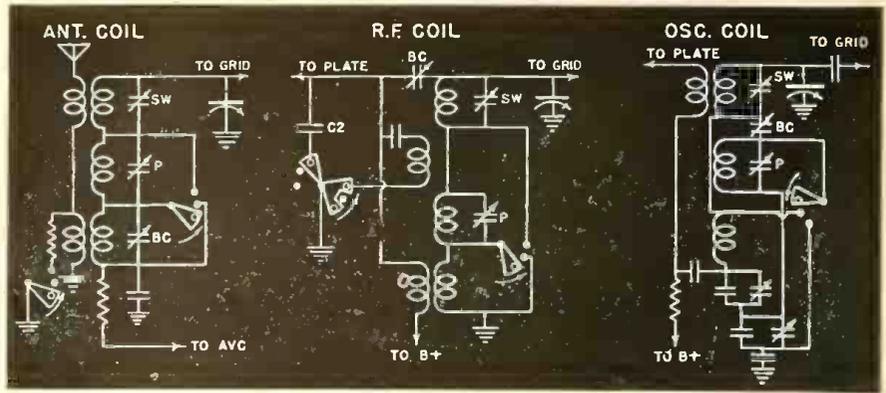
RADIO . . . "MAN-MADE" STATIC



THE nuisance noises caused by proximity of electrical conveniences may be completely divorced from any radio by installing this modern Amy, Aeeves & King licensed antenna. On broadcast as well as shortwave bands "NOISE-MASTER" improves reception . . . in every type of location!

Write for Full Particulars

CORNISH WIRE CO., Inc.
80 CHURCH ST., NEW YORK CITY



Coil system of the Belmont Model 778 receiver.

SERVICE NOTES

(From page 68)

BELMONT 778 COIL SYSTEM

★ The coil system found in the Belmont 778 receiver is somewhat unusual—the manufacturer's schematic shows a plunger type of switch. See page 43 of this issue. Circuit shown here has been redrawn to show the function of the various switches and coils.

Position of switches is broadcast. Trimmers have been labelled according to the band in which they are

used.

The antenna coil is of the usual type—3 coils in series.

The RF coil system is more involved. Three coils are used in series, but the BC trimmer is used as a combination coupling condenser and trimmer. Its circuit to ground is completed through C2. Note the series resonant circuit that is connected from the plate circuit to ground in the BC and SW positions of the switch.

The oscillator system is even more unusual. In the broadcast position the BC trimmer is connected to ground through the middle coil.

"PLAIN TALK" . . .

THE P. A. equipment marketing situation can be clarified by frank expressions of policy on the part of sound equipment manufacturers. Here is our frank expression!

DISTRIBUTION OF *Clarion* SOUND EQUIPMENT WILL BE THROUGH ACCREDITED JOBBERS ONLY.

Such jobbers are invited to share in the profits which are certain to accrue to franchised *Clarion* Sound Equipment Distributors. Write or wire Dept. J II.

TRANSFORMER CORPORATION OF AMERICA
69 Wooster Street, New York, N. Y.

Clarion
AMPLIFIERS



Meissner

AGAIN PIONEERS FOR THE SERVICEMEN, WITH THESE THREE LONG NEEDED REPLACEMENT UNITS

FERROCART (iron-core)

VAR. SELECTIVITY I.F. TRANSFORMERS



The use of these band-expanding I.F. Transformers in your repairs will give your customers high fidelity performance. These transformers are electrically variable and require no shaft or cam controls. Available in either two or three positions, using the mica-tuned condenser or the new Align-Aire tuned condenser. Double-Tuned, Frequency 456 (440-470) KC.

MICA-TUNED UNITS List \$3.00
ALIGN-AIRE UNITS List \$5.50

FERROCART (iron-core)

VARIABLE TUNED WAVE TRAP

The Meissner variable tuned wave trap is designed to reject undesired frequencies which generally cause interference such as code, etc. Engineered to operate in any receiver using 456 or 465 KC I.F.'s and on any wave band. Completely shielded.

SIZE 1 3/4" x 1 3/4" x 2 1/2" List \$2.00



FERROCART (iron-core)

VARIABLE INDUCTANCE ANTENNA COIL



Meissner again leads the field with this universal permeability tuned FERROCART (iron-core) antenna coil. With this unit, by simply turning the adjustment screw on the top of the can, the inductance can be varied as high as 25%. PERFECT CONDENSER TRACKING IS THE RESULT. In addition, this coil is of the Ferrocart-core type and will increase the gain and selectivity.

SIZE 1 3/4" x 1 3/4" x 2 1/2" List \$2.00

● SOLD BY ALL LEADING JOBBERS ●

MEISSNER MFG. CO.
Mt. Carmel Illinois

In the POL position the BC coil and series trimmer are connected in parallel with the police coil. In the shortwave position the POL and BC coils and series padders are shorted.

THAT VOLUME CONTROL

★ How much profit did you make on your last volume control replacement—or was it a loss? List price was probably \$1—at 40 off your cost was 60 cents.

In most cases it is necessary to make a trip to the jobber to get the proper resistance value and taper. Figure in your time at \$1.50 an hour and add in your transportation cost. Chances are that the control cost you \$2.50 instead of 60 cents.

Then there is the time coming and going to the customer's home plus that for installing a new control. Question is: how much profit was there in the job if you charged only \$2.50.

Even if you have the control in stock, there is still overhead to be figured in—and at some time or other you probably made a trip to your jobber to buy it.

And this same commonsense theory applies to all your jobs. Be sure to make a profit—otherwise you are being kept needlessly busy.

NOISY TRANSFORMERS

★ Noise in the RCA 80 series can often be traced to defective I.F. coils and A.F. transformers. These sets developed considerable frying and crackling noise from the I.F. coils and interstage audio transformers before they finally burnt out. Frequently the noise is erratic and fails to appear when the serviceman arrives on the job.

A quick method that usually works is to flash the primary of each stage involved by removing the tube and shorting the plate to ground. If the coil is good it can take the extra load with no noise or burn out. If noisy it will become worse, and if about to go, it will go out definitely.

This method, naturally, is good for any type of set showing the same symptoms. If upon removing a tube the noise still persists, the trouble is beyond that stage (near to the

speaker), so look further up the line until you come to a stage where the removal of the tube stops the noise—that will be the one to suspect.

CLEVELAND RADIO TRADE SHOW

★ Fourth Annual Radio Trade Show will be held at the Hotel Cleveland, Cleveland, Ohio, on November 1 and 2. Feature attraction will be a telephoto demonstration by Acme News Pictures and N.E.A. Service.

Stop guessing . . . Save time . . . trouble . . . money!

USE the new PHILCO IDENTIFIED RESISTORS INSULATED TYPE



PHILCO—manufacturers of the world's largest selling radio receivers—now brings you the newest aid to quicker and better service—identified resistors of the new insulated type, each with a rust-proof metal tab, showing the exact resistance value.

Waste no more time trying to puzzle out faded color markings. No more fussing with trick charts, codes, wheels and gadgets. No longer need you waste valuable time measuring the value (as you often have to do after all).

Philco Identified Resistors save all this time and annoyance. They give the right value instantly. Furthermore, you get a dependable insulated resistor, of special construction, insulated for 1,000 volts between resistance element and outer tubing. Safety! Convenience! Speed! And the RMA color marking for visual matching purposes. Available in all popular values of ½ watt or 1 watt rating.

These new and better resistors are priced no higher than ordinary ones. You can save time, trouble and money by using them exclusively in all of your work. Remember, PHILCO quality and full discounts to service men and dealers.

MAIL COUPON FOR DETAILS OF ASSORTMENTS AND PRICES

PHILCO, PARTS DIVISION
Tioga and C Streets, Philadelphia, Pa.

Send complete information on Identified Resistors and other Philco parts, with address of nearest distributor.

Name

Address..... City..... State.....

Polyiron Conquers the Ether

Aladdin

GREATER GAIN
BETTER DX
INCREASED SELECTIVITY
LOWER NOISE LEVEL

Write for Bulletin 536 filled with Valuable Technical Data
ALADDIN RADIO INDUSTRIES, Inc.
466T West Superior Street
Chicago, Ill.

Mr. Service Man can you fix my--er--er RADIO



YES, indeed you can and because you do good work and use dependable Ward Leonard replacement resistors, you give satisfaction, and she will call on you again for your services. That is how a permanent profitable radio business is built. The Radio Service bulletin 507A shows the Ward Leonard Line and gives prices. Be ready when she calls. Send for it today.

WARD LEONARD ELECTRIC COMPANY MOUNT VERNON, NEW YORK

Please send me FREE Bulletin 507A.

Name

Address

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

Jobber's Name..... RT

TODAY'S TRADE TALK

- American-Bosch smashes sales records
- Clough-Brengle opens New York offices

★ Eugene Carrington, widely known throughout the jobber trade, is now associated with the Standard Transformer Corp. of Chicago, manufacturers of Stancor products, in charge of advertising and sales promotion work and also working in close contact with Stancor jobbers throughout the country. Mr. Carrington, who was formerly identified with Utah Radio Products Co., has visited parts jobbers for many years and is thoroughly familiar with their merchandising and servicing problems.

Engineers of the motion picture division of the Cinaudagraph Laboratories, Stamford, Conn., announce the development of a new projection print. New product is 16 mm. but has the picture quality of standard 35 mm. film, carries both sound and color, and is produced at a cost of black and white.

★ Through a new agreement with Electrical Research Products, Inc., Bruno Laboratories, Inc., N. Y. C., is now licensed to make P. A. equipment under U. S. Patents controlled by Western Electric and the American Telephone & Telegraph

Co., Inc. License specifically covers P. A. systems including velocity microphones, amplifiers, and loud speakers; Bruno now has new sales fields in municipal and government installations or other spots where patent infringement protection is required.

Roy Daney, American-Bosch radio sales manager, reports that with August figures not yet compiled, July stands out in all American-Bosch radio history. The orders placed by distributors in July, 1936, total 52.7 per cent of all their orders for the last six months of 1935. In July alone United American Bosch Corporation sold over half as many sets as they sold in all of July, August, September, October, November and December of last year. During July, previous high daily production records were beaten. The month's total tops peak months in the peak of the season. Shipments going out by truck and train show greater daily totals than at any time in American-Bosch's twelve years of radio manufacturing. Distributors attending the New York distributors' meeting ordered four times as many sets this year as were ordered at last year's meeting.

★ John Meck, vice-president and general sales manager of Clough-Brengle, announced recently the opening of New York offices at 53 Park Place, with Sam Harper, formerly Chicago district sales manager of the company, as manager. Complete stock of Clough-Brengle equipment will be maintained at this office, and Mr. Harper will work in close cooperation with jobbers throughout Greater New York territory and eastern Pennsylvania. Russell Lund, formerly sales manager of Thordarson Electric Mfg. Co., has been appointed central division sales manager of Clough-Brengle, with headquarters at the company's factory at 2815 West 19th St., Chicago.

★ A prominent Chicago manufacturer is interested in hiring experienced men with technical knowledge to contact radio jobbers, electrical wholesale houses and similar trades, to work on a direct basis and not as manufacturers' representatives. Full details can be secured by writing to Ken Ford, 100 East Ohio St., Chicago.

★ Emerson officials have arranged to display some featured models of the line at the annual exhibition sponsored by E. I. DuPont De Nemours & Co., at Atlantic City.

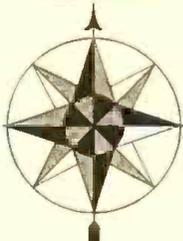
★ M. W. Weintraub, president of Garod Radio Corp., N.Y., just back from a 4-day cruise which he sponsored to Nova Scotia, reports a profitable and enjoyable time aboard the S.S. "Acadia." Garod's friends and dealers heartily OK'd the side tours planned by the company chief.

GLASS

THE 4 WAY ARCTURUS LINE IS N.E.W.S



CORONET
THE PERFECTED
METAL TUBE





"G"

Millions of Arcturus Glass Tubes, used initially in radio receivers, create a natural replacement market for Arcturus Dealers and Servicemen.

More "G" Tubes of Arcturus manufacture are in use today than any other make. Pioneered by Arcturus more than a year ago, and now used by the entire industry. Arcturus "G" Tubes have the advantage of tested and proved performance.

Arcturus Coronets—the perfected Metal Tubes—are being used as initial equipment by a number of set manufacturers. The active demand for Arcturus Coronets indicates the preference of the trade and consumers for a tube they know will give the same efficient service as other Arcturus Tubes.

Arcturus Coronets for replacing glass tubes is the biggest sales idea that has hit dealers and servicemen in years. Made to order for you to increase your sales and profits. Owners of old sets like this modernization idea; want to incorporate radio's latest development in their receivers.

ARCTURUS alone provides a 4-way sales and profit set-up; has designed its prices to give the trade a better opportunity for profits. See your Arcturus jobber or write us today for details.

ARCTURUS GLASS—"G" CORONET—THE PERFECTED METAL RADIO TUBES

Arcturus Radio Tube Co., Newark, N. J.



At the Show!

Be sure to see the ARCTURUS EXHIBIT Booth No. 12, New York Retail Trade Show, September 18th, 19th and 20th.

SALES AID DE LUXE

EMERSON FEATURES CELEBRITIES IN DRIVE TO AID DEALERS

★ All-State, industry-wide effort on the part of radio manufacturers to plug the appeal of new lines continues on a big scale as more plans are revealed by the promotion experts.

National dealer-aid campaigns have been presented in news summaries in *RADIO TODAY* from RCA, GE, American-Bosch, Zenith, Stromberg, Kadette, Fairbanks-Morse, Philco, Westinghouse, Fada and Sparton. Newest outline has arrived from E. F. Solow, Emerson's advertising manager:

"Fannie Brice, Lowell Thomas and other outstanding personalities of the stage, screen and microphone are now endorsing Emerson Radio through a wide variety of point-of-sale media and other promotional devices. This phase of the company's 1937 program of help for distributors and dealers is just beginning and reports from the trade have already been so enthusiastic that even more extensive plans for such advertising are being contemplated.

"Celebrity endorsements' are distributed to dealers by Emerson jobbers in the form of lithographed window display cards, small displays to place on top of Emerson Sets, newspaper mats, and wall broadsides.

"Other dealer helps include die-cut displays which serve as holders of actual Emerson Sets and on which are printed the outstanding features of the respective models. In addition there are several window streamers, envelope stuffers and educational material and suggestions for dealers and their salesmen."



Lithographed window display cards, with benefit of big names.

★ New 16-page radio log has been released by National Union Radio Corp., 570 Lexington Ave., N.Y.C., for use as promotional material by servicemen and dealers. Booklet is 8½ x 11, has complete broadcast data, 50 photos of radio stars, space for the dealer to carry an ad. They are on sale at cost through National Union distributors.

★ Seventh edition of "Bakelite Molded," a 48-page booklet issued by Bakelite Corp., 247 Park Ave., N.Y.C., is now available. This edition is elaborately illustrated, describes the characteristics of the product in detail, lists the industrial applications of Bakelite in electrical, radio, automotive, mechanical, display, hardware, packaging and textile fields.

★ New 1937 catalog has been issued by Wholesale Radio Service Co., Inc., 100 Sixth Ave., N.Y.C., featuring a new "Blue Ribbon Seal" idea.

★ Novel catalog has been issued by William Brand & Co., 268 Fourth Ave., N. Y. C., makers of electrical insulating materials. Booklet deals with the origin, uses and the more interesting histories of these materials, and includes sections on oil tubing, saturated sleeving, varnished cloths and mica. This is Catalog No. 11, sent free upon request.

★ Philco is out with its new Election Edition of the Political Atlas, brought up to post-convention situation. Dealers order them from distributors, give them to prospects who fill out accompanying cards.

★ Tobe Deutschmann Corp., Canton, Mass., has announced a new promotion campaign to further the sales of its new line of electrolytic condensers. Theme song is "The Big Condenser Fight Begins!"; novelty angle is that the fight turns out to be between two Tobe products.

★ "Official Football Facts," a booklet containing most of the data of immediate interest to anyone who intends following the current football season, particularly by radio, has just been issued by Philco. Brochure is suggested for use by dealers as a timely piece for distribution among prospects. Features are explanations, of rules of the game, diagrams, complete schedules for 1936. Author is W. W. Heffelfinger, former Yale football star, for 3 years a member of the All-American team.

★ Stromberg-Carlson has started a receiver display on wheels rolling around among dealers in the Rochester, N.Y., area. The big trailer carries 12 sets, including a battery model, all ready for demonstration. Display car has a topnotch built-in aerial. Stromberg is planning trips covering the entire country.



It's a Real Money-Maker Taco Master Antenna

- ★ One aerial and downlead for as many as 25 radio set outlets.
- ★ An all-wave, noiseless, high-efficiency system at a cost within reach of any building owner.
- ★ Ideal for apartment house, hospital, hotel, club. Also for modern residence, providing handy radio set outlets.
- ★ Neat. Easily installed. Concealed wiring for new buildings, exposed for old.

Write for technical and merchandising details. Meanwhile, ask your TACO jobber to show you the foundation kit and outlets.

TACO
TECHNICAL APPLIANCE CORP.
Pioneers in Noiseless Antenna Systems
17 East 16th St., New York City

PARTS JOBBERS BACKED BY BIRNBACH

The uniform excellence of the Birnbach line of Quality radio accessories has resulted in its wide acceptance by Home and radio fans. The present demand will be intensified this season by a comprehensive advertising campaign which will include trade papers read by more than 100,000 prospective purchasers of Birnbach products.

To Radio Parts Jobbers we say: "If you are not now a Birnbach distributor, become one. If you do handle our line, replenish your stock."

BIRNBACH IS GOING PLACES THIS YEAR — WITH A COMPLETE ADVERTISING CAMPAIGN BACKING BIRNBACH JOBBERS. WRITE US FOR SPECIAL JOBBER PROPOSITION.

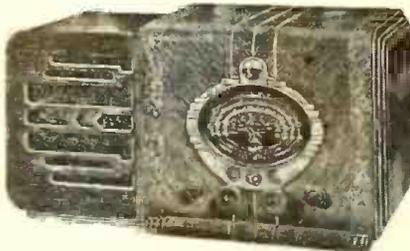
BIRNBACH
RADIO COMPANY
145 HUDSON STREET
NEW YORK CITY • N. Y.

NEW THINGS FROM THE MANUFACTURERS

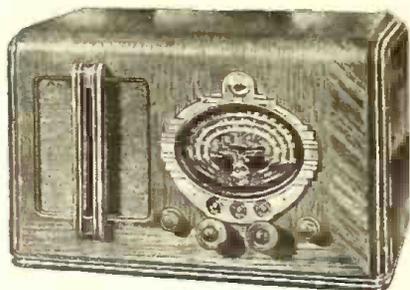
New sets by Majestic



★ Featured in the new Majestic line are 11 sets listing from \$14.95 to \$139.50. Above is shown the 1500 console—10 "G" type tubes with cathode ray tuning. Tuning range in 4 bands—540-35,000 kc.—reaches 8½ meter ultra short wave band. Illuminated volume control indicator, tone indicator, waveband indicator. Individual hi-fi control. Gyro rapid tuning 32:1 ratio—push-pull 12-watt output—12-inch speaker.



Seven-tube AC all-wave superhet—540-18,000 kc. in 3 bands. Eye tuning indicator—16:1 gyro tuning with edge raylit glass dial. Illuminated tone, volume, band indicators. "G" type tubes—6 watt power output—8-inch coltura speaker. Acoustically treated cabinet interior. Model 76—size 22¼ x 12x10 inches.



Laydown 6-tube set—world-wide reception—3 bands. Tone control with illuminated position indicator. Raylit tuning dial—16:1 tuning vernier. Band indicator and volume control indicator illuminated. "G" type octal tubes. Cathode ray tuning indicator. Power output 5 watts — 6½ - inch speaker. Model 66. Other sets listed

in specification section of this issue. Majestic Radio & Television Co., Chicago, Ill.—**RADIO TODAY**—see also advt. p. 1.

Aluminum exponential horn

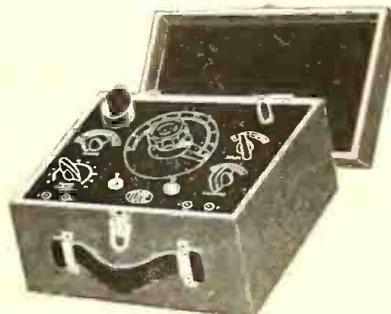
★ Heavy gauge spun aluminum exponential horn for indoor and outdoor use. Acoustically treated to avoid metallic sound. Bell diameter 20 inches, overall length 28 inches—weight 7½ pounds. Attractive appearance—suitable for use by orchestra or band. For use with 6-inch dynamic cone unit. Model XA22—list \$25. Chromium plated collapsible floor stand—model CS1—list \$21. Oxford-Tartak Radio Corp., 915 W. Van Buren St., Chicago, Ill.—**RADIO TODAY**—see also advt. p. 50.

RCA 12-watt amplifier



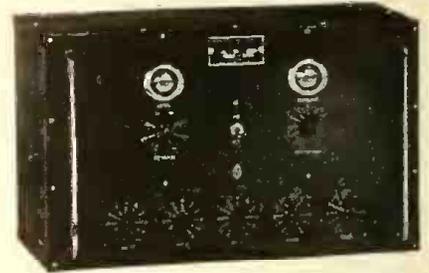
★ Four stage amplifier for sound reinforcement work. Gain 110 db.—frequency range 50-10,000 cycles. Undistorted class A output 12 watts. Input impedance 16,000 ohms—output 7½, 15, 40 ohms—field excitation for 2-1,000 ohm speakers. Tone and volume controls. Model MI-4283—list complete \$82.79. RCA Mfg. Co., Front St., Camden, N. J.—**RADIO TODAY**—see also advt. p. 29.

AC bridge and condenser analyzer



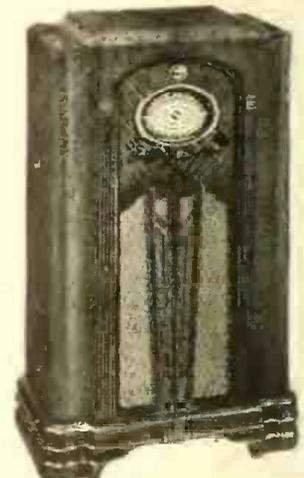
★ Instrument will read capacity and power factor of condenser directly—tests for shorts, opens, intermittents. Built-in neon tube check. 6E5 null indicator for bridge. Resistance range 1 to 1,000,000 ohms—capacity range 10 mmf. to 100 mf. Accuracy of measurements 5 per cent. Weight 7 pounds. Net price \$28.50. Tobe Deutschmann Corp., Canton, Mass.—**RADIO TODAY**

60-watt amplifiers



★ High-power amplifier using 6L6 beam amplifiers, 60-watt output. Five channel input with mixer controls—master gain control. Has electric eye overload indicator, eye visual monitor with level adjuster. Model 600—suitable for rack mounting. Additional 60 watt units with single input channel for use with 60-C are available for extremely large installations—model 60X. United Sound Engineering Co., St. Paul, Minn.—**RADIO TODAY**—see also advt. p. 53.

Grebe 1937 sets



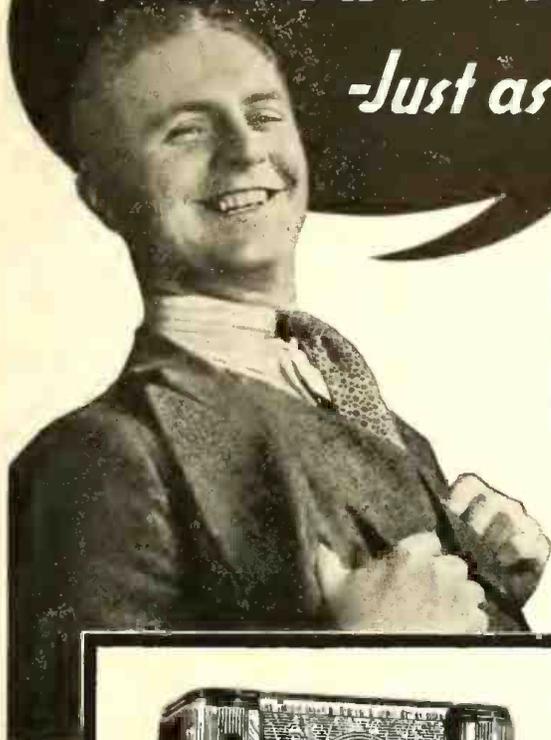
★ New Grebe line boasts over 30 sets (listed in specification section of this issue). Illustrated is the 4110E console—11-tube AC 4-band superhet. Tuning range 16-555, 870-2060 meters. Centromaster automatic control unit. Polychromatic dial scale with band spread. Variable selectivity—tone control—RF preselector. Individual coils—dead end switches—octal tube sockets. 12-inch high-fidelity speaker. List \$109.95. 12 tube AC-DC model—list \$109.95.



7-tube 3-band table set—16-555 meters. Band spread magna dial with

Yes, Sir! We're Already Cashing in on STEWART-WARNER RADIOS

-Just as We Did On Refrigerators



And You'll Know Why When You Hear That New Copper PHOTO-TONE SPEAKER

WE weren't fooling when we promised Stewart-Warner dealers a radio line just as hot as those 1936 refrigerators. Those dealers had marked up a 127% gain in refrigerator sales over 1935—and we determined to help them do the same in radio.

The way they're going to town already with the 1937 radio line proves that they got what we promised.

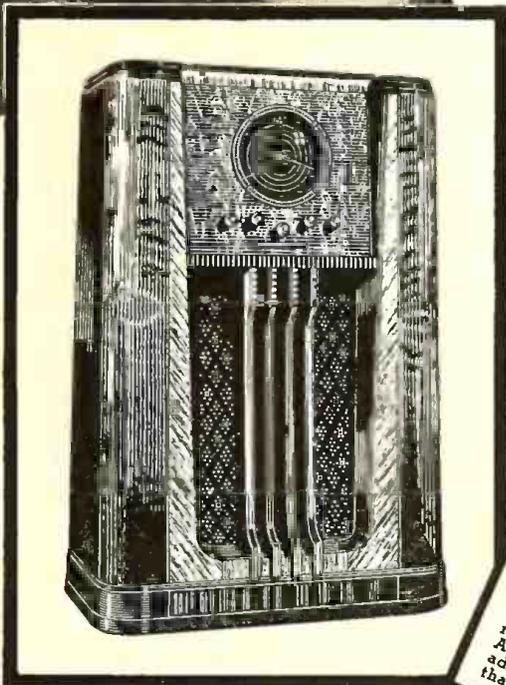
Never before have we packed so much real value into any year's models. The great new Copper Photo-Tone Speaker for instance. It's built a brand new, better way, and anyone can tell by listening! There's a new, appealing mellowness

—new photographic realism—on every note.

But that's just a start. New tubes, new circuits, new features—all add up to entirely new, easy-to-sell performance.

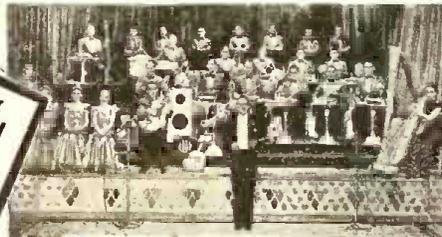
Tie up with this money-making Stewart-Warner line now. You'll be backed by the greatest merchandising drive in our history. It includes everything you need—newspaper ads, a coast-to-coast radio series with Horace Heidt and his famous Alemite Brigadiers, a brand new store display service and many other sales getters.

Get the facts from your distributor now—and ride the bandwagon with Stewart-Warner.



A record value! Twelve-tube Ferrodyne round-the-world radio with Twin Copper Photo-Tone Speakers, Shadow Beam Tuner and many "scoop" features.

Horace Heidt and his Alemite Brigadiers. On the air, coast-to-coast, selling Stewart-Warner radios for you.



**Ask About This Amazing
NEW FINANCE PLAN**
Something brand new in the business. Planned solely for Stewart-Warner dealers to help them scoop the field. As different as our special refrigerator plan last spring. 100% ADVANCE—NON-RECOURSE—administered through all the more than 150 C. I. T. offices.

STEWART-WARNER

CHICAGO, ILLINOIS

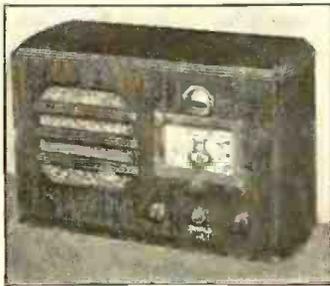
NEW THINGS

second hand. Automatic band indicator—AVC—full-range tone control. Beam power output tube—octal tubes—6-inch speaker. Walnut cabinet—10½x16½x9¾. Model 370C—list \$57.95. Grebe Mfg. Co., Inc., 119 Fourth Ave., New York City—**RADIO TODAY**—see also advt. p. 65.

DeWald sets

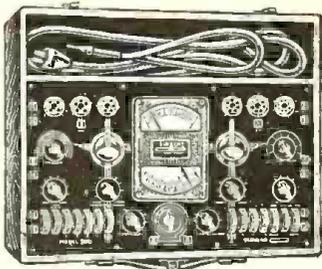


★ New DeWald line consists of fifteen home sets. Illustrated above is the 618 AC-DC superhet. Six glass tubes including rectifier—all-wave reception—18 to 555 meters. I-f. wavetrapp—tone control. Power output of one watt. Walnut cabinet. Model 618—list \$37.25.



Six tube AC table set with cathode-ray tuning. Dual-wave, 18-52, 180-555 meters. Tone control and wavetrapp. Full-vision dial with individual band lighting. 3½-watt output. Duo-tone walnut cabinet. Model 620—list \$35.75. Other models listed in specification section of this issue. Pierce Airo, Inc., 510 Sixth Ave., New York City—**RADIO TODAY**—See also advt. p. 68.

Supreme test instruments



★ New line of test equipment, including tube tester, radio testers, diagnometer, signal generators, decade box, multi-meter, universal AC bridge, cathoray oscilloscope, diagnosis, meter kit and carrier shift indicator have been developed by Supreme. Model 500 automatic illustrated.

Tests all type of tubes, including 6E5 and 6G5. Neon lamp hot leakage tests. Following meter scales, AC-DC volts—0/7/140/700/1400; DC mills—0/7/140/700/1400; resistance—0/2M/20M/200M/ 2meg/20meg; DB ranges—10 to +6, 0 to +16, +10 to +26. Electrolytic condenser leakage test on English reading scale. Supreme meter with bi-indicating needle and dual windows. Net \$66.95.



Cathode-ray diagnostic — has oscillator with constant frequency modulated band width from 125 to 15,000 kc. Beat frequency audio oscillator 50-10,000 cycles. Calibrated celluloid screen for use with cathode ray tube. Sweep circuit—7-20,000 cycles. Horizontal and vertical amplifiers—gain 40—flat 20-90,000 cycles. Model 555—net \$147.95. Supreme Instruments Corp., Greenwood, Miss.—see also advt. outside rear cover.

6-volt gas-engine charger

★ Battery charging electric plant for 6-volt units. Low speed engine operates at 1,800-1,900 rpm. Output of 175 watts—12-15 hours on gallon of gasoline. ½ horse engine with mechanical fly-ball governor. Generator with forced air cooling—27 ampere maximum. Complete with ammeter. Weight 45 pounds—carrying handle integral part of unit. Model B-C—list \$57.50. D. W. Onan & Sons, Royalston Ave., Minneapolis, Minn.—**RADIO TODAY**—see also advt. p. 56.

Low-cost teledial set



★ 12 tube all-wave "telephone dial" tuning console with metal tubes and AFC. Push-pull audio output 7½ watts—6-inch dial with mechanical band spread. Automatic antenna tuning—RF stage—fidelity control. Violin shaped cabinet and 12-inch speaker. Grunow model 1291—list \$99.50. General Household Utilities Corp., 2,638 N. Crawford St., Chicago, Ill.—**RADIO TODAY**—see also advt. p. 2.

LATEST OFFERINGS OF RADIO LITERATURE

(Continued from opposite page)

166 Ward Leonard. Service bulletin 507A emphasizing preparedness of servicemen when using Ward Leonard replacement resistors. Shows complete line and prices.

167 Solar. Capacitor analyzer and resistance bridge giving direct panel readings. 6E5 cathode ray tube for balancing. (Listed previously.)

168 Radolek. 1937 profit guide and supply catalog, covering parts, PA, servicing equipment, sets, tubes, accessories, hardware, tools, etc.

169 Wright DeCoster. Catalog of Nokoil speakers, permanent magnet type; has universal transformer and new para-curve diaphragm.

170 Birnbach. Literature on full line of accessories for "hams" and servicemen, sold through jobbers and "ham" supply stores.

171 Utah. Literature featuring replacement speakers made in 20 models including a type and size suitable for replacement in any set.

172 International Resistance. Announcement and catalog of IRC metallized volume controls for service and amateur use. Ten important electrical and mechanical features.

173 McMurdo Silver. Announcement of Masterpiece 30-60 amplifier, a unit of wide application and high performance, described as 28 sound systems in one.

174 Ward Products. Literature on newest auto aerial idea—fish-pole type, installed on bumper bracket. Also buggy-whip type and an improved running board aerial.

175 DeWald. Announcement of fifteen 1937 models, 2, 3 and 4 bands, 15 to 2,000 meters. Details of jobber or dealer proposition.

176 Radio Receptor. Folder featuring Series 7 dynamic microphones for PA, broadcasting, studio and location recording and other sound reproduction. Also manual of sound systems, components and accessories.

177 Meissner. Literature on latest types of coils for IF and RF transformers, antenna, wave trap, and other types used in replacement work.

178 Sprague Products. Details of the "600" line of condensers (600 v. conservative rating), featured by a new internal moisture proof tube. Also details of other Sprague types, including "pin-head."

179 Clarion. Statement of policy by Transformer Corporation of America covering marketing and distribution of Clarion sound equipment.

LATEST OFFERINGS OF RADIO LITERATURE

INFORMATION on any of the products listed below may be obtained promptly by using the post card herewith. Put a circle around the numbers of the items that interest you, fill out the card and mail. No postage needed.

This is an advertisers' service, free to anyone engaged in the radio business, and we ask you to confine your requests to those items in which you have a specific interest. All of these requests are forwarded to the respective manufacturers and are not filled by RADIO TODAY direct.

USE THIS POSTCARD TO GET FREE INFORMATION
NO POSTAGE REQUIRED

143 Raytheon. Details of a merchandising opportunity in tube replacement field and comprehensive sales aids for Raytheon dealers, including free technical data sheets.

144 Kadette. Announcement of additional 1937 models. Kadette Classic, 6-tube super, compact, in plastic cabinets of three brilliant colors; also model 96, laydown type, in grained walnut and contrasting veneers.

145 Philco. New 1937 parts catalog, 40 pages, 2 colors; 1,500 different items of radio parts, accessories and test equipment—"everything the serviceman needs."

146 Supreme. Announcement of 17 new models constituting a complete new line of radio-test equipment. Featuring the Quadrometer, newest instrument in Supreme line.

147 Radio Speakers. Literature on complete line of permanent dynamic and electro dynamic speakers. Includes types and sizes for battery sets, auto radio and PM installations.

148 United Sound Engineering. New No. 106 public address catalog now available on request. Takes the place of all previous U.S.E. public address sheets.

149 Amperite. Announcement of new velocity microphones and offer of a striking window decalomania to advertise sound service and Amperite velocity mikes.

150 Webster Electric (Racine). Information on four sound systems typifying the company's complete line. Marketing helps including list of fields for sale of sound services.

151 Premax. Catalog of antenna and ground equipment, including Pyramid all-wave, double doublet for one-roof mounting; also service masts, ground rods, etc.

152 Briggs & Stratton. Information on new 6-volt, 200-watt Power-Charger to keep up radio batteries of 2 or 6 v. Has power take-off for driving small equipment.

153 Webster (Chicago). Bulletin on PA system MP-420, a single system intended to meet a high percentage of dealers' demands for rentals and sales. 110 v. AC or 6 v. DC. Plug-in power packs.

154 Operadio. Catalog of unit-matched PA portable units, amplifiers, microphones and speakers and details of PA time payment plan.

155 Majestic. Announcement of new 1937 line of receivers having advanced scientific features. Line has 15 deluxe custom-built models, sold at competitive prices.

156 Grebe. Literature on 1937 line of receivers, featured by a 14-tube AC, 5-band, high fidelity super and 16-tube AC-DC with same specifications. Total, 40 models, including battery sets.

157 Federal Sales. Bulletin for manufacturers and parts jobbers covering all commonly used items of radio and sound system hardware.

158 Allied. New 1937 catalog covering 10,000 exact duplicate and replacement parts; 38 receivers; PA systems; generators, testing equipment, etc.

159 Halson. Literature on 1937 line consisting of 22 receivers of advanced design. Line featured by totally new high output AC-DC 19-tube set; interference control and high fidelity.

160 Triplett. Announcement of new super-sensitive vacuum tube voltmeter; no current drain from the instrument itself; has special Triplett self-calibrating bridge circuit.

161 Monark. Literature on storage batteries designed especially for radio and gas engine driven generators in farm radio and farm lighting service.

162 Freed-Eisemann. Catalog of 1937 line, featuring 6-tube 2-band super, AC or DC, with all up-to-date features. Smart styling and price appeal.

163 Rider. Information on forthcoming Manual, Volume 7. Extensive additions and changes. More complete servicing data; will cover sets announced up to Nov. 1936.

164 Precision Apparatus. Folder on new electronometer, series 600, a modern tube analyzer providing for numerous radio analyses and measurements from a single instrument.

165 Tobe Deutschmann. Catalog of electrolytic condensers of advanced design. Tubidon, easy to install, uses less space; Flexidon, has great flexibility. Various sections can be replaced if necessary.

165¹/₂ Radiotech Labs. Details and prices of a new line of tube testers having numerous important improvements.

FOR FREE SALES HELPS FILL OUT
AND MAIL THIS CARD

Put circle around numbers upon which you
desire information

To simplify your writing for dealer helps, merchandise booklets, etc., this service is offered without charge. Just fill out this card and mail promptly.

Please do not ask for literature in which you have no interest.

143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158
159	160	161	162	163	164	165	165 ¹ / ₂
166	167	168	169	170	171	172	173
174	175	176	177	178	179		

Your Name _____

Title _____

Name of Co. _____

Address _____



RADIO TODAY

480 LEXINGTON AVENUE

NEW YORK, N. Y.

BUSINESS REPLY CARD
First Class Permit No. 22273 (Sec. 510 P. L. & R.) New York, N. Y.



RADIO TODAY

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Enter my subscription to RADIO TODAY for one year (12 months) and send me a copy of FINGER-TIP FACTS ON RADIO.

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What is Your Main Line of Business? Please Check:

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| <input type="checkbox"/> Radio Dealer | <input type="checkbox"/> Radio Distributor | <input type="checkbox"/> Furniture Dealer | <input type="checkbox"/> Engineer |
| <input type="checkbox"/> Radio Service | <input type="checkbox"/> Broadcast Station Mgr. | <input type="checkbox"/> Musical Instrument | <input type="checkbox"/> Miscellaneous |
| <input type="checkbox"/> Electrical Dealer | <input type="checkbox"/> Automotive Dealer | (Please write in what business) | |

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RADIO TODAY

480 LEXINGTON AVENUE

NEW YORK, N. Y.

RADIO'S *only* TRADE DIRECTORY & HANDBOOK

FREE

with one year's
subscription to
RADIO TODAY



LIMITED EDITION
In handy, convenient size: 5½ x 8½ inches

RADIO TODAY now fills the long-felt need for a radio directory that is complete, authoritative, up-to-the-minute! Charts and tables have been included to fill the demand for this type of information in handy, permanent form. Every progressive distributor, dealer and service man will find innumerable ways to put this directory and handbook to work.

CONTENTS: Names and Addresses of Manufacturers of Receiving Sets, coded to guide you in selecting amateur, commercial, farm and battery, home, radio-phonograph combinations and auto sets.

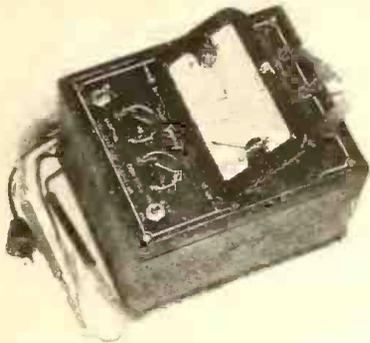
Names and Addresses of Manufacturers of Parts, Equipment and Instruments, segregated by lines to cover antennas, batteries, coils, condensers, generators, converters, line filters,

microphones, public address equipment, resistors, speakers, etc.

Serviceing and Merchandising—**CHARTS! TABLES!**—just the kind of information every dealer and service man needs daily. It tells you what goes wrong with radio sets—and why; it gives you data on radio set analyzers; sources of radio noise—helps you look for interference—aids you in eliminating the trouble; it gives you tube ratings and bias resistor tables.

FILL IT IN—TEAR IT OFF—MAIL IT TODAY

Vacuum tube voltmeter



★ Self-calibrating vacuum tube voltmeter. Employs bridge circuit whereby tube characteristics are stabilized with circuit— independent of changing tube values. Uses twin instrument—galvanometer and 3-range voltmeter. Linear scales reading in peak AC and DC—0/2.5/10/50 volts. Metal case with black wrinkle finish. Model 1250—net \$33.34. Triplett Electrical Instrument Co., Bluffton, Ohio—RADIO TODAY—see also advt. p. 40.

New amplifier rack



★ Rack and panel for amplifiers and sound systems. Removable panels attached to channel by continuous hinge on one side and screws on other—provides for easy servicing. Sides and rear provided with steel dust cover. Can be placed against or built into wall. All work can be done from front of rack. Type RH-1. Radio Receptor Co., Inc., 106 7th Ave., New York City—RADIO TODAY—see also advt. p. 32.

60-watt beam amplifier



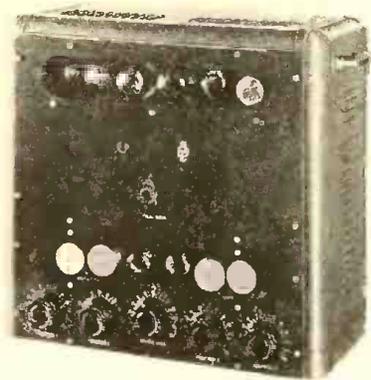
★ High-fidelity amplifier with push-pull 6L6's—power output 50-60 watts. Five input channels with separate volume controls—master gain control.

Volume indicator on sloping chromium panel. Field for four dynamic speakers. Model K16045—list \$124 complete. Other amplifiers shown in new catalog. Radolek Co., 601 W. Randolph St., Chicago, Ill.—RADIO TODAY—see also advt. p. 56.

Freed-Eisemann table set

★ Six tube AC-DC superhet—tuning range 540-1,700 kc. Large multi-colored full-vision dial—cabinet of two-tone walnut veneer and gumwood. Six glass tubes including ballast—power output 1 watt. Size 14 x 8½ x 6½. Model FE-60, list \$26.95. Freed Mfg. Co., 44 W. 18th St., New York City—RADIO TODAY—see also advt. p. 36.

Webster-Chicago amplifier



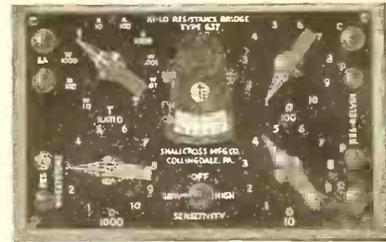
★ Sixty-watt power amplifier using 6L6 beam tubes. Approximately same physical size as old-type 30-watt amplifier. Has one to four position input—gain 143 DB. Tapped output impedance—will handle 1 to 10 permodynamic speakers. Amplifier will serve from 12-12,000 people, depending upon conditions. Model 4P-60. Webster-Chicago, 3825 W. Lake St., Chicago, Ill.—RADIO TODAY—see also advt. p. 31.

Tube and condenser checker



★ Tube tester for metal, "G" and glass tubes. Leakage tests up six megs. D'Arsonval English reading meter. Rotary switch for testing each element of tube. Filament rotary switch for all voltages. Checks paper by-pass Condensers and leakage in electrolytics. Steel case—7 x 10 x 3½. Model EE—net \$18.95. Million Radio & Television Labs., 361 W. Superior St., Chicago, Ill.—RADIO TODAY

Hi-lo resistance bridge

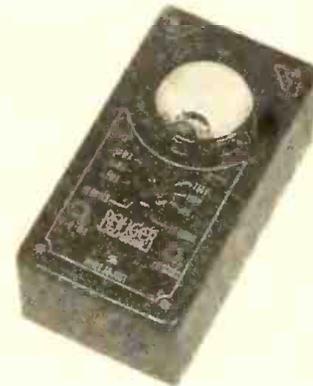


★ Combination Wheatstone and Kelvin bridge for resistance measurement. Resistance range 0.00001 ohm to 11.1 megs—0.00001 to 01 ohms (5 per cent accuracy), 10 ohms to 1 megohm 1 per cent, above 1 meg. 2 per cent. Uses manganin wire resistors—L&N 15 microamp. galvanometer. Power supply—1.5 volt battery for normal ranges. Oak carrying case 10 x 9½ x 5¼ inches—weight 8 pounds. Type 637—list \$75.00. Shallcross Mfg. Co., Collingdale, Pa.—RADIO TODAY

Amperite Velocity microphone

★ Velocity mike that gives studio type reproduction at unusually high outputs. Acoustical design eliminates cavity resonance—triple shielded to prevent stray pick-up. Shock absorption at two points eliminates mechanical vibration. Cable plug with positive locking device—on-and-off switch. Uses nickle aluminum magnets—high and low impedance models. Model RBHn. Amperite Corp., 561 Broadway, New York City—RADIO TODAY—see also advt. p. 30.

Ranger-Examiner multi-meter



★ Pocket type volt-ohm-milliammeter with selector switch and black molded case. DC ranges—0/15/150/750 volts, 1.5/15/150 mils, ½-1,000, 0/100M ohms with 1.5 volt battery. 2-inch Triplett D'Arsonval meter. Case with rounded corners—3 1/16 x 5 7/8 x 2 1/4 inches. Modernistic silver and black panel.—Model 735—net \$10.80. Readrite Meter Works, Bluffton, Ohio—RADIO TODAY—see also advt. p. 61.

Align-aire I.F. transformers

★ I. F. transformers with air-dielectric trimmer condensers. Eliminate instability and drifting. Ten complete turns between maximum and minimum capacitance. Moisture-proof, dust-proof, temperature-proof. Either air or Ferrocart cores. 170 to 3,100 kc. models. Meissner Mfg. Co., Mt. Caramel, Ill.—RADIO TODAY

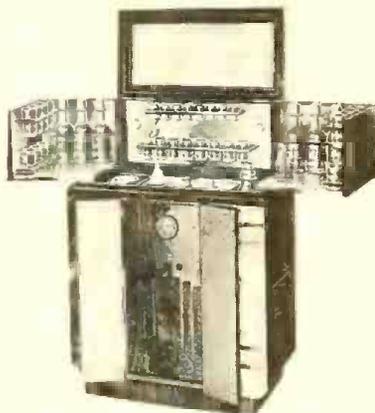
(To next page)

NEW THINGS

Humidity-proof condensers

★ New Sprague condensers, paper, foil and gauze types in the 600 and 450 volt lines are now using humidity-proof tube construction. Sealed tube makes it impossible for humidity to get into condenser, definitely eliminating what has been the most common cause of condenser failure. New type condensers are identified by a red dot imprinted upon the base. Sprague Products Co., No. Adams, Mass.—**RADIO TODAY**—see also advt. p. 39.

Radiobars



★ 1937 Radiobars equipped with latest Philco sets. Bars available with various glassware, mixers and containers. Model 528-620B illustrated with 37-620B Philco. List—\$252.50. Other models from \$140. DeLuxe model in phonograph combination. Radiobar Co. of America, 7100 McKinley Ave., Los Angeles, Calif.—**RADIO TODAY**

Radio-phonograph combinations

★ New Harris line features several combinations, table, console, and portable models. Table combination illustrated. Seven-tube receiver—2 bands, broadcast and shortwave. 8-inch dynamic speaker—6-watt output. AVC and tone control. Automatic record changer—play 8 10-inch or 7 12-inch. Two-speed motor—crystal pick-up.



Model 701W—list \$174.50. AC-DC model (701 AC-DC), list \$199.50. Harris Mfg. Co., 2422 W. 7th St., Los Angeles, Calif.—**RADIO TODAY**

Radio storage battery



★ Six-volt storage batteries specially designed for radio use—built-in hydrometer. Have minimum self-discharge—maintain approximately constant voltage throughout charge-discharge cycle. One-piece rubber case eliminates acid seepage. Wing-nut terminals. Monark Battery Co., 4556 W. Grand Ave., Chicago, Ill.—**RADIO TODAY**—see also advt. p. 31.

Low cost velocity mike

★ High-fidelity microphone—50-10,000 cycles. Output of -68 DB. Impedance of 250 and 16,000 ohms. Metallic shielding throughout. Flexible shielded cable 30 feet long—3-prong polarized plug. Net weight 2 pounds. Model MI-4010A—list \$43.50. RCA Mfg. Co., Camden, N. J.—**RADIO TODAY**—See also advt. p. 29.

Radio "B" batteries



★ "B" batteries with metal tops and receptacle for set plug. Unbreakable top with triple seal, new internal construction and design, balanced capacities—resulting in increased service hours. Batteries are of increased capacity and offer more service hours per dollar cost. Nos. 25, 45, 55. Rayo-Vac Co., Madison, Wis.—**RADIO TODAY**

Steel cutting styli

★ Professional line of steel cutting styli for recording on silveroid discs and all silver nitrate or acetate records. Hand finished of special alloy steel lapped to mirror polish and razor edge. Universal Microphone Co., Inglewood, Calif.—**RADIO TODAY**—See also advt. p. 81.

Tobe auto antenna

★ Last month **RADIO TODAY** carried an item giving the list price of the Tobe auto antenna as \$3. The correct price is \$3.95.

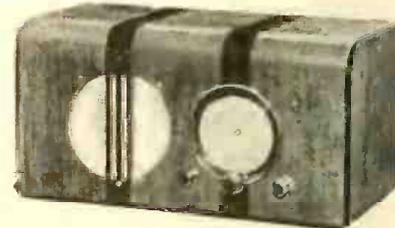
Cabinet for exact duplicate Replacement condensers

★ New cabinet developed for handling replacement condensers. Made of heavy gauge steel finished in Aerovox yellow and black. Shelves labelled alphabetically according to set names. Sloping front carries replacement chart for easy reference. Sliding doors in rear give access to shelves. Aerovox Corp., 70 Washington St., Brooklyn, N. Y.—**RADIO TODAY**—see also advt. p. 66.

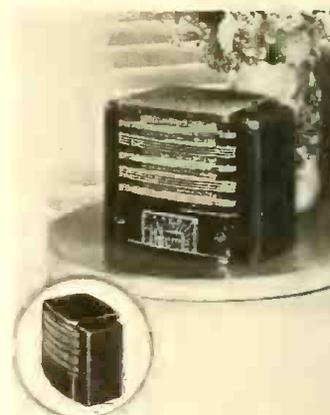
Nipermag steel

★ New magnetic alloy for all magnetic purposes where a permanent magnet is used. Coercive force of 660 Oersted, remanence is 5,000 gauss. Specific gravity of 7.0. Value of H on BHmax demagnetization curve is 375. Foundry castings have BHmax values over 1,000,000. Short article "Magnetic Circuit Calculations" available on request. Cinaudagraph Corp., Stamford, Conn.—**RADIO TODAY**—see also advt. p. 54.

Two Kadettes



★ Dual-wave AC-DC 6-tube (including ballast) superhet—range, 550-1,600, 1,620-4,300 kc. Six-inch dynamic speaker. Large illuminated full-vision dial. Cabinet of grained walnut with contrasting veneers. Model 96—list \$24.95.



6-tube receiver housed in plastic cabinet—3 colors available. Set tunes 540-1,725 kc. Illuminated airplane dial—AVC. Cool resistance free power cord—uses ballast tube. Kadette Classic—list \$29.50. International Radio Corp., Ann Arbor, Mich.—**RADIO TODAY**—see also advt. p. 59.

Haynes radio log

★ Complete listening guide and associated data is revised for Fall, to include full information on football broadcasts. Designed for rapid reference—list 10 cents. Haynes Radio Log, 161 West Harrison St., Chicago, Ill.—**RADIO TODAY**

TRADE NEWS

★ Amperite Corp., 561 Broadway, N.Y.C., offers free to servicemen and dealers an exceptional decalcomania for use in windows. Item measures 9 in. x 5 in., announces P.A. activity, is finished in gold, red, black and white.

★ D. W. May, metropolitan radio sales manager for General Electric, has added another successful radio cruise to the long list of those he has directed. With 150 radio dealers and their wives aboard the liner "S.S. Rotterdam" returned to New York Sept. 8, after a bang-up week-end trip to Nova Scotia.

★ Charles A. Verschoor, president of the International Radio Corp. of Ann Arbor, Mich., originators of the compact radio and manufacturers of the Kadette line, announces the retaining of MacManus, John & Adams, Inc., of Detroit as advertising and merchandising counsel. This agency, now identified with such accounts as Cadillac, LaSalle, and Pontiac motor cars, Champion Spark Plugs, Stokol home stokers, products of The Dow Chemical Co. and many others, has a long record of OK performance. Immediate plans, while not fully completed, include vigorous advertising and merchandising for the new line of Kadette radios now being introduced to the trade and public.

★ Grebe Mfg. Co., Inc., has opened a showing of its 1937 line at Hotel Lexington, New York City, to run through Sept. 19th. Concern will exhibit about 37 models.

★ Majestic Radio & Television Corp., Chicago, has just emerged from a 30-day schedule of dealer shows in key cities of the country. Exhibits attracted dealers as distant as 500 miles from the shows; Majestic reports many "sight unseen" orders from those unable to attend.

★ Garod Radio Corp. has announced a showing of its new models at the Hotel Lexington, New York City, begun Sept. 9. Company will show 31 models.

KADETTE Jewels

A WORLD of Happiness FOR SALE

10

TAKE ME WITH YOU FOR HOME OR TRAVEL

A BEAUTIFUL COLOR FOR EVERY PURPOSE

Kadette steps out again with a trim, colorful display, wherewith dealers may glorify the midget.

Every "UNWIRED" HOME and WAYSIDE GARAGE in Your Locality is a Potential Customer for

Tiny-Tim

6 Volt 200 Watt

Radio Battery Charger AND PORTABLE, Gas-Electric POWER PLANT

CONTINENTAL MOTORS CORPORATION
Powerful as the Nation
AMERICA'S STANDARD

for

- SUMMER COTTAGES
- FARM HOMES
- CAMPS
- WAYSIDE GARAGES
- SOFT DRINK STANDS
- MOTOR CRUISERS
- AUTO TRAILERS
- SAIL BOATS

● Tiny Tim Portable Radio Battery Charger and Power Plant was designed and built to meet a long-felt need. It is simple in construction, light in weight (weighs only 57 pounds), dependable and economical for your customers to buy and to operate. Tiny Tim is super-engineered for continuous operation. It is the only unit that is semi-automatic—stopping of itself when the battery is fully charged. Also it offers controlled

voltage—an exclusive feature. This means that a battery cannot be damaged due to high voltage. Tiny Tim has a genuine Red Seal engine and an entirely new type of generator. It will operate 18 to 20 hours on a single gallon of gasoline—will light fourteen 15-watt electric lamps, and at the same time charge a 6-volt battery. The retail price is \$55.00, F. O. B. Detroit.

Write for full information and dealer discounts on Tiny Tim and our new, simplified wiring system that can be installed in less than an hour.

Continental Motors Corporation

12801 East Jefferson Ave. - Detroit, Michigan

RECORD PIANO MUSIC
at 33½ R.P.M. with
UNIVERSAL PROFESSIONAL
Recording Machine

New, improved design—Scientifically correct—Superlative performance—Solid, heavy dependable—Precision machined for long and continued use—16-inch distortion proof turntable disc—Constant speed rim drive—110-volt AC 100% synchronous reversible motor—Individually calibrated timing bar provides for both 33½ and 78 rpm. at 90, 110 and 130 lines per inch—Solid steel bar slide—The climax of four years of research and experiment—Positively the last word in instantaneous recording equipment.

Write for latest folder giving detailed description.

UNIVERSAL MICROPHONE CO., Ltd. 424 WARREN LANE INGLEWOOD, CAL., U.S.A.

FALL TOOTS FOR RADIO-ELECTRICAL BIZ

Home appliance dealers notice peak in manufacturer help

★ GRAND shuffle which is currently conspicuous among the new-modeled makers of refrigerators and electrical home appliances has some catchy details.

Manufacturers are out with a mass of material to snap up the dealer's sales, determined to offer tie-ins of tested quality, eager to blanket the country with powerful plugs. It's to be devoutly hoped that every radio-electrical dealer knows about all the national advertising, store and window displays, mail-piece novelties, circularizing stunts, broadcast features, newspaper ads, etc., which have been set up to improve his sales future.

High points of this activity have been reported by the promotion champs in response to RADIO TODAY's willingness to summarize them.

Fairbanks-Morse issues business-getters

★ Lively notice of dealer help comes from W. R. Ceperly, FM's manager of advertising and sales promotion:

"Fairbanks-Morse refrigerator dealers are being supplied with a 'Blanket Coverage' newspaper among other sales helps to stimulate fall refrigerator sales. This full-sized newspaper, printed in three attention-compelling colors, illustrates and describes not only the leader model, but also several other models in the line.

"The various convenience and economy features are also graphically illustrated, together with a complete statement of the advantages of the refrigerator in its entirety. The 'Blanket Coverage' newspaper has been thoroughly tested in several sections and its sales productivity has been proven to be very high. Proper use of the newspaper enables the dealer to secure a complete coverage of his locality, impressively yet at a very low cost, comparatively.

"'Business Getters' are being distributed to Fairbanks-Morse refrigerator dealers as a means of stimulating fall sales. The 'Business Getters' are furnished in pamphlet form and contain detailed instructions for conducting specialized local

promotions. One of the 'Business Getters' is based on the housewife's interest in cold dishes for hot weather. Another is based on the age of products locally owned which were manufactured by this 106-year old company.

"Complete details for conducting local contests, judging and awarding prizes, securing publicity and planning a tie-up advertising campaign are contained in the 'Business Getters.'

"In addition to these items many other sales helps are being made available to Fairbanks-Morse Conservador refrigerator dealers to aid them in their fall sales campaign. Sales manuals, display pieces and folders of various types are included in the list of promotion material which is being distributed."

Norge trims sales resistance

★ Advertising experts for Norge point to a big-time drive to reach the last unit of American consumers. The current campaign features at least five branches of magazine and newspaper display, vigorously plugging "plus value" home appliances.

Norge has a national newspaper schedule of its own, featuring refrigerators, ranges, washers, ironers, dramatizing new features, a 10-year warranty. Four different ad lay-outs are currently in use on this schedule.

Special series of display ads are ready for use in dealer cooperative plans. Three of these feature combination offers, and a fourth accents

Norge's position in the business of making electricity a better servant in the home.

Company has also prepared a series of four ads, available to dealers for use where they do not care to prepare their own ads. Further, Norge has a batch of ten ads made up for either dealer cooperative or straight dealer advertising.

This Fall campaign also includes important displays in *The Saturday Evening Post* and *Good Housekeeping*.

Kelvinator masses its dealer help

★ E. L. Sylvester, director of public relations for Kelvinator Corp., has a current summary on how the company helps dealers this Fall:

"Featured in Kelvinator's program to assist dealers in merchandising its products is a 15-minute recorded radio program starring Donald Novis and Morton Gould with a 24-piece orchestra. For dealers calling for a less pretentious support is a disc giving 14 one-minute spot broadcasts. Both allow for cut-in dealer announcements.

"Six animated window displays are provided at six-week intervals to help dealers focus public attention on Kelvinator. A motor that will fit any display is provided gratis. This is augmented by a floor display featuring the fundamental requirements of refrigeration and emphasizing the manner in which Kelvinator fits all of these. Useful, also, are these displays for exhibits at fairs. Neon signs are added to call attention to Kelvinator and can be used either as a window sign feature or to direct attention to Kelvinator in a department store.

"Helpful also to dealers in visibly demonstrating the small amount it requires to finance the purchase of a Kelvinator is a bank into which coins may be inserted, making up the monthly payment in small deposits.

"Cooperative newspaper advertising, with the company providing the necessary mats and copy, is used to advantage by a large group of Kelvinator dealers."

RADIO WILL ELECT THE NEXT PRESIDENT

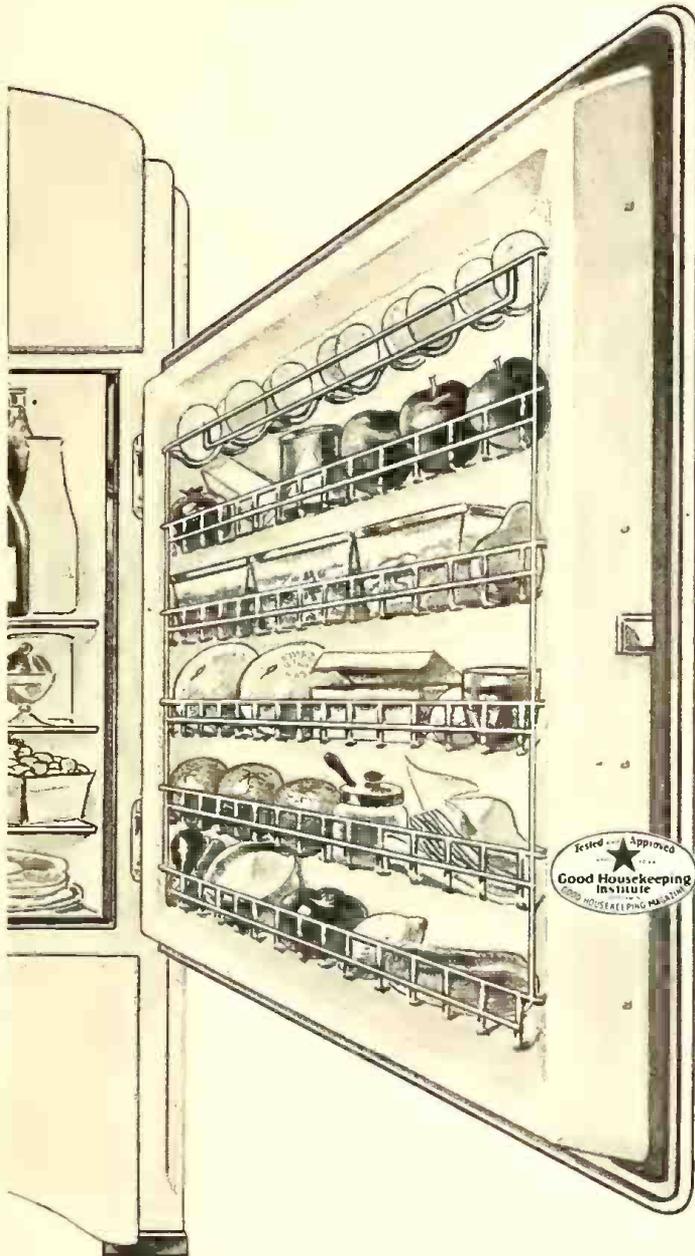
This phrase, coined by RADIO TODAY, and featured beginning with the January issue, has been taken up by radio manufacturers, jobbers, and dealers. Already it is being widely used.

RADIO TODAY urges readers to display this slogan in their own advertising between now and Election. Use it to help awaken the public to the new dignity and importance of radio in public affairs. Use it as an aid to selling more radios and better radios—

RADIO WILL ELECT THE NEXT PRESIDENT

The Open door

TO GREATER SALES VOLUME is the CROSLLEY SHELVDOR



The nation's housewives are stampeding to the Shelvador . . . Crosley Dealers everywhere are reporting new "highs" in sales volume . . . wide-awake dealers are clamoring for the Crosley franchise—what's causing all this excitement? Is it the advanced Shelvador features or Crosley's dominant position in electrical refrigeration? It's both of these PLUS . . .

this much more in
a **SHELVDOR**



**THE WORLD'S
MOST BEAUTIFUL
REFRIGERATOR**

DEALERS: Line up with the Crosley Line and Profit! The Crosley Shelvador is priced for quick sales action—from \$99.50 to \$244.95, including delivery, installation and FIVE-YEAR PROTECTION PLAN.

(All prices slightly higher in Florida, Texas, Rocky Mountain States and west.)

THE CROSLLEY RADIO CORPORATION • CINCINNATI
POWEL CROSLLEY, JR., *President*

JOBBER ON THE JUMP

★ Exceptional sales activity on the part of public utilities companies throughout the country has been reported by H. H. Bosworth, manager of the "central station" sales for GE's specialty appliance division. Sales of refrigerators and electric ranges are far ahead of last year, Bosworth declares, and the unusual angle is that the utility companies have continued activity on these lines straight through the summer.

★ Three important new jobbers have been named by the General Household Utilities Co. to distribute

Gruow sets: E. A. Wildermuth, Brooklyn, N. Y.; Peaslee-Gaulbert Corp., of Atlanta, Ga., San Antonio and Houston, Texas; Ferguson Co., Paducah, Ky. Sales manager at the Wildermuth Co. is Ray Hoefler; general manager at the Ferguson Co. is E. L. Yarnell.

★ Central Supply Co., Denver, Colo., is a new distributor for Motorola. A. H. Vogler, manager of the Denver firm, reports excellent business conditions in his state; Colorado missed the drought and cashed in on higher prices for fruits and

vegetables, and tourist biz in the state has reached a new high.

★ Large numbers of Zenith distributors went to a sectional meeting in Chicago late last month to discuss merchandising plans for the rest of 1936. Zenith's new Moderne window and floor display came in for a big hand. Meeting was conducted by E. F. McDonald, Zenith's president; E. A. Tracey, vice-president in charge of sales; J. R. Rasmussen, district sales manager; and N. H. Terwilliger, sales promotion manager.

Other Zenith event last month was a golf tournament for 75 members of the company's Men's Club. Terwilliger chairmanned the entertainment committee and arranged for prizes.

★ Real Radio Service, Inc., Milwaukee, Wis., is a new distributor for Fada, according to plans completed by Joseph Gerl, midwestern sales manager for Fada.

★ Utah Radio Products Co. announces the appointment of the following new distributors:

Central Radio Co., Milwaukee, Wis.
Ne-jed-jo Radio Supply Co., Green Bay, Wis.

South Side Radio Co., Chicago.
Chanrose Radio Co., Jamaica, Long Island, N. Y.

Fisher Distributing Co., New York City.

Romar Radio Co., Philadelphia.
Philadelphia Radio Supply Co., Philadelphia.

Herback & Rademan Co., Philadelphia.

J. F. Distributing Co., Brooklyn, N. Y.
Mac Radio Company, Mt. Vernon, N. Y.

Bennett's Radio Supply, Perth Amboy, N. J.

Aaron Lippman & Co., Newark, N. J.
M. Schwartz & Son, Schenectady, N. Y.
Page Radio Shop, Troy, N. Y.

★ Dealers from Colorado, Wyoming, western Nebraska and north-eastern New Mexico were recently guests of the Auto Equipment Co., Denver, Colo., Emerson distributors. Exceptional exhibit featuring the complete line was held at Grand Junction, Colo., under the supervision of J. H. Parks, Auto Co. treasurer.

★ Series of lively dealer meetings has just been finished by Lamar-Rankin Co., Atlanta, Ga., Sparton distributors. C. P. Humphries, appliance manager, conducted the meetings and Hugh Snyder, district sales manager, represented the Sparks-Withington Co. Georgia meetings were at Macon, Columbus, Savannah and Augusta; fifth meeting was held at Anderson, S.C.

★ Harry L. Roper, 7 years district manager for Crosley in Texas, has organized the Alamo Distributing Co., Inc., San Antonio, Texas, to job Crosley products. Succeeding Roper in the Texas managership is H. F. Clayton.

★ Fada announces a new distributor in Rochester, N.Y., the Kovalsky-Carr Elec. Co., Inc. New jobber arranged a pre-showing of the new Fada lines for Sept. 10 and 11, with Harold Custin, district manager for that area, in on the arrangements.

EVERY RADIO SERVICEMAN SHOULD OWN



Pocket D.C. Volt-Ohm-Milliammeter

FREE THE NATIONAL UNION *WAY



Reads D.C. 15-150-750 volts at 1000 ohms per volt; 1.5-15-150 Milliamperes; 1/2-1000 low ohms; 0-100,000 high ohms at 1.5 volts.

*The National Union Way makes the purchase of National Union radio tubes doubly profitable. Besides full protection on the highest quality radio tubes, each National Union tube purchased helps to earn free equipment. But, possession of the equipment is obtained at once with just a nominal cash deposit. (Deposit is rebated when required number of tubes have been purchased.) Over 50,000 completed deals with progressive radio dealers. Don't be misled. See your National Union jobber and get all the facts.

Other National Union Offers

In **SOUND EQUIPMENT** items available include 17-watt portable system, 10-watt portable system, 6-watt portable system, phonograph pickup and turntable, etc.

In **SERVICE EQUIPMENT** items available include tube testers, analyzers, oscillographs, signal generators, modulators, meters, etc.

In **SHOP EQUIPMENT** items available include stock cabinets, coats, display signs, etc. All items absolutely free the National Union Way.

National Union Radio Tubes

National Union manufactures a complete line of radio tubes in glass, metal and G-type. National Union's high quality has made them

the outstanding favorite in the radio service profession. All sales policies have been formulated with the idea of making National Union radio tubes the ideal replacement tube for the radio dealer. This has been backed up with a selling program that means real support and help to the wide-awake dealer. Dealers and jobbers handling National Union radio tubes are the leaders in repair parts and service.

Let National Union Help You

Write for Information

NATIONAL UNION THE ROAD TO BETTER BUSINESS

1. Full guarantee on highest quality radio tubes.
2. Cut price business not solicited.
3. Price Protection.
4. N. U. jobber stocks are complete...No hunting for odd types.
5. Timely business building aids.

NATIONAL UNION RADIO CORPORATION,
570 Lexington Ave., New York City (RT936)

Please send me more information on Ranger Examiner New Pocket DC Volt-Ohm-Milliammeter.

Dealer's Name

Address

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

JOBBERB ON THE JUMP



Sleek, streamlined trailer carrying a full line of gas-driven generating plants will make a bee-line through the West, down the Pacific Coast. Three gents speculating on its demonstrating power, left to right: Kenneth Ford of Chicago; Lee Robinson, sales mgr., RADIO TODAY; D. E. Bright, pres., Pioneer Gen-E-Motor Corp.

★ Down town studios of Station WLW, Cincinnati, was the scene of a two-day dealer meeting sponsored late last month by the Crosley Distributing Co. Some 300 dealers from Ohio, Kentucky and Indiana flocked to the open house affair.

★ Ontario Elec. Co., Buffalo, N.Y., has completely re-vamped its show rooms and now occupies an entire block. Lay-out includes 6 large show windows with permanent modernistic decorative effects.

★ Roskin Distributors, wholesalers for Philco radios and Fairbanks-Morse refrigerators in Boston and Worcester, Mass., Albany and Middletown, N.Y., report a 103 per cent increase in business over last year. Roskin Co. has enlarged and revamped its showrooms and warehouses, doubled its sales organization.

★ Colorado State Fair, held late last month at Pueblo, had one special radio booth. An Emerson distributor, Anto Equipment Co., Denver, co-operated with Crews Beggs Dept. Store, Pueblo, on a big exhibit featuring Emerson sets and Norge home appliances.

★ B. M. Cuthrell, Norfolk, Va., and P. G. Blanford, Portsmouth, Va., long-time distributors for Spartan, have formed the P. G. Distributing Corp., Norfolk, to job the line in 28 counties of Virginia and North Carolina.

★ Ros Howard is now sales manager of the RCA-Victor Distributing Corp., 111 North Canal St., Chicago. Mr. Howard was for a number of years sales manager of Zenith Distributing Corp., Chicago, and is generally recognized as one of the foremost sales executives in Chicago territory.

★ Utah Radio Products Corp. has appointed Samuel S. Egert as jobber sales representative for metropolitan New York, to have offices at 54 West 45th St., N. Y. C. J. B. Price retains his present position as Eastern manufacturers' sales representative for the firm.

★ Telechime, Inc., has been formed with sales offices in New York, Chicago and Cincinnati, to market electric-chime devices and musical doorbells manufactured by General Kontroler Company, Dayton, Ohio. Headquarters will be in the Carew Tower, Cincinnati, with Eastern offices in the Graybar Building, New York City. J. Ralph Corbett and Dr. Gisbert Bossard head the new merchandising company, and Walter H. Frentau is general sales manager.

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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.

BIGGER AND BETTER

That's

RIDER'S VOLUME VII

It will have

- 1600 PAGES more than ever before
- MORE COMPLETE SERVICING DATA than ever before
- MORE CHANGES than ever before
- MORE MANUFACTURERS than ever before
- SERVICE DATA ON 1936-1937 SETS announced up to November, 1936.



AND

A COMPLETELY REVISED INDEX COVERING ALL SEVEN RIDER MANUALS

PRICE \$10

"RADIO TOMORROW!"

Looking ahead into facsimile and television,
from a background of 30 years in radio

By DAVID SARNOFF, *President RCA*

★ AT PRESENT we are engaged in taking some of the new radio developments out of the laboratory and into the field for practical test. I refer particularly to Facsimile and to Television. We have recently opened an experimental facsimile circuit on ultra-short waves between Philadelphia and New York. We are now sending weather maps by radio facsimile to ships at sea. We are transmitting reproductions of photographs and of advertisements between New York, London and Paris.

Home facsimile

Some day also we shall have a facsimile broadcasting service to the home. The technical barriers to such a service have been overcome. Just as in the early days of sound broad-



This month Mr. Sarnoff completes 30 years' in radio. It was Sept. 30, 1906, that he got his first job with the old Marconi company, absorbed in 1919 by RCA which Mr. Sarnoff has served as traffic manager, engineer, general manager, and president since 1930.

casting it now remains to create the practical service which facsimile can render to the home. The genius of American business and particularly of American advertising will know how to use this new medium to its own profit and to the nation's benefit.

As to television it may be said that it is now in the earphone stage of radio. As a commercial operation television has not yet arrived. It is not around the corner nor even around the block. But we have advanced sufficiently far to say that the technical obstacles are not insuperable.

The test period may be a long and costly one. Critical technical problems must still be solved. The present range of television transmission from a single station is scarcely more than twenty-five miles and existing wire facilities are not suitable for inter-connecting television stations. Radio relays or a modified wire system must be developed to enlarge the range and potential audience for a single costly program.

Size of television picture

There is also the problem of further increasing the size of the television picture without loss of clarity. The experimental television observer today watches the stage from the back row of the second balcony. We want to give him a seat in the front row of the orchestra. When television broadcasting reaches the stage of commercial service advertising will have a new medium.

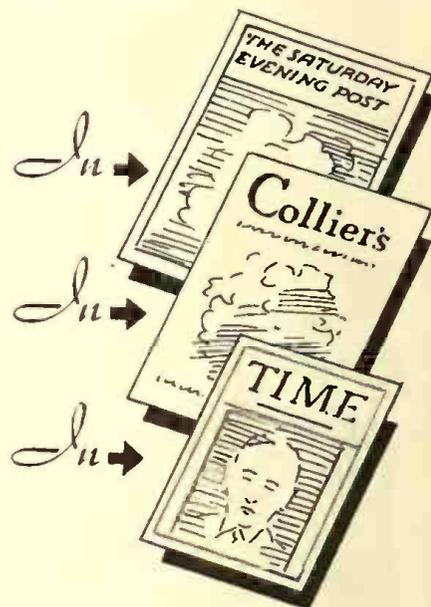
The new medium will not supplant or detract from the importance of present-day broadcasting. Rather it will supplement this older medium of sound and add a new force to the advertisers' armament of salesmanship.

Television will add little to the enjoyment of the symphony concert as it now comes by radio to your living room. Sound broadcasting will remain the basic service for the programs particularly adapted to its purposes. On the other hand television will bring into the home much visual material — news events, drama, paintings, personalities — which sound can bring only partially or not at all.



Into your community — read by thousands of *your* neighbors, *your* friends, *your* customers — goes G-E Focused Tone Radio Magazine Advertising.

The startling story of G-E Focused Tone Radio will be told regularly in *single pages, double pages, and center spreads, in FULL COLOR.*



AND OTHER LEADING PUBLICATIONS.

It is a *local* advertising campaign on a national basis — because it will bring *your* neighbors, *your* prospects for radio sales into *your* store to see and hear Radio's Newest Marvel, G-E FOCUSED TONE!

Cash in on the interest created by this advertising program. Identify your store as the G-E Focused Tone Radio headquarters in your community. Tie in with newspaper ads — select them from the G-E Radio 1937 Newspaper Mat Book. Use all the display material made available to you in the G-E Radio Sales Promotion Services. If you tie in your store with the G-E Focused Tone Radio Program in this manner, you will really "go to town" in the 1936-1937 radio season!

Watch

G-E RADIO

in 1936-37!

ONLY GENERAL ELECTRIC

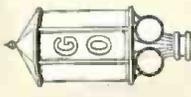
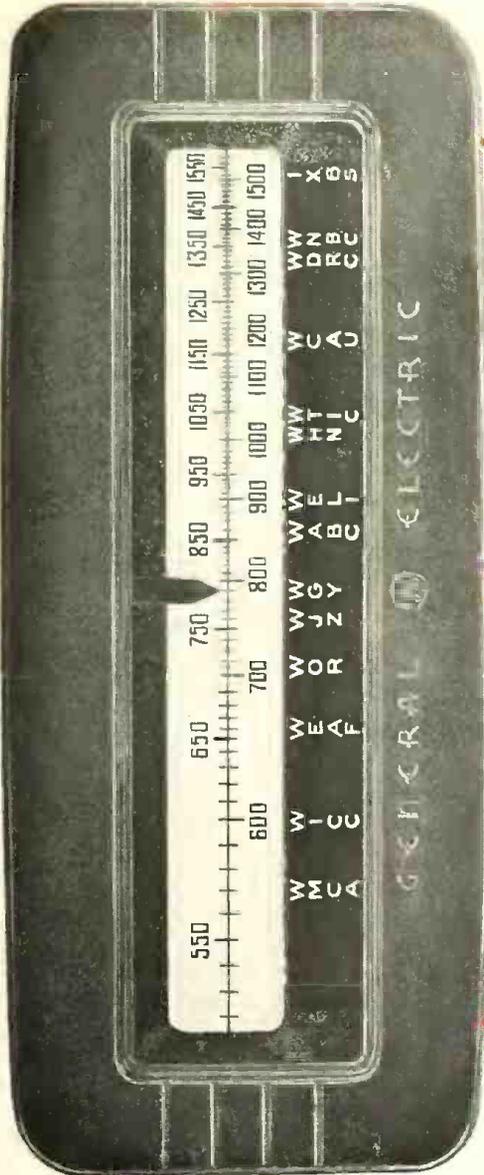
Focused Tone Radio

DIAL has these 5 Sensational

FEATURES

These new and amazing features are but a few of the selling opportunities incorporated in the design of the General Electric *Focused Tone* radio line. They signal *Green Lights Ahead* for dealers who want to "Go" places on increased radio sales and increased radio profits. It pays to sell a radio line that has so many advantages.

FOR METAL TUBE RENEWALS, SPECIFY G-E METAL TUBES.



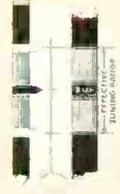
G-E COLORAMA TUNING

The dial flashes automatically from red to green to guide you in the selection of stations. The red signal warns you reception is distorted or no station is tuned in. When the dial shows bright green, the signal is strong, and free from noise — every note is true and clear.



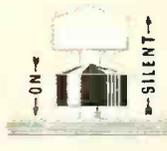
G-E LOCAL STATION PERSONALIZER

The tall letters of local stations flash on when you tune in. On the higher-priced models they are illuminated in green, individually. A "custom-made" scale is provided for each locality, listing the most popular stations in that area.



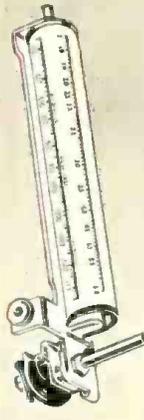
G-E AUTOMATIC FREQUENCY CONTROL

As the dial pointer is moved in to the approximate region of the station's resonance point on the dial scale, the receiver's tuned circuit automatically and instantly snaps into its perfect Focused Tone position. It's a dial you simply can't tune wrong.



G-E SILENT TUNING

Absolutely silences the speaker as you tune across the dial, passing over strong stations to the one you are interested in at the moment. When the station desired is reached, simply push in the control knob and the program is heard at its maximum clarity.



G-E SLIDING-RULE TUNING SCALE

It is as easy to read as a ruler. All kilocycle positions are shown on a straight line — like the markings of a "slide-rule." On the majority of models, only one scale is visible at a time; when changing to another band, a new scale is turned into position by the band-change switch. An automatic vernier reduction drive permits either rapid tuning or slow-speed tuning, without manual shifting of the tuning knob.

GENERAL ELECTRIC Focused Tone Radio

APPLIANCE AND MERCHANDISE DEPT., GENERAL ELECTRIC CO., BRIDGEPORT, CONN.

"HERE'S THE

Newest thing
IN RADIO!"

Your Parts Jobber

SEVENTEEN NEW

1937

SUPREME

**INSTRUMENTS
ARE READY**



**A COMPLETE
NEW LINE OF
RADIO-TEST EQUIP-
MENT FROM \$17.95
TO \$147.95**

The new 1937 SUPREME Instruments are on parade—a price range from \$17.95 to \$147.95—greater values than ever! For example—the model 590—seven A. C. voltage ranges of 0.5/25/125/250/500/1250/2500 volts; seven D. C. voltage ranges of 0.5/25/125/250/500/1250/2500 volts; five D. B. ranges—10 to +6, 0 to +16, +10 to +26, +20 to +36, and +30 to +46 decibels; six D. C. milliampere ranges of 0.250 microamps; one ampere range of 0/12.5 amps; twelve capacity ranges of 0.0125/0.025/0.05/0.125/0.25/0.5/1.25/2.5/5.0/12.5/25.0/50.0 mfd.; and five resistance ranges of 0.1, 1,000, 10,000, 100,000, 1,000,000/10,000,000 ohms from self-contained batteries. Ranges to cover all necessary test work in any receiver, transmitter or speech equipment. The 0-200 microampere Quadrimeter—the newest thing in Radio. All for only \$46.95. Write for catalog or come in today and see the world's finest radio Testing Equipment.

**YOU CAN
BUY ANY
SUPREME INSTRUMENT
ON S. I. C. EASY TERMS**

SUPREME INSTRUMENTS CORP. GREENWOOD MISS., U. S. A.

EXPORT DEPT., ASSOCIATED EXPORTERS CO., 145 W. 45th STREET, NEW YORK, N. Y., CABLE ADDRESS: LOPREH, N. Y.