

RADIO TODAY

Building an
a-l-radio dealer
structure—See p. 12

PHONOGRAPHS

RECORDS

INTER-
PHONES

TUBES

SOUND

AUTO RADIO

HOME RADIO

PARTS

SERVICING

APRIL

Match the Mood of Your Prospects...



*there's an NBC program
to do it*

THAT'S what the wise radio dealer does today. He doesn't tune in a Swing Band for the old folks, or give the young ones Household Hints. He finds out, in the course of the conversation, how tastes run in both sets and programs. Then he safeguards the sale by dialing an NBC Station and Program—one which matches the mood! It's an invaluable aid in selling the better sets.

Know your NBC Stations and Programs— what they are... when they go on. They're your yardstick of program quality. To tune them in, swiftly and accurately, is to give your demonstration every possible break!

*RCA presents "The Magic Key"
every Sunday 2 to 3 P. M., E. S. T.
on NBC Blue Network.*

**National
Broadcasting
Company**

A Radio Corporation of America Service

Clarion Radio

Everything new. but the name



Clarion - a name of infinite possibilities

Clarion was, and is again, the name of a Good Radio, as brilliantly alive as ever, because in nearly one million American homes, Clarion radio receivers are doing today what they were built to do—deliver constant and satisfactory radio reception at the turn of a switch. We are not reviving Clarion, because Clarion never died. Hundreds of thousands of satisfied owners and their millions of friends have seen to that, so we merely announce

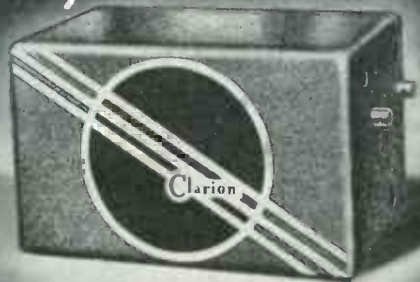
- THE CONTINUATION OF A GREAT NAME** • Clarion is sponsored by an experienced and successful group of CHICAGO radio men.
- the product will be as good as skilled engineers and experienced manufacturers using the very finest of raw materials can make it.
 - America's leading cabinet designer will provide the "styling."
 - the line will be sold only through carefully selected franchised distributors.
 - list prices will be very competitive.
 - discounts will be considerably better.

CLARION AUTO RADIO READY RIGHT NOW

- Three Great Sales Features: Tone Aligner. Sensitizer. Synchronizer. Six, Seven and Eight Tube Models. Price range \$34.95 to \$69.95.
- styled in a sleek, modern manner that Commands Attention.
 - quality performance that clinches the hard deals.
 - tailored panel mountings for all cars.
 - easiest to install and service.

CLARION CORPORATION, CHICAGO, U. S. A.
Pure Oil Building

7 Watts
UNDISTORTED POWER



First home set models ready in May

RCA RADIOTRONS
THE CHOICE OF MILLIONS
OF SET OWNERS

RCA Radio News

RCA Manufacturing Company, Inc. • Camden, New Jersey
A Service of the Radio Corporation of America

RCA "CHECK-UP"
THE CHOICE OF THOU-
SANDS OF SERVICE MEN

To the consumer, RCA Radiotrons mean high quality... To the radio man, RCA Radiotrons mean easier selling, higher profits

DEALERS GET WAY TO FIND PROSPECTS ... MAKE THEM PAY TO BE DISCOVERED

Spring "Check-Up" a Proved Way to Profits ... Pays You for Building New Sales!

RCA Radiotron jobbers now offer a vastly improved profit-making plan based on three years of successful operation.

The RCA Radiotron Spring Check-Up Plan is a sound, complete ten-point radio check-up service for which you charge your customer \$1.50, exclusive of parts... A complete merchandising package wrapped up for immediate use.

What It Does

This sensational Plan gives you entry into 73% of the homes in your community, because that many homes have a radio. Visits to sick radios open the door to the sale of more than tubes. Dealers and service men find check-up also promotes sales of service and parts—sells new sets and appliances.

Why It Works

58 out of every 100 sets in your community need service, repairs, new tubes. If you let them, set owners will wait until their radios break down completely before getting service. You can stir them into action with this Check-Up Plan because check-ups are a part of American life. People are accustomed to automobile, health and dental check-ups. Hence, they see the wisdom of a radio check-up.

You visit customers on the basis of "service"—not "sales". You get paid in full for the service you render. In addition, you collect for parts, tubes, and whatever else you sell—and every home offers you an opportunity for profitable sales! In this way, the RCA Check-Up Plan actually makes prospects *pay* for being discovered!

HOW THE CHECK-UP IS PROMOTED TO CONSUMER

RCA Radiotron, the only tube manufacturer today doing any national consumer advertising for its dealers, breaks with a tremendous campaign in April, featuring

One column ads in Saturday Evening Post and Collier's every other week.

Newspaper ads in over 100 cities.

Strong commercial announcements on a full-hour nation-wide broadcast every Sunday.

Ask your distributor how you can cash in on this outstanding advertising program.

POWERFUL SALES HELPS OFFERED BY RADIOTRON

Radiotron jobbers are now in a position to supply service men and dealers new and potent sales aids to help them cash in on the Spring Check-Up. Ask your jobber how.

1 You can have your name listed in local newspaper ads. 2 Newspaper mats for your own use can be secured. 3 New mailing pieces, handouts and various pieces of literature can be had on a cooperative basis.

MAKE YOUR WINDOW A PROFIT PULLER



Here is the second display in the '37 Radiotron Display Service. The slate with chalk and eraser comes with two giant cartons, measuring 6" x 6" x 18" and 30 dummy cartons. A real talking display that will help you sell Check-Up.

Ask your RCA Tube distributor how you can get this complete year's service.

NEW!

Auto Radio Check-Up Opens New Field for Sale of Service, Tubes and Parts

1,412,000 auto radios were sold last year. This year it is estimated there will be 1,750,000 more sold. Car dealers aren't prepared to service them. You are! These radios need attention more often than home sets—and the RCA Auto Radio Check-Up Plan gives you a great opportunity to cash in on extra business. Get full details from your RCA Tube distributor.

DEALERS MAKE 16% NET PROFIT USING RCA CHECK-UP PLAN

Below is shown results obtained by over 1,000 neighborhood dealers, radio service men and department stores from mailing 500 to 1,000 letters in connection with the RCA Radiotron Check-Up, to prospects and customers over a period of one month to three months. They averaged 38 calls per 1,000 mailings. Based on this average, the dollar returns per dealer are:

35 Check-Ups at \$1.50 each	\$ 52.50
Sale of tubes, parts for replacements were \$3.65 per Check-Up	127.75
	\$180.25

Dealers' operating cost based on the above dollar volume

Cost of tubes sold	\$ 39.01
Cost of parts and accessories	21.10
Cost of labor	38.00
20% overhead (rent, light, etc.) <small>(this is high)</small>	36.00
	\$134.11

*Average cost of advertising	\$ 17.00
Average net profit—16%	\$ 29.14

The profit shown above, of course, was in addition to the money made by dealers in the regular course of business. Many dealers have reported sales of new radios and other electrical appliances ranging from \$3 to well over \$700—all plus value and profit.

Thousands of dealers are averaging from 3% to 16% returns—from 30 to 160 radio check-up jobs per thousand letters sent to radio set owners, at an average of \$5 per job.



Did You Ask for **INNOVATIONS?**...Then Look to

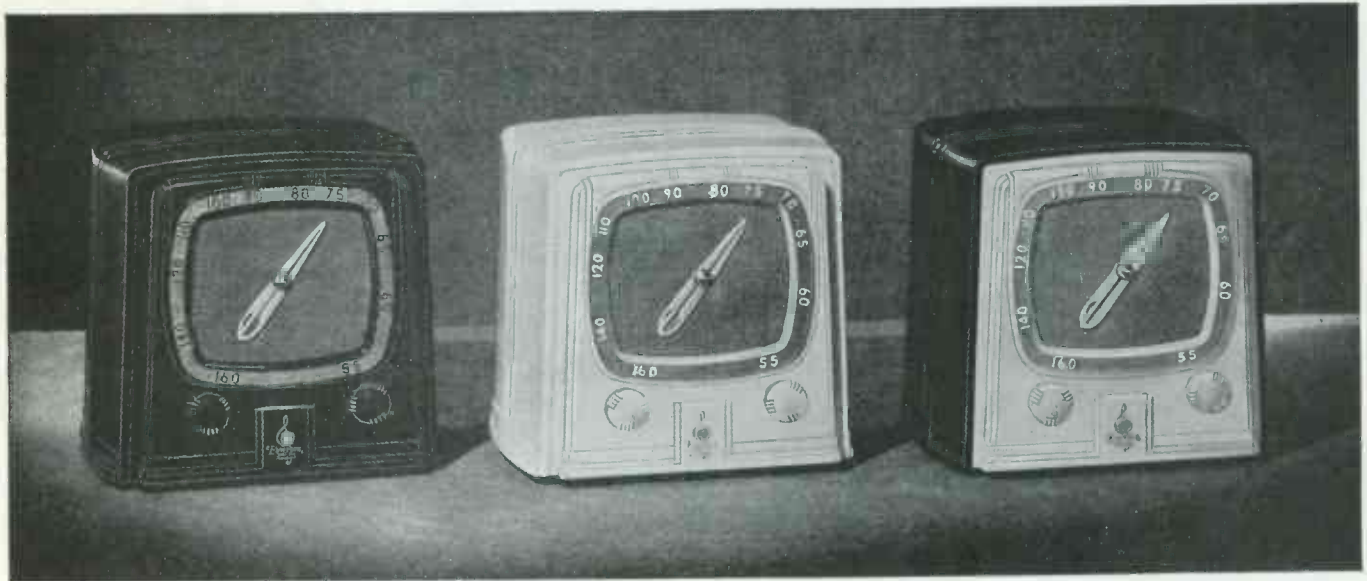
Emerson

"RE-CREATES THE ARTIST



Radio

IN YOUR HOME"



NEW... Emerson Model Q-157 Walnut—Ivory—Black and Ivory

\$14⁹⁵

(Slightly Higher in West and South)

AC-DC Compact — 4-Tube — Standard American Broadcast and Police Calls — with oversize grille dial, streamlined pointer, automatic overload control, electro-dynamic speaker, power line noise filter, built-in antenna and many other features, including illumination signal in center of trade-mark. Size: 7½" wide, 5¾" deep, 7½" high. Ready to make selling history for YOU.



Emerson "Silent Salesman"

Ask your Emerson distributor NOW for details of his offer to deliver this powerful demonstrator to your store. Put it to work. It's the most dynamic sales producer ever offered to the trade.

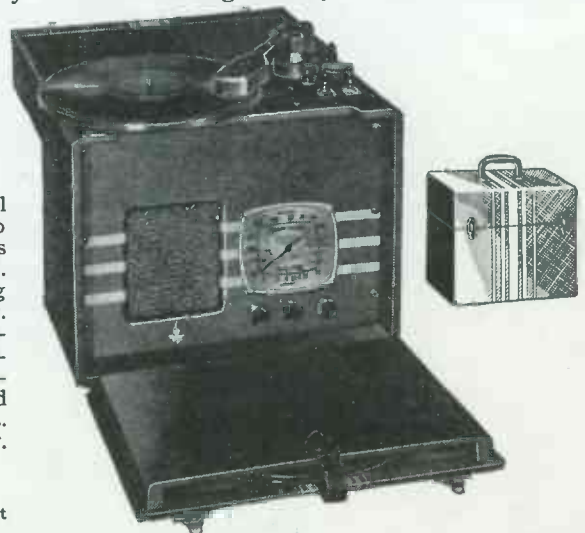
The COMPLETE Emerson line consists of Table Models, Consoles, Combination Radio and Phonographs, Battery Receivers and Auto Radio—\$14.95 to \$149.95.

PORTABLE Combination

EMERSON Model G-127 (At Right) Radio and Phonograph—Plays Anywhere (AC-DC). A VOLUME Spring and Summer seller. American — Foreign — Police. 6-Tube Super-heterodyne with advanced radio and phonograph features. 6½" dynamic speaker.

\$79⁹⁵

(Slightly Higher in West and South)



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

World's Largest Makers of Small Radios

THE RADIO STATIONS OF THE



— SHOWING JUST A FEW OF



Spot Lighting

DEALERS WHO OFFER THE COMMERCIAL CREDIT COMPANY PLAN

INCREASE YOUR SALES and assure yourself maximum profit on all time-payment transactions by standardizing on Commercial Credit Company financing.

Millions of families are in the market this year for refrigerators, automatic heating equipment, radios and electric household appliances. Most of these families buy on time. There will be no hitch in selling them if you offer them the Commercial Credit Company plan. They know the national reputation of this twenty-five year old company for integrity, consideration and low cost. More than 31,000,000 copies of full page, four color advertisements in national magazines this spring are spot lighting dealers who offer Commercial Credit Company financing.

Our perfected investigation methods weed out the questionable credit risks. Our great resources permit us to finance you up to the limit of your selling capacity. Our service through 180 local offices is pledged to give responsible dealers close co-operation at all times, under all circumstances. Write for complete information.



COMMERCIAL CREDIT COMPANY

COMMERCIAL BANKERS BALTIMORE



SERVING MANUFACTURERS, DISTRIBUTORS AND DEALERS THROUGH 180 OFFICES IN THE UNITED STATES AND CANADA

DON'T RETIRE

FROM THE RADIO BUSINESS THIS SUMMER

FEATURE FADA

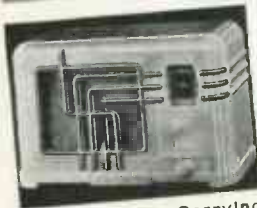
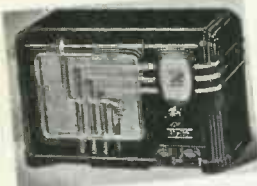
"COLORADIO" for the Home - "MOTOSSET" For the Auto

For Extra Summer Home Set Sales!

FADA Coloradio

"THE RADIO BEAUTIFUL"

FEATURED IN 7 DISTINCTIVE SERIES
8 MAGNIFICENT COLOR COMBINATIONS



Suede Zipper Carrying Cases are available for all Fada "Coloradio" models.

Fada "Coloradio" offers the dealer a complete line of radio receivers that satisfies every consumer demand... AC models, AC-DC models... and battery operated models for the farm. From the powerful 7 tube All-Wave superheterodyne to the 5 tube AC superheterodyne they possess the combined sales appeal of Color, Performance and Value. No other line of radio receivers offers the dealer such exceptional summer sales opportunities. Fada "Coloradio" series are priced as low as **\$19.99**

Fada "Coloradio" is featured in the following eight attractive color combinations.

WALNUT - BLACK - BLACK and GOLD - BLACK and CHROMIUM - IVORY - IVORY and GOLD - CHINESE RED - CHINESE RED and GOLD.

Specially designed "Coloradio" display is available to all dealers on Fada's co-operative advertising plan.

For Extra Summer Auto Radio Sales!

FADA Motoset

"AMERICA'S FINEST AUTO RADIO"

FEATURED IN 4 SUPERB MODELS THAT OFFER "STAY SOLD" PERFORMANCE

Make extra sales with the new Fada "Motoset," America's finest automobile radio. Model 267, 6 Tube Superheterodyne, pictured on the right, with self contained Dynamic Speaker and priced at \$42.95 to the Model 267SD with separate 8" Dynamic Speaker, pictured below, priced at \$49.95, offer the same "Stay Sold" performance because they possess identical chassis features.



CHASSIS FEATURES: 9 Tube Performance; No Spark Plug Suppressors; 3 Gang Condenser; Automatic Volume Control; Continuous Tone Control; Diode Detection; Electrostatically Shielded; 6 Tuned Circuits; 4 Watt Power Output; Micro-Sensitivity; Super-Selectivity; Low Battery Drain.

DEMONSTRATION DISPLAY
An attractive sales producing demonstration display is available to all dealers through Fada's special co-operative advertising plan.

MATCHED PANELS
1937 Fada Motoset Under Dash Mountings and Controls to match instrument panels on all cars are distinctive for their harmonious designs.

FADA RADIO & ELECTRIC COMPANY • LONG ISLAND CITY • N. Y.



EVERY OFFICE NEEDS

PHILCO PHONE



*... and every sale
is all PROFIT!*



\$49.50

FOR TWO STATIONS
ADDITIONAL STATIONS
\$10 EACH



Every business that uses more than one room is a PHILCO PHONE prospect! As a matter of fact, Philco dealers are finding the smaller firms . . . the ones not big enough to require a telephone switchboard and operator . . . are just about the easiest ones to interest in the time-saving, step-saving features of PHILCO PHONE!

So don't neglect the small business concerns . . . and the professional offices with one or two doctors and dentists and a receptionist! Every office . . . every garage . . .

every restaurant . . . every movie house needs PHILCO PHONE.

And every PHILCO PHONE you sell is all clean profit! No trade-ins . . . no expensive installation . . . no service worries . . . and a big percentage of cash sales!

Philco dealers who are putting the proper effort on PHILCO PHONE are finding sales aren't limited to business uses either. There's a big, untouched market in the better homes in your community, too!

PHILCO RADIO & TELEVISION CORPORATION

Staff—

DARRELL BARTEE
 RANDALL R. IRWIN
 M. H. NEWTON
 B. V. SPINETTA
 VINTON K. ULRICH

LEE ROBINSON
Sales Manager

RADIO TODAY

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RADIO PRICES GOING UP

★ Survey of radio industry shows that current rises in raw materials, parts, and labor costs will soon be felt in radio-receiver prices. A boost of 10 to 15 per cent is looked for when the new lines are announced in May or June with perhaps more increases later.

Facing labor difficulties, some set-makers have been cautious in fixing new prices too early. Factories which have not yet been forced into union contracts are holding back announcements until they learn what upance may be needed to meet new costs.

If coming price increases do not exceed 10 to 12 per cent, distributors and dealers feel that boost will not seriously affect consumer buying, since radio purchases are made at long intervals by any one family or buyer, and price memory does not linger.

"SPRING CLEAN-UP" TIME

★ This is the season when thousands of radio listeners begin to suffer annoyance from blown-down antennas, corroded contacts, and worn out tubes.

Earlier in the year, when reception was at its peak, these troubles were not so noticeable. But with the departure of cold weather, reception gets weaker, and then the faults in the listener's installation which have been accumulating all winter begin to show up as interference with the programs.

Accordingly RADIO TODAY is initiating a "Spring Clean-Up" campaign to be taken part in by all radio dealers and distributors, and is further co-operating by arranging for broadcast periods to tell the listener how to "eliminate present troubles by calling in a qualified radio man."

A chart of suggestions for the radio dealer and serviceman appears on a following page. The first of the broadcasts is scheduled for 7 P.M. E.S.T., Friday, April 23, over WJZ and Blue network, NBC.

BIGGEST AUTO-RADIO YEAR

★ Unless sit-downs and lock-outs further hold up automobile production, 1937 is going to be auto-radio's biggest year, by far.

Plans of the car-makers contemplate a 30 per cent increase in number of car-radios installed this season as compared with last year, when auto-radio sales were 2,000,000 sets, according to observers in a position to review all makes.

At least one million auto-radio sets will be sold through local retail dealers during 1937, according to this same authority.

8,248,755 RADIOS IN 1936

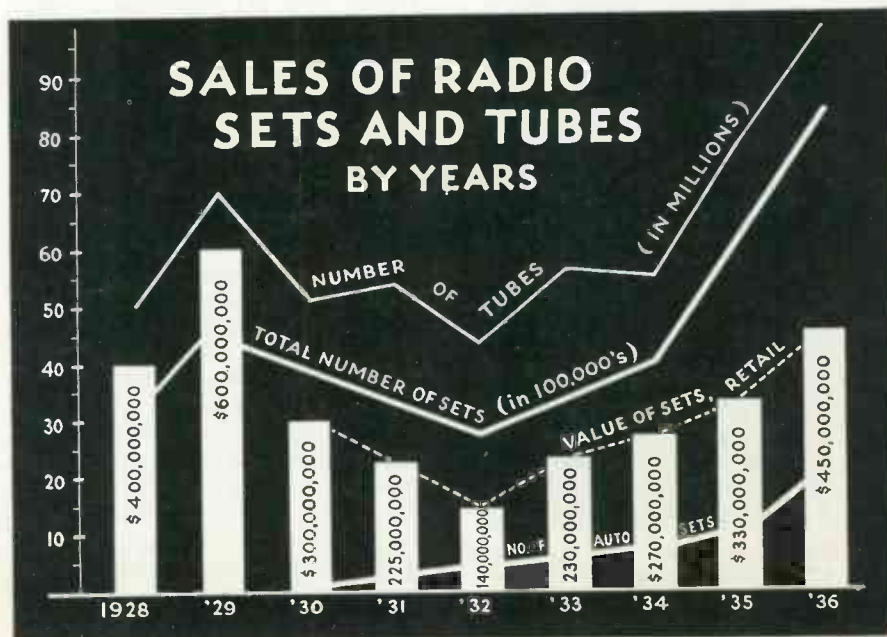
★ Complete figures reporting all radio sets built by licensed radio manufacturers in 1936, are now available for all four quarters of the year, and reveal that radio-set sales for the twelve months officially passed eight million receivers. This total is, of course, an all-time high—in number of sets—far exceeding the banner year of 1929, when production was 4,400,000 sets, with a retail value of

\$600,000,000. In comparison, 1936 retail value was probably about \$450,000,000

1935	Sets
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	Sets
1st quarter	1,287,462
2nd quarter	1,697,444
3rd quarter	2,330,959
4th quarter	2,932,890
Total	8,248,755

Radio-tube sales showed a corresponding increase over the preceding year. Following are the figures on tube output, 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	19,971,773	6,595,378
July-Sept.	23,965,512	9,434,460
Oct.-Dec.	30,891,846	9,846,100
Total	98,304,208	\$31,942,400





Vance Woodcox, new field sales manager for RCA-Victor, at Camden.

CAUGHT IN THE THIRD NET

★ Champ spreader among the networks these days is the fiercely expanding Mutual Broadcasting System. Only 30 months old, MBS has been coast-to-coast since last December; this month it adds 8 stations of the Oklahoma Network, bringing the total hook-up to 51. Mutual talks up special flexibility of coverage, and mentions that it has a set-up which "moves Hollywood east."

Station counts on the other networks are today: NBC Red and Blue 124, Columbia 103.



Sam Ruttenberg of Amperite examines mike which, after immersion ten days in Portsmouth, Ohio, flood, worked as well as ever.

SPECIAL TRAIN TO TRADE SHOW, CHICAGO

★ For the first time since 1931, at least one special train will carry an Eastern contingent of manufacturers, distributors, sales representatives, and others to the National Trade Show in Chicago.

The "Radio Industry Special" will leave Grand Central Station over the New York Central Lines June 9, to arrive in Chicago on the morning of June 10, opening day of the Trade Show. Cars will be picked up at Albany, Rochester, Buffalo, Cleveland, and other points en route. The Albany car will start from Boston, thus permitting the New England radio trade to join the "Special."

The Committee on Transportation comprises Perry Saftler, Chas. Golenpaul of the Sales Managers Club, and Dan Bittan, Jack Price and Earl Dietrich, all of The "Representatives." Details about the "Radio Industry Special" can be obtained from Perry Saftler at 27 Warren Street, New York City, or members of the Committee.

CROWNING SEASON

★ Hand that builds the programs still sells the sets, and right now that hand is plenty fleet. London's Coronation event will of course be a high point in the current broadcast season; NBC alone will have 50 mikes scattered slyly around Buckingham Palace and Westminster Abbey, with which to pick up the post-Simpson events.

Big-league baseball is now under way, with plenty of cash meaning for the tube as well as the set business. Such persons as Mrs. Roosevelt and Grace Moore have started new broadcasts. Then there's the Spring season of Metropolitan Opera, and Nat'l Music Week, May 2-8.

MARKING THE CHAIN PROGRAMS

★ Many of the new 1937 radio sets will have push-button control, each receiver will be locally "set up" so that by pushing buttons marked with the letters of nearby stations, the desired program will be heard.

This new development seems to set the stage for a more easy designation of chain programs. It would be an easy matter to have the chain-station push buttons of distinctive colors, so that NBC Red, NBC Blue, CBS, and MBS programs could be at once located on any up-to-date set.

Many listeners follow particular

chain features. Researches made by RADIO TODAY indicate that the great mass of these listeners, while familiar with their local broadcast stations, do not know what the station's chain affiliation may be. To find a popular chain program thus becomes a matter of trial and error, by tuning in all local stations.

If the radio dealer who sells new sets—or the service man who repairs older receivers—made a regular practice of marking in the network affiliations of local stations, this would be of great convenience to the listener, and of great advantage to the broadcast chains and their advertisers.

RMA DIRECTORS, NEW YORK, APRIL 22

★ The Radio Manufacturers Association board of directors will hold its next and regular Spring meeting at the Hotel Roosevelt, New York City, April 22, instead of at Hot Springs, Va., as previously planned. Originally it has been hoped to combine the board meeting with a vacation session at Hot Springs, but engagements of several of the directors made this impossible.

The RMA annual convention will be held at Chicago, June 8-9, preceding the National Radio Parts Show. A big industry banquet in the Hotel Stevens grand ballroom is a projected highlight of the Chicago convention.



A. A. Berard of Ward-Leonard, vice-president of National Chicago Trade Show, June 10-13.



Bill Osler, vice-president Cornish Wire, on a three-week cruise to the West Indies.

RADIO EXPORTS UP 28%

★ From Washington comes Department of Commerce report that radio exports are very much on the up and up. Radio shipments for February, 1937, were \$2,376,000, as against \$1,829,000 a year ago—an increase of 30 per cent for the month.

For the two months ending February 28, 1937, radio exports were \$4,960,000, as compared with \$2,868,000 for the corresponding two months of 1936 indicating 28% increase.

Last year 600,000 radio sets were exported, or 7½ per cent of the total radio sets made.

FINE FEMINE HAND

★ Ten million critical dames of this country decide every year to ballot daintily over which radio programs they think are the best. Gals are affiliated with the Women's National Radio Committee, which throws an annual dinner when things are decided, awards scrolls. Outfit often waxes quite acid over what it regards as a lack of quality programs.

This year, the Committee said that the best musical program was the Detroit Symphony Orchestra; best variety show, Rudy Vallee Hour; best educational program, Chicago University Round Table; best news program, Boake Carter; best children's program, Dorothy Gordon's Children's Corner; best drama, WABC Radio Theater.

Two special scrolls were awarded: one to Mutual's WOR for "outstanding contribution to serious music," the other to Dr. Walter Damrosch, who got super-mention for "foresightedness in grasping the possibilities of radio for the dissemination of musical culture."

RADIO SALES BY MONTHS, WASHINGTON, D. C.

★ The Electric Institute of Washington, D. C., compiles all sales of radio and electrical appliances in the capital-city territory, as reported by dealers and distributors. Listed below are monthly sales of radio sets to dealers. "Figures shown are radio sets averaging \$55, and do not include sales of midget sets—we did not attempt to keep a monthly record of midgets," explains William G. Hills, assistant director.

1936 sales by wholesalers:

January	2,437
February	1,600
March	1,763
April	1,652
May	709
June	1,832
July	1,763
August	3,245
September	4,246
October	5,009
November	4,005
December	6,726

Total sales through wholesalers 34,987

In addition, 9,000 midgets were sold at an average list price of \$11 (\$99,000). Also, local radio dealers reported purchasing *direct from manufacturers* 1,711 radio sets, at an average list price of \$55 (\$94,105).



Bob Lacey, popular radio exec, becomes general manager of new Clarion Corporation, Chicago.

Total radio sales going into the Washington market thus aggregated 45,689 sets, at a total list value of \$2,117,390.

Washington has one of the very highest percentages of radio saturation in the country, the recent report of the Joint Committee on Radio Research giving it 125,000 homes with radios, in a population of 487,000. This is a saturation of 256 radio homes per thousand of population. Other high saturations are: Los Angeles, 268 per 1,000; San Francisco, 269; Miami, 250; Des Moines, 257; Kansas City, 258. U. S. average, 186.



C. W. (Bill) Shaw, new general sales manager for Hygrade-Sylvania, lays plans for putting new tubes in old sockets, with Paul S. Ellison, renewal sales head.

THE "ALL-RADIO" DEALER

New "tube-amplifier" lines, inter-phones, "sound," auto-radio, etc., complete merchandise structure begun by home sets, phonographs, records

★ GENTLEMAN - DEALER of 10 years back, the man with the phonographs and the polished manners, will tell you that his store used to be a heart-unit of the community.

Outfits operated those fine days on a solid routine, quiet and authentic. They were a non-chiseling, low-pressure lot, discreet and prosperous. They understood good music and sold things to everybody in town who spoke the language; they were civilized authorities on home entertainment.

Some 8,000 of these dealers withdrew in confusion when radio got under way as a specialty. It was a musical instrument, sure, but these gents had neither the wish nor the strength to out-promote some of the noisy opportunists who rushed in to sell it as a gadget on which the price could be cut.

The road back

If the trade tempo reduced the cultural aspects of radio merchandising, it also produced a series of new products with which the old-type dealer may come back for keeps.

New trend offers a series of improved radio-tube devices including intercommunicating systems, phonograph-radios, sound apparatus, electronic musical instruments and organs, etc. These are added to the stand-bys: home and auto sets, tubes,

parts, servicing, records, etc. One day television will be added.

Outlook is that the business may regain its long-lost chance to exist mainly to sell only-radio-musical devices. Attached are a natural appeal and a deal of profit.

Nature of these items is such that the former technique, the old language, is stirred to life. Dealers will still sell merchandise which has special sales value from a seasonal angle, but the main acquaintance will be with amplification via the tube.

Sober again

Radio stores will once more become shops of character and prestige, listed in the local schematic as there-to-stay entertainment centers. Fact that music has taken to the air only gives them more authority and more chance to do the finer type of business, coupled with technical expertness.

Bond of the most advantage has always been the store's acquaintance with local clubs, listening groups, churches, schools, civic groups, etc.

Today, therefore, the all-radio dealer must also keep in close touch with the broadcast offerings on the air. He must know about the great features which are coming—the Metropolitan Opera broadcasts, the trans-Atlantic programs, the Toscanini concerts, and the many unique events

on which the broadcasters spend fortunes to report adequately. For these outstanding broadcasts the radio dealer can appoint himself local promotion and bally-hoo man,—to see that the whole community, homes, clubs, schools, take full advantage of the treasures on the air.

Clear interference

In helping to solve the problems of local interference, the dealer can accomplish much by cooperation with the local utility company. Local reception can be no better than the noise-level of man-made interference in the vicinity. The radio dealer should have proper instruments in his service shop, to locate electrical interference. And he should work with the local broadcast station and the electric-light company to track down interference troubles reported from those two sources.

Part of the excitement is due to the fact that the possible all-radio set-up includes many products for which the local market is practically untouched. The sound business doesn't know its own strength, as the list of applications increases every day. Observe that no less than 95 good-sized companies are manufacturing the apparatus.

As for intercommunicating systems, which are perhaps the newest of radio's own products, the outlook has continually brightened since the idea appeared. Actually, the majority of receiver prospects are also inter-phone prospects. A total of 20 manufacturers are already in the field.

Set engineers have learned the trick of quickly outmoding the receivers of another year, and there are nearly 150 companies doing it. It will be recalled, too, in building up the all-radio picture, that there are 620 makers of parts, 55 manufacturers of test equipment, and 13 tube makers.

Thus the total number of manufacturers in the tube-amplifying field nears 1,000. They have national advertising campaigns, research departments preparing more gadgets, modern promotion policies. Little doubt but that the new all-radio trade structure will be substantial and profitable.

THE 1937 DEALER

works with

Musical leaders
Civic groups
Schools Churches
Social clubs
Newspapers
Local broadcasters
Utilities
Other stores

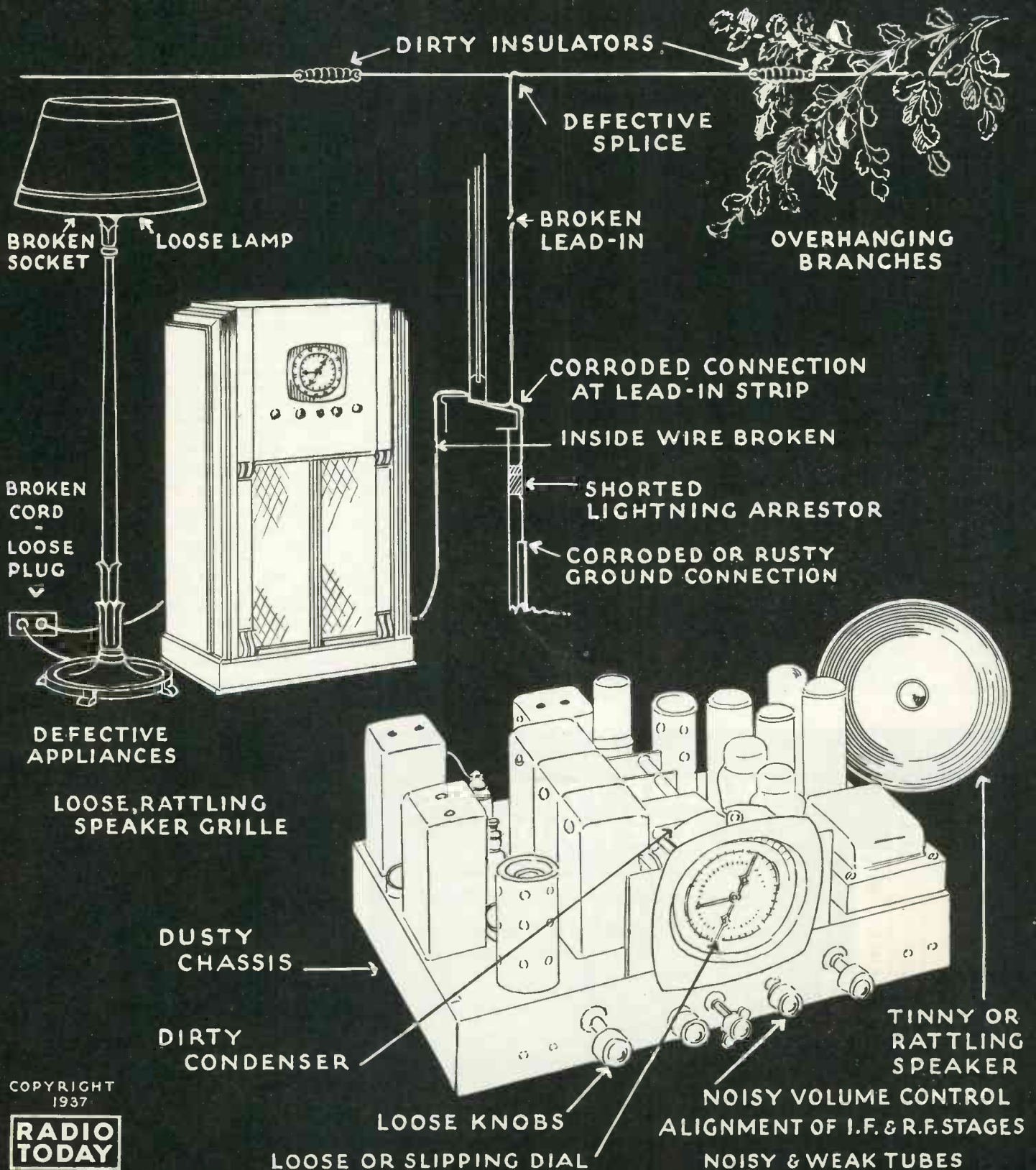
HIS 1937 STORE

features

Home sets
Auto sets
Phonograph-radios
Records Tubes
Intercommunicators
Sound equipment
Electronic instruments
Servicing

SPRING CLEAN-UP

Every home radio installation needs a thorough going-over by a competent service man — and a new set of tubes!



COPYRIGHT
1937

**RADIO
TODAY**

HIGHER PRICES ARE AHEAD

Radio sets must follow upwards with increasing cost of materials, parts and labor

★ RADIO prices are going up.

This price movement is already apparent in almost every commodity. And radio sets will be no exception.

Price levels of the new receivers seem likely to be 10 or 15 per cent above the prices of corresponding sets for the past season. Raw-material costs, parts costs, and labor costs have all responded to the upward surge of recent prosperity.

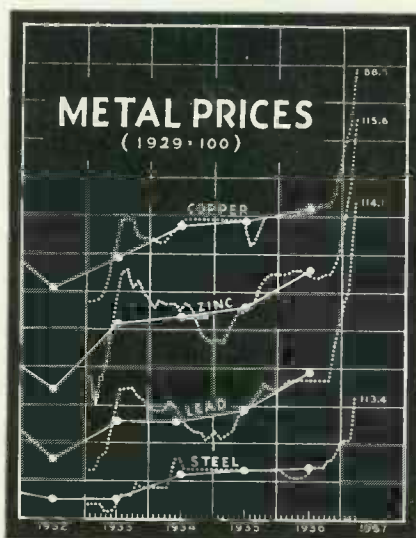
And these up-surges are bound to carry radio prices upward with them in the opinion of radio industry leaders. When the new models are introduced in May and June, the higher levels are likely to take effect.

Scarcity of materials

Scarcity is another factor which has had the set-makers worried. For not only are prices of raw materials, metals, wood veneers, etc., up 10 per cent or more, but in some cases these raw materials are so scarce that they are being rationed out on the same basis as purchases were made a year ago.

Even the forces recently set in motion by the Administration at Washington to stop further increases in raw material prices by shutting off capital-goods purchases by the Government, do not seem likely to head off radio-set price increases, for such price-revisions are already necessary based on the raw-material advances that have occurred.

Meanwhile it is expected that fur-



How metals have soared in price since 1932. Chart by National Industrial Conference Board.

ther labor-cost adjustments may be made. While labor contracts have been completed in some sections, these still remain to be negotiated in other plants, and such manufacturers are delaying announcing new higher prices until they can determine just how far these will have to go.

RADIO TODAY has invited expressions from radio industry leaders on the price situation facing the trade, and presents the following informative comments from well-known personalities of radio.

Arthur T. Murray, chairman of the

radio-receiver section of the Radio Manufacturers Association and president of United American Bosch, says:

"To my mind there is no question but that radio prices must be higher during the coming season—since, going back to the source, the cost of practically everything is the result of the labor employed in its fabrication—back, in fact, to the amount that is paid labor for taking metal in the form of ore from the ground. With labor rates advancing the way they are, I don't see how there can be any question that prices will be higher."

More increases later

Speaking for Philco, Vice-President Sayre M. Ramsdell writes:

"Our feeling is that radio cannot escape higher prices this season. The rise will probably be startling. But it will be absolutely necessary, due to increases of from 50 per cent to 100 per cent in the cost of basic materials entering into radio construction—as well as increased costs in radio manufacturing plants themselves. Not only will initial prices for the new season be higher, but there is every likelihood that further increases will be necessary as the season progresses."

In Commander McDonald's absence, Zenith's Paul M. Bryant comments:

"The radio business, as well as most other businesses, is going to see higher prices this season. This advance in price is inevitable, in view of the rising costs of raw materials, parts and labor. The effect of higher prices should be felt at the time new lines are introduced."

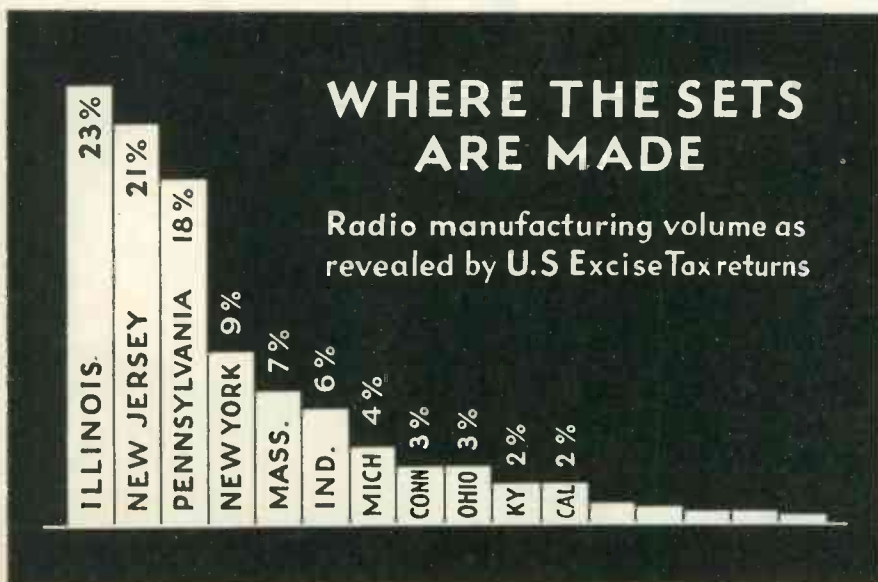
Ernest H. Vogel, radio manager for General Electric, anticipates:

"There is no doubt and every indication that, due to increased material and labor costs, prices of radio sets for the coming season will be definitely higher than those that prevailed a year ago. We are not in a position to determine now what percentage of increase will be in effect as the items of labor and materials are constantly in flux."

Ben Abrams, Emerson's president, sees price advances five months off. He says:

"Briefly, my answer is that we will see higher prices about September or October. My opinion is that the increase will be in the neighborhood of about 10 per cent. Actually, there is good reason for increased prices to be in effect right now. However, the season of the year and the fact that a few manufacturers are liquidating some of last year's models, makes it difficult to put into effect the right prices on radio sets at this time.

"I feel that even higher than 10 per cent increases should go into effect in the fall, if some of the manufacturers would put into effect a better control



on production. Unfortunately, excessive production makes necessary the very short profit on radio, which in many cases is inconsistent with good business practice, and particularly so as regards a product such as radio for which the buying public is prepared to pay a fair price, if only the industry would stop forcing on the market more radio sets than the market can consume. As a result, the price level is kept down, and all at the expense of the manufacturer, jobber and dealer. The only remedy I can see, is the starting of a movement for control of production, industry-wise."

Ol' Debble Depreciation

Lee McCanne, radio sales manager for Stromberg-Carlson, sees saner bookkeeping by radio manufacturers as a factor in price advances:

"In increasing prices, I believe most manufacturers will try to avoid the deliberate under-pricing of certain models as loss-leaders, and will try to cover their normal overhead with a proper provision for depreciation. Much has been said about restricting prices to the bare amount necessary to cover increased costs of material and labor and attempts have been made by politicians to picture as 'heartless connivers' those manufacturers who try to put their prices where they ought to be to provide a normal manufacturing profit.

"The fact remains, however, that in recent lean years with intense competition one manufacturer after another has stopped writing off normal depreciation on his plant and equipment; has arbitrarily set up a fictitious low overhead or has deliberately under-priced one or more models while in the throes of that fever known as 'volume mania.'

"After three or four years of this kind of juggling of figures, Old Man Depreciation begins to catch up with us. Machines wear out and there is no fund built up to replace them. People start buying his loss-leaders faster and the manufacturer wakes up to find he is losing money in a hurry."

Sounder basis

Expressing the views of President Alschuler of Sentinel, E. G. May writes:

"Surely the distributor and dealer are not in a position to absorb advanced costs, as their expenses of doing business must necessarily increase proportionately to the higher costs of labor, rents, etc.

"The above is all well and good, as it certainly would not be out of order for the radio business to be more remunerative for all concerned. Restraint must be used, however, to prevent this inflation of prices reaching a point where prices are beyond the means of the ultimate consumer upon whom we are all dependent.

"This rising market represents an opportunity for the establishing of resale prices on a sounder basis than we have been forced to submit to in the past. We hope it will be treated as such, rather than as an opportunity to skyrocket profits to a point where the entire industry will suffer."

April, 1937

TUBES CRY "REPLACE US"

— yet millions of sockets are renewed only once in 5 years!

— present replacement sales should be doubled or tripled.

★ THE radio tube business has only one major fault. Radio tubes stay in operating service too long! For too many years those faithful little electron-emitters go on glowing feebly in the dark and reproducing the wonderful melodies of the night air. They just won't give up the ghost.

True, they grow weaker and weaker with the months after the first year or two. But though they may distort the beautiful tones of priceless artists, cause noise and hum, and require the volume control to be hiked up to the limit, callous radio listeners seem to go on expecting radio tubes to work three years, four years, five years, and maybe longer.

44 million tubes

For actually the average use now imposed upon radio tubes in this country is five years! Figure it out for yourself.

Last year 44 million tubes or thereabouts were sold for replacement purposes. Altogether we now have about 29 million home radios and 5 million

automobile radios in use. Allowing six tubes or so per set, this is a total of 230 million tube sockets in the home and auto radios. To this number, add ten million sockets to cover those in radio experimenters' outfits, "ham" stations, public-address and sound systems, and other miscellaneous uses, and the number of sockets rises to 240 millions, as shown below.

Dollars waiting

And, of course, 44 million tubes poured into 240 million sockets, is one tube renewal only every fifth year or longer—only a mere sprinkle!

If tubes were to be replaced even every second year, the present tube-replacement business would be doubled and tripled.

This tube-replacement problem demands the attention of every radio dealer, serviceman and distributor. For each, it represents a golden opportunity—a chance to pick up waiting dollars—while helping millions of listeners put their sets in shape to enjoy fully the great programs the broadcasters send them.



RADIO DEALERS AVERAGED \$19,300

—replies to RADIO TODAY'S survey show installment sales high
 —most dealers reporting have profitable service departments

★ **RESPONSES** to the questionnaires sent out to radio dealers, in RADIO TODAY'S extensive "Survey of Radio Selling Costs and Profits," are now coming in to the New York office, and already retail radio sales aggregating three million dollars have been reported on. Most of the forms returned have been fully filled in to give complete merchandising information on the businesses reporting, although in some instances occasional details are found to be omitted. A very large proportion of the replies, however, will be found usable for compilation.

In the replies from dealers reporting fully, yearly volumes of sales of radio run from a few hundred dollars annually, up to hundreds of thousands of dollars of 1936 sales. But the average of the dealers reporting thus far, falls at \$19,300 a year for radio sales. (This checks closely with the "average radio dealer" figure cited in the January, 1937, issue of RADIO TODAY, where the community "key-dealer" was assumed to sell \$17,600 in sets and about \$2,000 in tubes, besides doing \$4,000 in radio servicing and repairs.)

Most dealers reported their 1936

radio sales well ahead of 1935. Some enjoyed a two-fold and three-fold increase in sales volume; a few others fell behind 1935 but gave no reason to account for it. The average of the replies received indicated an increase of 60 per cent for 1936, over 1935. (Radio sales in 1936 160 per cent of the 1935 figure.)

Installment sales lead

A considerable extent of installment business was indicated in 1936, particularly in the more active concerns doing the larger volumes of business. Thus for the dealers reporting, the relative sales handled on cash, credit, and easy-payments, rank as follows:

Cash sales30%
 Credit sales18%
 Installment sales52%

The majority of the radio dealers reporting have their own radio-servicing and repair organizations, in addition to their regular installation men. These servicing businesses seem to have made money during 1936, and since this additional income was earned without any considerable capital outlay, it would ap-

pear that a service department is a profitable adjunct for a radio retail store, if it is supervised by careful management.

Listed below are representative statements for radio businesses falling around the average of the replies received—\$19,300. These figures, which are shown without identification, can be used as valuable comparisons for the reader's own business, if within this range of \$15,000 to \$30,000 yearly.

The complete returns of the survey will be analyzed by various groupings, and will be reported on fully in following issues.

ON-YOUR-TOES DEMO

★ Sales experts are steadily advising dealers that all radio displays should be connected to the proper power, aerial and ground outlets at all times. Several dealers who make this a part of their policy have reported that it really makes for effectiveness and ease in sales presentations.

Facts are that if a dealer is forced to hold up his demonstration, prospect will exhibit impatience.

SOME REPRESENTATIVE OPERATING STATEMENTS FROM RADIO DEALERS IN THE \$15,000-\$30,000 CLASS

	A	B	C	D	E	F	G
1. Sales of Radio in 1936.	\$17,194	\$19,865	\$21,500	\$22,331	\$23,451	\$27,352	\$29,215
(gross sales minus returns, etc.)							
2. Opening Inventory of Radio, Jan. 1, 1936.	1,267	1,942	2,400	1,610	566	1,119	2,100
(at cost, unless otherwise noted)							
3. Radio Merchandise Purchased during 1936.	12,278	10,843	14,000	13,809	12,066	13,889	13,700
4. Closing Inventory of Radio, Dec. 31, 1936.	2,634	2,367	2,100	2,061	520	1,555	2,450
(at cost, unless otherwise noted)							
5. Radio Sales represent of my total business.	80%	77%	60%	85%	65%	34%	20%
6. Expense of handling sales during 1936							
a. Salaries of owners or officers.	2,007	2,400	3,000	4,636	3,000	1,810	4,200
b. Employees' salaries and wages.	689	1,889	3,000	416	2,000	6,507	3,745
c. Rent.	240	700	1,440	328	540	.....	900
d. Advertising.	446	632	100	543	300	.....	1,350
e. Light, heat, telephone.	179	240	480	197	250	382	600
f. Free servicing during guarantee period, delivery, installation.	127	798	80	.....	250	.....	250
g. All other expenses.	1,052	2,000	250	.....	125	3,500	300
Total cost of doing business.	4,600	6,261	8,350	.....	6,465	12,200	11,355
7. I operate a radio-repair or "service" department which during 1936 took in a total of. ....	.....	937	9,600	.....	.....	20,924	.....
To operate this repair department during same period, cost, not including free servicing of sets sold (see 6f.). ....	.....	850	8,400	.....	.....	5,834	.....
Making a net profit on repair dept. of. ....	.....	87	1,200	2,565	.....	14,089	.....
8. Radio sales in 1936 in terms of 1935.	180%	116%	96%	97%	120%	.....	85%
9. My 1936 radio sales were divided approximately (in percentages)							
(Cash.	25	30	40	15	4	.....	5
(Credit.	15	10	40	.....	9	.....	.....
(Installment sales.	60	60	20	85	87	.....	95



Stride No. 1



Move No. 2

FOUR STRIDES IN SELLING

Refrain: "In the Good
Old Summer Time"

"We shout, we orate, we go into ecstasies over a model. . ."

In other words, we have to watch it, or we make the customer feel "the strain of buying."

Radio sales progress outlined by these pictures has four new angles on that subject. Story is told in terms of any dealer's enthusiasm for his merchandise.

In No. 1, a group of "oversold" housewives are chosen. They've been "simply deluged with salesmen and phone calls . . . driven frantic!"

Then in No. 2, the dealer and his salesman decide to be through with the kind of selling which only confuses the prospect. They decide to accent just the talking points big enough to mark their merchandise as genuinely "different."

In No. 3, the salesman calls by appointment, quietly opens his radio argument by using essentials only. He knows she "will be interested in seeing something very much different from the others."

Last is No. 4, in which the salesman pleasantly tries to get this sort of answer from the prospect: "Well, for my peace of mind I suppose I'll have to or I'll always wonder if I didn't miss something." Probably there's no more to the story except the radio contract.

Scenes in this series were chosen from the new Fairbanks-Morse talking slide film, "Mrs. Martin Sees It Through."



Effort No. 3



Step No. 4

WHAT'S HAPPENING IN RECEIVERS

Automatic selectivity control and acoustic treatment bring better tone
Set designers, facing rising prices, use ingenuity to cut production costs

★ "JUST push the button, and—presto—there's your station" will be the spectacular feature in selling the 1937-8 radio sets. Push-button tuning and remote control will be used in many of the better receivers according to authoritative sources. No longer will there be any need for fumbling with dials—just push the button on the set or on a control box located beside an easy chair and instantly the program will be heard.

This and other tuning refinements will be the most-widely adopted feature for the coming year. Some telephone-type dials will be redesigned and improved for better appearance and easier operation. Automatic tuning of this year's type will probably be extended to the lower-priced sets, while the push-button method using a motor drive will be employed on the more expensive models.

Automatic selectivity

Automatic selectivity control may be used in some of the receivers to supplement automatic volume and frequency controls. This new "automatic" expands the I.F. amplifier and provides high fidelity reception when the signal strength of the station is sufficient to ride over the

local noises and static. And when the signal is weak the I.F. amplifier becomes sharp or narrow so as to exclude noise and interfering signals. Because of its automatic feature it does away with the need of a fidelity control on the front of the set—consequently tuning is simplified.

More tubes for the same money will be featured by some manufacturers. Separate oscillator tubes, diode detectors, and control tubes are to be utilized. Much of this padding can be justified from an engineering point of view, but in other cases it is being done to obtain a sales advantage.

Gadgets pruned

With an increased production cost of approximately 15 per cent anticipated because of labor and raw materials, it is more than likely that some of the sets will be stripped of their refinements if the price is to remain the same. However, it is planned to provide the same performance in the sets at the same price if possible. Other proposed ways of beating the increased costs are to use this year's chassis with minor changes. In this way the manufacturers will be able to save on tooling costs.



FINGERTIP access to phonograph, records, radio, offered by Sonora.

Whatever the means utilized, there will still be the \$39.95, \$49.95, \$59.95, etc., price classifications for dealers to feature. Perhaps in the smaller sets there will be a smaller number of tubes, while the large models may be padded by using single-purpose tubes.

AC-DC sets

Introduction of the beam-power-output tubes for AC-DC sets means that many of these sets will have a power of 2 watts in place of the usual 1 watt. Speaking of beam power tubes, it is not unlikely that degenerative feed-back will be found in the audio stages of a few sets—already it is being employed in power amplifiers for sound systems. That means higher quality reproduction.

Hand in hand with the lower distortion in the amplifiers, acoustic compensation and treatment is scheduled for wider use. In the Masterpiece V built by McMurdo Silver, excellent reproduction is obtained through the utilization of bass-reflex principles developed by Hugh Knowles of Jensen. Other methods are the "Magic Voice," "Acoustic Clarifiers," and "Acoustical Labyrinth" and their use will be continued. Even on the lower-priced sets, absorbing materials will be placed in the cabinets to reduce the boom caused by cabinet resonance. This,



LOUNGE STYLE radio is shown here as an end-piece for corner seats. Modernage, New York City furniture stylists, designed it around a 6-tube Stromberg-Carlson. Philco, Zenith and Emerson also have "end-table" sets.

coupled with more scientific design will give the new models superior tonal quality at the lower frequencies.

The Kadette "Equafonic" receiver has a non-directional system of sound distribution which projects the sound equally in all directions. This is accomplished by mounting the speaker vertically and having a curved reflecting baffle above the cone to direct the sound horizontally.

Pre-selection of stations

Almost human tuning device has been developed by Harold J. Kaye of Newton, Mass., which will automatically turn the radio on and off and tune in any desired station. Unlike a human it never forgets to tune in any program that has been previously set up. Different from previous devices, it will work for a period of seven days with different set-ups for each day. Since programs are scheduled at 15-minute intervals the pre-selector works on the same basis—any desired set-up for each interval. Just imagine setting up the set on Sunday morning for the entire week and having favorite programs tuned in automatically on the dot—that is just what one of the editors has recently witnessed. Any combination of stations and off periods can be utilized. Plans at present are for marketing it late this season.

RADIO WILL SET FURNITURE STYLES—VASSOS

★ There'll come a time when the man on his way downtown to buy furniture will stop in at the corner radio store to see what his new living room suite ought to look like, according to the prediction of John Vassos, who is design consultant for RCA in Camden.

Vassos says that already the expanding radio business has brought "modernism" into the American consciousness, in furniture as well as radio. Everybody notices what radios look like, he says, because they see the sets in the ads and because listeners stare at dials when the things are functioning. You can't just push a radio over in a corner, like a chair or a table, and forget about it. That's the reason chairs and tables have got to spruce up to keep in step with radios.

This doesn't mean that radios are going to be sold by furniture departments, according to Vassos. The noise of customers giving a whirl to the volume control would disturb newlyweds talking about Chippendale, Duncan Phyfe and the mode mo-



TILT-TOP table as another treatment of the small set, sponsored by Rogers-Majestic Corp., Ltd., Canada.

derne. But it does mean that radio dealers, sooner or later, will have to take a leaf from the book of furniture rules and sell sets somewhat in the furniture manner.

Already certain large dealers have engaged Vassos to design whole new radio floors, so that buyers can see sets singly, on carpets and in home-like surroundings. As a cue to the smaller dealer, usually with insufficient space to do this kind of a job, RCA has constructed and put in op-

eration in New York, a small sample store, so designed that people can see single radios, rather than a number of sets in a pile.

Radios now are furniture, according to Vassos, but there will come a time when they will be merely an architectural feature. The "radio of the future" will be recessed into a panel in the wall. But that will occur when we are all living in prefabricated houses, with built-in air-conditioning, etc.

In the meantime radio is going to continue right out in front where everybody looks at it. Right now what they see is a lot of streamlining, with chromium bands and whatnot, and that's the style for the 1937 living room.

WHY THEY BUY SOUNDLESS RADIOS

★ Wondrous theatrics of the good old-fashioned family brawl are no longer the vogue. Units of the family are buying silent radios, for one thing, to take the point out of domestic listening disputes.

Husbands march into radio stores muttering about "keeping peace in the family." Wives are unhappy about a man "having his nose in the newspaper at all the wrong times." The in-laws speak out of turn again and observe that silent listening "might simplify things."

So now they can buy equipment for private listening and snap at each other about something else for a while.



PRETTY PAIR here are Helen Snook, record manager at Aeolian Co., N.Y.C., and an Ansley Radio-Dynaphone combination, with sliding top, 7 tubes, short wave, all controls within easy reach.

EVERY-DAY TRICKS for RADIO DEALERS

Sales promotions by days, collected from six stores where they were tested



April 20-30

20—"Sell up" by grouping sets in three's. When a customer mentions a certain price range, take him to the group which starts with that price, demonstrate all three.

21—Fix up a home movie in your window, with the screen on a side wall. Use it to plug your sound equipment.

22—Feature a display of portable phonograph-radios, with one record constantly in motion; use an outdoor background.

23—Check up on country clubs and beaches (opening about now) for sound prospects.

24—Run an ad in your local theatre bulletin, hooking up with radio stars on the screen.

26—Engage a local musical celebrity to appear in person in your store, distributing logs of network programs he recommends.

27—From second-hand car dealers, get new lists of car owners without radios, to let you in on the new motoring season.

28—Send out Radio Tour Maps cut in the shape of a radio tube.

29—Use the fact that May 1 is a moving day in large cities. Advise patrons: "Don't Spoil Your New Home With an Old Radio."

30—Set up a batch of large mirrors in your window, to show the backs of new sets to passers-by.

May 1-19

1—Check up on all possible neighborhood display floors, where you may spot new receivers, with your name and address attached.

3—Send a letter to your prospects explaining how the new Fair Trade Laws affect your sales and service.

4—Choose a lively announcement from a radio manufacturer, display it in the form of a large telegram.

5—Suggest to all parents that they will need a new set for their youngsters when school is out.

6—Send women prospects a special list of broadcasts aired regularly for them.

7—Promote the idea that sons and daughters should present Mother with a personal radio on Mother's Day next Sunday.

8—Get some London magazines and newspapers to exhibit with sets in your window, plugging the Coronation next Wednesday as a broadcast event.

10—Run an ad in old English type, listing all Coronation broadcasts due.

11—Feature home recorders, suggesting that persons make their own rec-

ords of speeches made at the crowning of the new King of England.

12—Coronation of George VI.

13—Use the song, "May I Have the Next Romance With You?" in a circular with the word "romance" changed to "contract."

14—Send prospects a card showing a map of your town, with the location of your store accented.

15—Display a 6-ft. reproduction of the service or repair tickets used in your store.

17—Attach your card to the current "Reference Lists of Members of the IRSM" for distribution among prospects.

18—Organize a Maytime canvassing campaign. Prepare a street directory so that canvassers will know householders' names when they call.

19—Send out notices of your prices on special "Spring Clean-Ups" of receivers.

Dealers pictured above, who contributed ideas to this month's calendar: C. F. Jones, Jones Radio Service, Perryton, Tex.; Jack Davis, Eveready Radio, N. Y. C.; Ed Lowe, Lowe Elec. Co., New Rochelle, N. Y.; W. E. Engle, Engle Elec. Co., Lakeland, Fla.; D. E. Feldman, Union Radio Service, New Rochelle, N. Y.; and N. Goldman, Goldman Elec. Co., New Rochelle.

Be an Authorized **DICTOGRAPH SILENT RADIO**
 Dealer—and Sell “Private Listening” for ANY Set!



Alice Faye in a scene from “Wake Up and Live,” the 20th Century-Fox picture in which she is co-starred with the famous feuding pair, Walter Winchell and Ben Bernie.



**Extensively Advertised
 in Leading National Periodicals**

**The Greatest Traffic Producer
 in Radio**

INVESTIGATE THIS SPECIAL OFFER!

U. S. Pats. 101,980 and
 1,630,028; others pending.

**PROFIT-
 OPPORTUNITIES
 MULTIPLIED!**

... with the *Acousticon
 Mystic Ear*, which may
 now be sold for use with
 radios of all makes!



INCREASED production now permits us to sell genuine Acousticon Mystic Ears *alone* to authorized Dictograph Silent Radio dealers. Thousands who would like to own the Dictograph Silent Radio but are hesitating because of cost will grasp this opportunity to give their sets the exclusive advantage of *individual listening*.

No radio in recent years has shown the crowd-pulling powers of the Dictograph Silent Radio. One store reports 75 demonstrations from one ad. Another pulled 200 people into the store with a week-long window display. Now that you can offer the Mystic Ear for use with *any set*, the proportion of orders resulting from demonstrations will *quadruple!*

Extensive national advertising has already created a huge demand that will focus action on your store the moment you show Dictograph Silent Radio. Our Spring campaign includes ads in Collier's, Good Housekeeping, House Beautiful, Modern Mechanix, Screen, the Fawcett Publications and other important publications reaching more than 10,000,000 prospects.

To extend our already large dealer representation still further we have evolved a special offer you should investigate. It makes you a Dictograph Silent Radio dealer and also gives you an opportunity to cash in heavily on individual sales of the Acousticon Mystic Ear. Fill in and mail the coupon *today* for full particulars.

DICTOGRAPH PRODUCTS CO., Inc.
 Executive Offices: 580 Fifth Ave., New York, N. Y.

DICTOGRAPH PRODUCTS CO., INC. RT-4
 580 Fifth Ave., New York, N. Y.
 Please send details concerning your Dictograph Silent Radio proposal.

NAME

ADDRESS

CITY STATE

I am a retailer I am a wholesaler

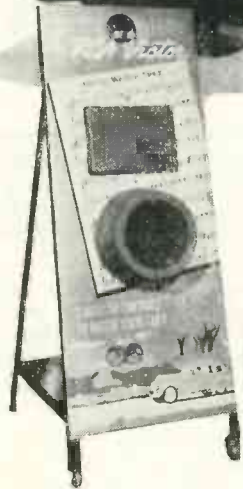
In the car... as in the home... it's RCA ALL THE WAY!

Only RCA Victor Auto Radios have *Magic Voice!*

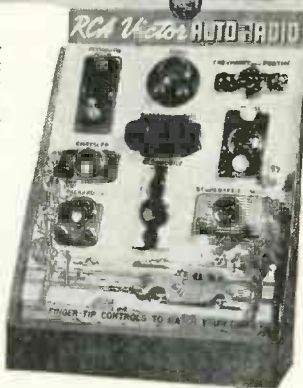
**LOOK AT THESE SALES MAKING
DISPLAYS FOR YOUR STORE!**



An example of the selling help RCA Victor gives you!
Highly attractive Three-Unit display showing sets, speakers, controls—A forceful, silent salesman!



(left) Single-unit display, has controls at top; set, speaker mounted on sheet music of "Merrily We Roll Along."



(right) Escutcheon Plate display demonstrating various types of "Custom-controls." Generous space behind front wall of display for storing boxed controls.

RCA Victor Auto Radio Features!

Finger-Tip Controls to match all cars. (Tone control and Sensitivity control conveniently located on control head.)—Full-vision, non-glare illuminated dial... 16 to 1 tuning drive—easier control... RCA Metal Tubes... Powertron Vibration—eliminates rectifier tube... Automatic Volume Control... Magnetite Core transformers for permanent circuit alignment... 9 watts output... Dynamic speakers... 2 audio amplification stages... No spark plug suppressors necessary, and many other fine features.

Outstanding performance features, plus store sales helps, plus national advertising, plus RCA ALL THE WAY, equal MORE PROFITABLE SALES FOR YOU!

RCA Victor makes it easy for you to cash in on auto radios this year! Its 1937 models are packed with powerful selling features, led by the Magic Voice, famous from coast to coast as the creator of finer tone.

In addition to the many quality features to help you sell, RCA Victor will make your job easier and more lucrative with compelling magazine advertising in *The Saturday Evening Post* and *Collier's*. The RCA ALL THE WAY story will build more sales and volume for you. A vigorous merchandising plan—the sales-inspiring store displays shown on this page—all will do their share. 1937 is going to be auto radio's biggest year. Cash in with RCA Victor!

RCA presents "The Magic Key" every Sunday, 2 to 3 p. m., E. S. T. on NBC Blue Network



• RCA Victor Magic Voice Model 67M-2... 8-inch Magic Voice speaker... 6 tubes and Powertron 9w. output, 2 audio stages. Tone control. Local-distant switch on control panel.

• (at right) RCA Victor Model 67M... 6 tubes, 3½ watts output. Outstanding performance at low price.

RCA Victor
AUTO RADIO

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

Radio Today

You'll make
more money
with
C. I. T.

C. I. T. BUSINESS BUILDER

The localized
national
finance
service

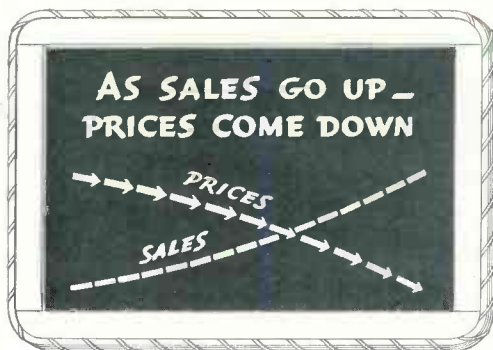
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APRIL 1937

Leading C. I. T. Manufacturer and Distributor Clients Offer Dealers Limited Recourse Retail Finance Plan

SIMPLE AS A. B. C.



The average American is quick to understand basic economic principles once they are explained in simple terms. C.I.T. has condensed the theory, soundness and value of instalment selling in the illustration shown here. It's as simple as A.B.C. and is used in all C.I.T. magazine advertising. This little slate, like you used in the old red schoolhouse, reminds people that instalment purchasing by millions of families (a) makes possible electric refrigerators, radios, and other appliances at moderate prices (b) enables industry to give the public greater and greater values through volume production.

**"...C.I.T. service has
always clicked"**

—says a Western Dealer

"... Your first real help was given me in 1922 in Anaconda, Montana, when my business was expanding. Again in 1924 in Butte, Montana, you gave me draft privileges at a time when western Montana was infected with bank failures. I am sure you realize the local prestige and assistance this privilege gave me.

"Over many years of business dealings, C.I.T. has always 'clicked' with me."

Dealers find four important advantages

ONE of the outstanding recent developments in appliance financing, most appliance dealers now agree, is the new Limited Recourse Retail Finance Plan offered by leading manufacturers and distributors through C.I.T.

This plan relieves the dealer of contingent liability after the first four monthly instalments on the purchase of a household appliance have been made. (Commercial installations are not included.) It operates *without cost to the dealer*.

In the opinion of representative dealers, the Limited Recourse Plan has four major advantages:

First: because the finance company relies on the dealer's endorsement only until the first four instalments are paid by the purchaser, the finance company's requirements for dealer quick assets are much lower than formerly.

Second: as a result of this lowering of dealer credit requirements, many dealers who formerly were unable to qualify for financing service through a strong national finance company, are now able to secure such valuable financing accommodation.

Third: because there is no pyramiding contingent liability resulting when a dealer does a large volume of business, this permits the dealer to show his bank and suppliers a better financial statement and entitles him to more finance credit.

Fourth: there is no holdback to tie up profit. The dealer receives 100% cash advance at once. His capital remains fluid; his current assets increase and are not frozen beyond immediate reach.

YOU CAN GO "LIMITED RECOURSE"

Leading radio, refrigerator and appliance manufacturers have worked out the Limited Recourse Retail Finance Plan for your benefit. They have selected C.I.T. to operate it for you. Through this plan you find it possible to concentrate on selling without having to worry about the mounting contingent liability which, under other methods, would result from an increase in sales.

The Limited Recourse Plan is simply a new and additional financing service designed to meet the requirements of those dealers who prefer to limit their contingent liability. However, the Full Recourse Plan is still active and is being used by large and small dealers alike, just as heretofore.

PLAN PROVES POPULAR

Appliance dealers both large and small have been quick to see the merit and to take advantage of the new plan. Enthusiastic comment by many dealers, distributors and manufacturers interviewed is evidence that the plan has already successfully served the constructive merchandising purpose for which it was designed. Ask your local C.I.T. office for complete details of the Limited Recourse Plan.



C. I. T. Consumer Advertising

Here is the C.I.T. full-page advertisement which appears this month in Saturday Evening Post, Collier's and Time. This good-will advertising is designed to explain instalment financing and to build business for the dealer who uses C.I.T. service.

AND YET COMPETITORS SAY BROWN IS "JUST LUCKY" by Agnew



The poster shown here

is proving immensely popular with appliance dealers the country over. It is also offered with easel back for counter use and in small size as a window sticker. Door handle cards as shown above and the consumer booklet with cover design similar to the poster can also be secured from the C.I.T. branch office nearest you.

PHONE OR WRITE

You can be sure of quick, personalized service through the C. I. T. branch nearest you. These 160 local offices are manned by staffs that render a complete localized finance service—investigating credits, buying paper, making collections.

The Question Box

- Q.—To take advantage of combination sales financed by one contract must both items be bought at the same time?
- A.—No. A customer who several months ago bought a refrigerator, for example, can come back and purchase another appliance and add it to the refrigerator contract, in this way taking advantage of the long maturity.
- Q.—Is it advisable for the user to finance the purchase of low-priced appliances?
- A.—Generally not. Because the fixed costs of credit investigation, accounting and handling are the same for a \$25.00 balance as for a \$150.00 balance and the service charge for the smaller balance must reflect these fixed costs. Hence the charge seems high to the small appliance buyer.
- Q.—What is the most economical way to finance the purchase of a low-priced appliance?
- A.—Lower priced items often can be included in a contract for a larger item, financing the combined balances as one transaction.
- Q.—In the case of appliances sold on the Limited Recourse Plan do dealers generally maintain the same interest in the customer after their four months liability?
- A.—Yes. Because friendly relations with satisfied users is the most prolific source of dealers' leads.

They have a name for it

In England, instalment buying is known as the "hire purchase" system. It is widely used although not as extensively as in this country. One of the reasons America leads the world in enjoyment of such conveniences as automobiles, radios, electric household appliances, etc., is that sound instalment buying enables almost everyone to purchase the new contrivances. Thus they can be manufactured on a large scale and sold at reasonable prices. "As sales go up . . . prices come down."



THE PHILOSOPHY OF "DEALER DAN"

Most people *know* what they want when they come in to buy—but it's up to you to show them *how* they can buy without feeling the strain. C.I.T.'s Budget Plan is the answer, of course.

To insure the "outgo" of your merchandise—you've got to tell your customers how they may make purchases out of "in-come."

In using the Limited Recourse Plan I find it smart never to "limit" my interest in a purchaser throughout the duration of his contract. Satisfied friends mean good leads.

AUTO - RADIO NOISE

- recognizing source or cause of radio noise
- suggested cures for interference

★ **SUCCESS** of any auto radio installation is dependent upon the reduction of noise to an extremely low level, particularly when the set is used more than a few miles from the broadcasting stations.

Before attempting to cure the noise it is desirable that the serviceman spend a few minutes first in an effort to find out where the noise is being generated.

In general there are two main sources of radio noise in all cars, ignition and generator—and both of these are prevalent only when the engine is running. Other noise producers may be loose wires, electrical gas gauges and thermometers, motors on car heaters, bad electrical contacts in the body and chassis.

Generator interference

Generator interference is caused by a small amount of arcing at the brushes which is carried to the radio circuits by means of the auto wiring system. Its cure is accomplished in the same manner as that of electrical motors in the home. A condenser with extremely short leads is connected across the generator output and ground. Usually a condenser is sufficient although in some cases it may be necessary to clean the commutator with sandpaper (not emery) and reseal the brushes. This source of noise is easily ascertained—speed up the motor and shut off the ignition. If the generator is causing the trouble, the noise will be heard as the motor coasts to a stop—ceasing of course, as soon as the engine has stopped turning.

Ignition noise may enter the set either through the antenna circuit or the battery line. In cases where an external speaker is employed, its cable may be a pick-up circuit if unshielded. Interference from the ignition system, naturally, will be heard only when the motor is running. It is usually heard in the form of rapid clicks when the engine is idling which speed up and merge into a continuous tone when the engine is accelerated.

Reducing ignition noise

Noise which comes in through other than the antenna system can often be sufficiently reduced by relocating the speaker cable and the

ammeter lead—first having disconnected the antenna from the set.

Peening of distributor rotor arm is suggested by E. H. Barry, Service Editor of *Motor* as a method of reducing ignition interference. To peen the rotor arm, clamp a piece of steel in a vise. Slide the rotor over this plate so that the plate is between the rotor arm and the bakelite rotor. Peen the end with a small machinist's hammer, extending it about .005 inches. Great care must be taken not to crack the bakelite in performing this operation. Likewise, make sure that the rotor does not strike the contacts in the distributor block. If a double rotor arm is used, each end must be peened. The interference noise should be reduced to a negligible amount by this operation.

Should noise still be present, it is probably being conducted into the car by the oil windshield, or thermometer lines or even the steering column. Effectively grounding them to the dash will prevent these lines from carrying interference to the radio set.

Noises from accessories

Noise from dome lights, electric gas gauges, etc., can best be found by connecting a condenser across them to ground or by disconnecting the circuit temporarily from the electric system of the car. The condenser for the gas gauge should be

connected across the unit at the gas tank. Other positions for condensers may be: electric oil gauge, ammeter or ignition switch, clock, ignition coil, fuse block, fan motor, etc.

When instructions are available telling where to use condensers in various make cars and where to make ground connections, these should first be carried out to the letter before attempting to remedy noise difficulties. Very often these routine suggestions will clear up all noise.

Wheel static

There is a type of noise that is often difficult for the serviceman to find—but it can always be prevented by taking precautionary measures. Wheel or tire static is often noticeable when driving upon certain types of roads—particularly cement. In wet weather it disappears completely since it is caused by the accumulation of static electricity on the wheel which discharges through the axle grease to the car. Moisture on the rubber tire renders it a non-insulator so that only in dry weather can static electricity collect.

Solution is the use of springs or static collectors inside the hub cap. Some of the 1937 cars are equipped with these springs. Much effort can be saved by installing these springs as a routine matter.

This cause can be easily determined by tuning the set off a station. Speed up the car, then shut off the motor and disengage the clutch—if noise is present in the form of a roar or scratching noise, it is due to tire static. Of course, this test must be made on a dry day preferably on a cement (or a macadam) road.

Cars using overhead antennas are
(To page 61)

COMMENTATOR WINS AWARD FROM WOMEN'S NATIONAL RADIO COMMITTEE



From the New Yorker

"Now tune in on Boake Carter, Lily, and leave us alone."

ATTRACTIONS OF THE SHORT-WAVES

Whole world is at customer's door through these magic channels
 With coming of static on BC band, short-wave listening grows better!



Showing how the Electric Institute of Washington, D. C., used the spectrum below, drawn up by RADIO TODAY, as the central feature of an all-wave-radio window display. Dolls and flags indicated the nations of the world.

FOREIGN-STATION DISPLAY BRINGS RESULTS

★ A very fine main window display which stressed the range of radio reception brought good results to the C. Niss & Sons Furniture Co., Milwaukee, Wis.

Each radio displayed was placed on a specially built, rounded platform with white covering. The background behind each radio was also rounded and very pleasing in effect. Behind each radio, and easily visible from the sidewalk, was the name of some far-away place. This indicated the out-of-the-way and distant places of the world which the radio owner could reach by buying one of these sets.

Some of the places mentioned were Buenos Aires, Caracas, Havana, Mexico City, etc. This, of course, stimulated the imaginations of many and induced them to buy a new radio.

Along the edges of the display back-

grounds were also painted numerous musical notes which helped to carry out the idea that one can get radio music of quality from many parts of the world.

WAR DRAMA BY S-W DIRECT FROM SPAIN

★ A new element of international drama has been introduced into short-wave listening as a result of the Spanish War, and the efforts of both Loyalists and Rebels to win favorable opinion in America. Several of these Spanish stations, such as EAQ No. 2, Madrid, are being received in America as loud as locals. Reports of battles, air-raids, attacks and counter-assaults make up the tragic continuity of these broadcasts, which would be intently followed by many American listeners if more only knew about them.

The war has also opened many new

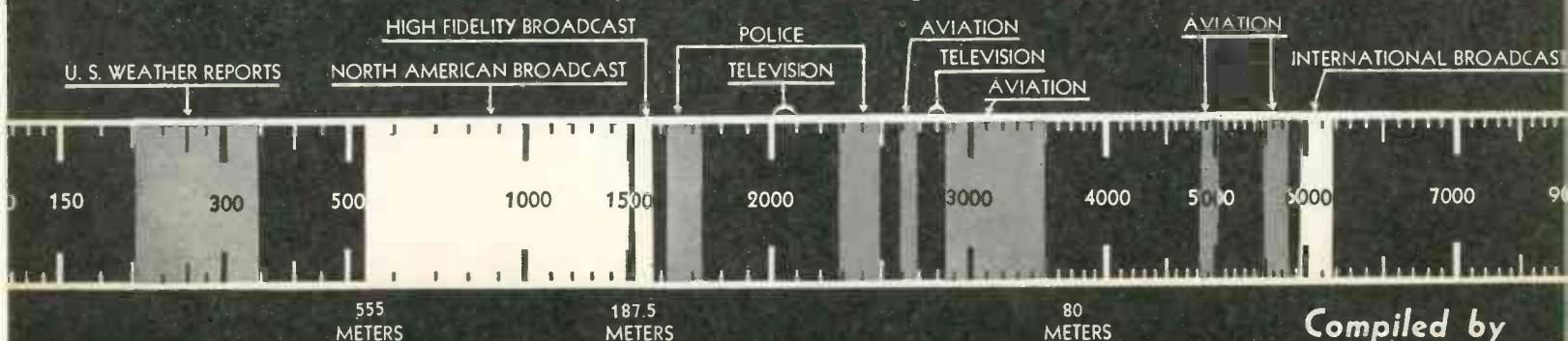
stations in Spain, the International Short Wave Club in East Liverpool, Ohio, reports. ECN1, Barcelona, is on 6.99 mc. (42.88 meters) regularly, noon to 7.00 p.m., EST. PSU1 at Barcelona is on 7.128 mc. (42.08) from 2:30 EST to 5:30 p.m. ECP2, "Radio P.O.U.M.," is on 7.143 mc. (42 meters) between 1:00 and 3:30 a.m. EAH, General Union Workers' Station at Vallerias, near Madrid, is on 31.65 meters or 9.48 mc. irregularly now, 4:00 to 5:00 p.m. EASR1, "Habla Mariana," operated by the Loyalist fleet off Cartagena, was heard 3:30 to 5:30 p.m. once.

PSU1, Barcelona, on 7.18 was heard 3:50 to 4:10 p.m. and said it was owned by United Socialist Party of Catalonia. SNU, Barcelona, on 7.00 mc. was heard at 2:00 p.m. EAP1, on 7.08, was heard at 5:00 p.m. EDR4, San Sebastian, is heard moving around on 6.535 mc., 6.565 mc. and 6.583 mc. Heard on 6.54 mc. and broadcasts 4:00 to 5:05 p.m. now. EAJ1, Barcelona, on 41.70 meters or 7.194 mc. is heard daily 4:00 to 5:00 p.m. EDNEHY, Madrid, on 10.07 mc. broadcasts daily now 3:30 to 5:30 p.m. EAQ, Madrid, on 9.68 mc. is scheduled 5:15 to 9:30 p.m. daily and 1:30 p.m. to 9:30 p.m. Saturdays.

SELECT 100 PROSPECTS

★ Philco dealers are enthusiastically using a special "100-Club" direct-mail plan made available a few weeks ago. The plan, while utilizing the direct-mail principle, is different from the usual campaign in that special emphasis is placed upon only 100 selected prospects, enabling the dealer to concentrate his efforts upon a few productive prospects instead of scattering his efforts over a wider area.

There's fascinating entertainment all along the whole radio spectrum.



Compiled by

SCHEDULE OF SHORT-WAVE NEWS BROADCASTS

SUNDAY		
E.S.T. (N.Y. Time)	City	Frequency Megacycles
9.55 a.m.	New York	21.52
11.00 a.m.	Schenectady	15.33
" "	New York	17.78
" "	Boston	9.57
" "	Cincinnati	6.06
11.10 a.m.	Chicago	6.10
" "	Boston	9.57
11.30 a.m.	Schenectady	15.33
6:00 p.m.	Boston	6.04

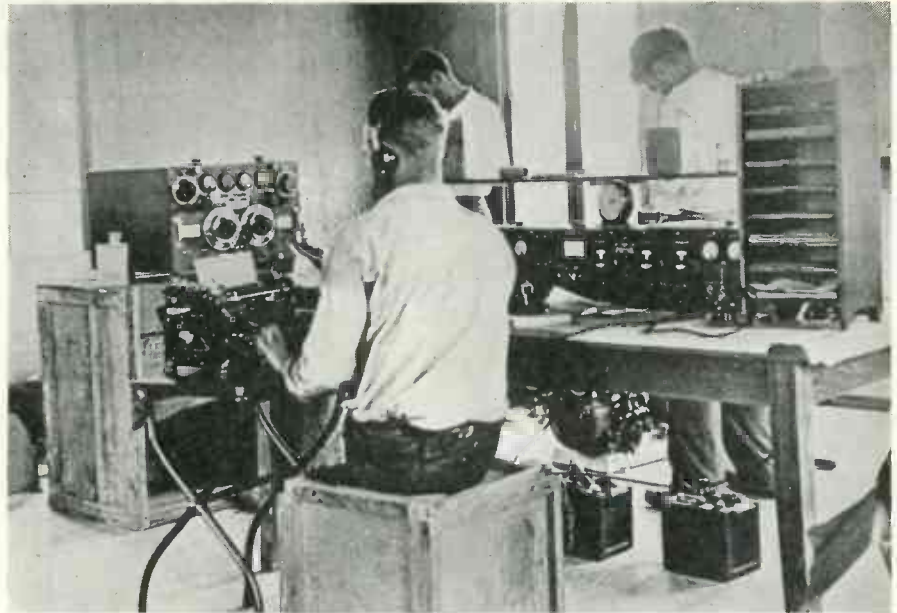
MONDAY Through FRIDAY		
7.00 a.m.	Boston	9.57
7.25 a.m.	Schenectady	15.33
7.55 a.m.	New York	17.78
8.15 a.m.	Pittsburgh	21.54
9.40 a.m.	New York	21.52
9.55 a.m.	Schenectady	15.33
10.00 a.m.	Pittsburgh	15.21
" "	Boston	9.57
" "	New York	17.78
12.00 noon	Pittsburgh	15.21
" "	Boston	9.57
12.10 p.m.	Schenectady	15.33
12.25 p.m.	New York	17.78
1.45 p.m.	Boston	9.57
4.30 p.m.	"	11.79
5.00 p.m.	"	9.57
6.00 p.m.	Pittsburgh	15.21
" "	Boston	9.57
6.00 p.m.	New York	6.10
" "	Schenectady	9.53
6.30 p.m.	Boston	9.57
" "	New York	21.52
" "	Schenectady	9.53
11.00 p.m.	Pittsburgh	6.14
" "	Boston	9.57
" "	Schenectady	9.53
11.30 p.m.	New York	6.10
6.30 p.m.	New York	6.10

SATURDAY		
7.00 a.m.	Boston	9.57
7.25 a.m.	Schenectady	15.33
7.55 a.m.	New York	17.78
8.15 a.m.	Pittsburgh	21.54
9.55 a.m.	Schenectady	15.33
10.00 a.m.	Pittsburgh	15.21
" "	Cincinnati	6.06
" "	Boston	9.57
" "	New York	21.52
" "	"	17.78
12.00 noon	Pittsburgh	15.21
" "	Boston	9.57
12.10 p.m.	Schenectady	15.33
12.25 p.m.	New York	17.78
12.30 p.m.	Cincinnati	6.06
1.45 p.m.	Boston	9.57
4.30 p.m.	"	11.79
5.00 p.m.	"	9.57
6.00 p.m.	Pittsburgh	15.21
" "	Boston	9.57
" "	New York	6.10
" "	Schenectady	9.53
6.10 p.m.	New York	21.52
6.30 p.m.	Boston	9.57
" "	New York	6.10
" "	Schenectady	9.53
11.00 p.m.	Pittsburgh	6.14
" "	Boston	9.57
" "	Schenectady	9.53
11.30 p.m.	New York	6.10

News Commentators

SUNDAY		
E.S.T. (N.Y. Time)	City	Frequency Megacycles
10.00 p.m.	New York	6.10
10.45 p.m.	"	6.12
11.00 p.m.	Cincinnati	6.06
11.30 p.m.	Chicago	6.10

MID-PACIFIC ISLANDS BECOME NEWS CENTERS OF BROADCASTING



The China Clipper, the new air links with New Zealand, and now the June 8 eclipse of the sun bring the Pacific Ocean into the radio spotlight. Here's Midway Island, Pan American Airways base.

MONDAY, WEDNESDAY and FRIDAY		
7.45 a.m.	Cincinnati	6.06
9.45 a.m.	New York	17.78
10.30 a.m.	Chicago	21.52
12.15 p.m.	Cincinnati	6.06
2.00 p.m.	New York	15.27
5.00 p.m.	Cincinnati	6.06
6.45 p.m.	New York	6.10
" "	Pittsburgh	15.21
" "	Boston	9.57
6.45 p.m.	Schenectady	9.53
7.30 p.m.	"	9.53
7.45 p.m.	New York	11.83
11.00 p.m.	Cincinnati	6.06
11.30 p.m.	Chicago	6.10

TUESDAY and THURSDAY		
7.45 a.m.	Cincinnati	6.06
9.45 a.m.	New York	17.78
10.30 a.m.	"	21.52
10.45 a.m.	Cincinnati	6.06
5.00 p.m.	"	6.06
6.45 p.m.	New York	6.10
" "	Pittsburgh	15.21
" "	Boston	9.57
7.15 p.m.	New York	11.83
7.45 p.m.	"	11.83
11.00 p.m.	Cincinnati	6.06
11.30 p.m.	Chicago	6.10

SATURDAY		
7.45 a.m.	Cincinnati	6.06
7.15 p.m.	New York	11.83
12.05 a.m.	Cincinnati	6.06

experts. Why not push all-wave sets and antennas during this period? Since, on account of static, broadcast reception is poorer in the summer, it's only logical that the public should turn to the higher frequencies where the static is a minimum. And during the hot months the S-W static is even less than in the winter.

THIS "WAVELENGTH CHART"

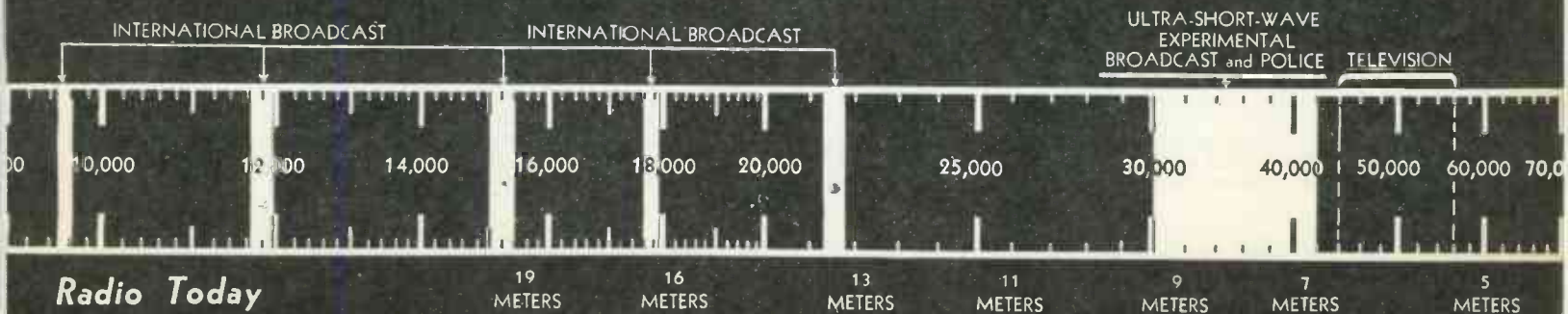
★ The chart below, prepared by RADIO TODAY, shows all the points at which broadcast entertainment and news features come in on an "all-wave" receiver reaching from 100 kilocycles to 72,000 kilocycles (or 72 megacycles, from the Greek word "mega," meaning "million").

Radio channels are designated by either wave-lengths (in meters) or frequencies (in kilocycles or megacycles). For any given channel the wavelength multiplied by the frequency (in kilocycles) always gives a constant figure—300,000, the speed of radio or light, measured in kilometers per second.

BETTER SHORT-WAVE AHEAD

★ Within the next few months short-wave reception will be at its best. That summer is the best short-wave season is acknowledged by the

Show this wave-chart to your customers to guide them in 1937 listening

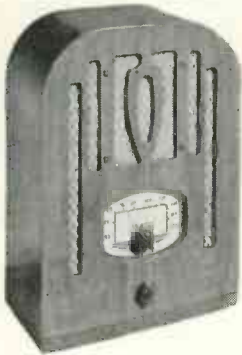


NEW THINGS FROM THE MANUFACTURERS

Oxford permag speakers

★ Complete line of permanent magnet dynamic speakers ranging from 3 to 14 inches. 3-inch size for use in small sets and inter phones. For P.A. use there is a P.M. speaker with a 6-inch cone housing for use with exponential horns. Model XA22 is a new spun aluminum exponential horn. Oxford Tartak Radio Corp., 915 W. Van Buren St., Chicago, Ill.—RADIO TODAY.

RCA farm radios



★ Low priced battery type superhet receivers for use away from power lines. Available in 2 and 6-volt models. 4-tube circuit tuning 530-1720 KC. Output of 1/2 watt. Large illuminated dial—AVC—permo dynamic speaker. Magnetite I.F. transformers, insuring factory alignment. Model 84BT for 2-volt, model 84BT-6 for 6-volt operation includes synchronous vibrator power supply. RCA Mfg. Co., Front and Cooper Sts., Camden, N. J.—RADIO TODAY—see also advt. p. 22.

Equafonic radio

★ Arm-chair type radio with cocktail service. Non-directional distribution of signals—speaker cone mounted horizontally with specific baffle above to bend the sound waves and project them in all directions. Grilles located on all four sides for equal volume intensity. Kadette Equafonic. International Radio Corp., Ann Arbor, Mich.—RADIO TODAY.

6-tube portable superhet



★ Compact set designed for use while traveling, camping, cruising. Operates on AC and DC. Self-contained aerial—illuminated gold dial—tone control. Housed in fabrikoid covered case in black or brown. Airplane cloth

in blue, green, red or brown. Model 26—list \$29.95. Freed Mfg. Co., 44 W. 18th St., New York, N. Y.—RADIO TODAY.

AC-DC compact



★ 4-tube T.R.F. receiver for AC-DC operation. Tubes 540-1750 KC—large dial with streamlined pointer. Beam power output tube of 2 watts—dynamic speaker. Audio overload control. Available in walnut, ivory and black case. Model Q-157 list \$14.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.—RADIO TODAY—see also advt. p. 3.

Halsion table sets



★ 8 models now presented by Halsion in its 1938 line. Model T-5 illustrated features "Tele-Tune" in a 5-tube AC-DC tuned RF chassis. Tunes 170-550 meters—housed in walnut cabinet—list \$14.95.

Model 25 is a 6-tube AC-DC superhet tuning 545-1750, 2300-7500 KC. Has full-vision dial with golden, metallic face. Tone control and pentode output tube. List \$29.95. Other models are:

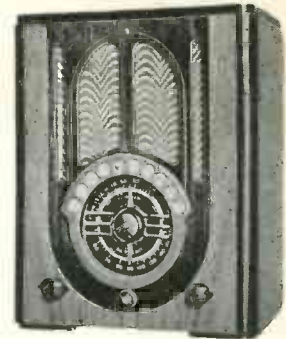
Model 135	5-T	AC	2-band
Model 102	6-T	AC-DC	2-band
Model 103	7-T	AC-DC	2-band
Model 104	6-T	AC	2-band
Model 106	7-T	AC	2-band
Model 412	8-T	AC-DC	3-band

Halsion Radio Mfg. Co., 120 E. 16th St., New York, N. Y.—RADIO TODAY.

Arm chair radio

★ Electric phonograph or phonograph radio combination in an arm-chair design. Set is 6-tube AC-DC with 2 bands. 10-inch dynamic speaker—tone control. Compartment for 100 records. Supplied in walnut, maple or mahogany. Sonora Electric Phonograph Co., Inc., 160 Varick St., New York, N. Y.—RADIO TODAY—see also advt. p. 50.

Crosley teletuning radio



★ New Fiver model receivers feature teletuning with a dial for rapid selection of stations. Five tube AC chassis—American and foreign reception—540-1720, 5800-15,400 KC. Teletuning model list \$24.95. Without dial tuning—\$19.99. A battery type set tuning 540-1725 KC. is available at \$19.99. Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio.—RADIO TODAY.

Line filters

★ Line of low cost line filters. Capacity type filters for use between plug and convenience outlet. Priced from 25 cents to \$1. Master Radio Labs., 206 Broadway, New York, N. Y.—RADIO TODAY.

Webster-Chicago interfone



★ System of inter-office communication—2 types available. 2-station outfit and multiple system accommodating up to 10 stations. A number of simultaneous conversations may be carried on over any pair of stations with the multiple system. Both units housed in highly polished wood case with ebony finish. Model OCM illustrated. Webster Chicago, 3825 W. Lake St., Chicago, Ill.—RADIO TODAY—see also advt. p. 39.

*Advance
Showing*

ARVIN

1938 TABLE RADIOS WITH THE

Phantom Filter Circuit

FREE—This attractive Island Display with order for Arvin Table Models—see your jobber for complete details about the Arvin No. 6 Deal at once.

There are 11 table models in this advance showing of Arvin Radios. Starting with the smart little Arvin Phantom baby—a 5-tube set at \$19.95 up to 6 and 8-tube models. The Island Display provides a perfect setting for any 6 of them you select. It is painted in rich oil colors of maroon and contrasting buff tones. Actual size of display is 50" high and 40" wide.

Prices slightly higher in extreme South, Denver and West.

**DOMINANT
Sales Features
AND POPULAR
Price Tags**



Big Sales News in Radio . . . a few years ago it was the superheterodyne circuit. Today . . . it's the Arvin Phantom Filter Circuit. Why? Simply because engineers have perfected a circuit that puts more punch in the new 1938 Arvin models . . . improves tone quality . . . filters out noise . . . and gives better all-over-the-dial reception. It's all due to the way the coils, condensers, transformers and tubes are knit together. And you well know, it's the circuit that makes a radio.

The value of Arvin's big sales feature . . . the *Phantom Filter Circuit* . . . will be readily appreciated when you hear the new table models. And

when you see the price tags, you'll realize the opportunity Arvins offer you for sales and profits.

Arvin set out to design the "hottest" line of table radios in the industry—and did it! When you see the complete line announcement next month, you'll recognize instantly that Arvin consoles are just as "hot." Yes—Arvin will be a hot line this year. See and hear the new Arvin table models—and order the Arvin No. 6 Deal from your jobber.

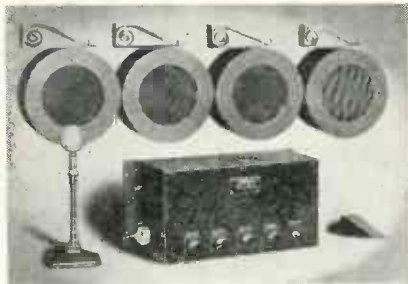
NOBLITT-SPARKS INDUSTRIES, Inc., Columbus, Indiana . . . Also makers of Arvin Phantom Filter Car Radios and Arvin Hot Water Car Heaters.

ARVIN
*The New Big
Name in Radio*

LOOK FOR ANNOUNCEMENT OF COMPLETE 1938 ARVIN LINE IN MAY

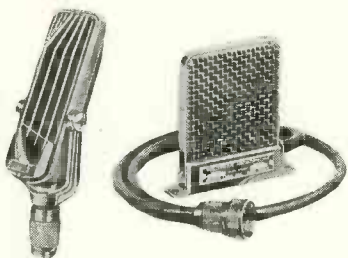
NEW THINGS

Operadio paging system



★ Amplified paging system for factories, hotels, public buildings, etc. Complete with crystal mike, amplifier, permanent magnet dynamic speakers. Speakers connected in parallel with ordinary wire. Model 111. Operadio Mfg. Co., St. Charles, Ill.—RADIO TODAY—see also advt. p. 43.

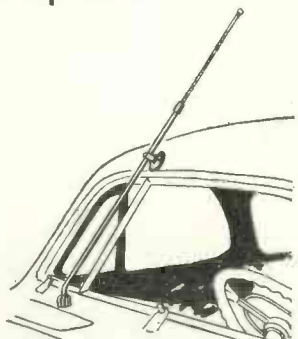
Velotron mike



★ Base mounting velotron mike for paging systems, etc. Output of minus 55 DB. Size 2 x 2¼ x ½ inches. Complete with 3-foot cable. Model SP—list \$13.50.

Wide angle pick-up microphone of modernistic design. Use of "directional" fins widens angle of pick-up in front of mike and reduces pick-up from rear. Available with rotary on-off switch. Model WS—list \$31. Bruno Laboratories, 30 W. 15th St., New York, N. Y.—RADIO TODAY.

Auto top aerial



★ Telescopic antenna for use with automobiles—requires no drilling of car top. Made of stainless steel and brass with chromium plate. Chieftain model F.M.—list \$2.45. Ward Products Co., 1523 E. 45th St., Cleveland, Ohio—RADIO TODAY—see also advt. p. 74.

DeWald synchro-beam sets

★ Seven-tube table model with synchro-beam tuning, variable tone control, and indirectly illuminated dial. Tunes 19-550 meters in 3 bands. 6½-

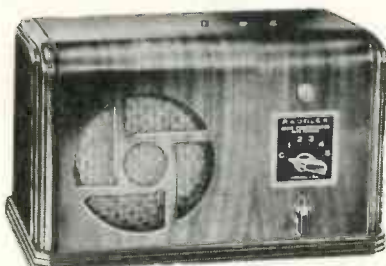
inch dynamic speaker. Model 700. Housed in bent-wood duo-tone walnut cabinet, 16¾ x 7½ x 10 inches.

Model 527 is a 5-tube superhet auto radio. Set mounts behind instrument panel. Iron-core antenna coil—vernier tuning—pentode power output. Streamlined metal case. Pierce-Airo, Inc., 510 Sixth Ave., New York, N. Y.—RADIO TODAY—see also advt. p. 50.

Auto remote controls

★ Complete line of auto radio dash panel needs for all popular cars. Other Stewart products are control housings, cable, and end fittings. A tool for cutting and attaching these parts is also available. F. W. Stewart Mfg. Corp., 340 W. Huron St., Chicago, Ill.—RADIO TODAY.

Radolek inter-office communicating system



★ Master type 2-way system of communication. May be used with up to 5 outlying stations. Remote stations call master by pushing call button. Master unit controls conversation—push button to talk. Radolek Co., 601 W. Randolph St., Chicago, Ill.—RADIO TODAY.

Portable sound system



★ 15-watt portable sound system with high-gain amplifier. Input channels for mike and high-impedance phono pick-up. Supplied with crystal mike, stand and 25-ft. cable. Uses Magnavox high-fi 12-inch speaker with 50-ft. cable. Tone control to match acoustics of surroundings. Waterproof carrying case houses all equipment. List \$134.50. Electro-Acoustic Products Co., Fort Wayne, Ind.—RADIO TODAY.

2-inch cathode ray tube

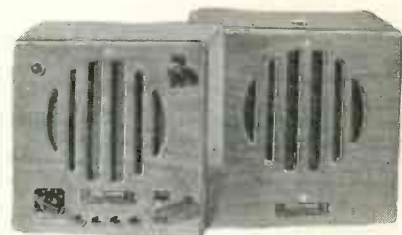
★ High-vacuum 2-inch cat-ray tube with 4 electrostatic deflection plates. Has octal base and 6.3 volt filament—interchangeable with 913. Plate voltage 300 to 600. 7¾ inches overall. Type 24-XH—list \$7.50. Allen B. Dumont Labs., Inc., Upper Montclair, N. J.—RADIO TODAY.

Hickok multi-meter



★ Infinite impedance voltmeter for radio set measurements—ranges 0/10/50/250 volts. Employs potentiometer principle of voltage measurement and has self-contained power supply. Other ranges as follows: 0/10/50/250/500/1000 volts at 1000 ohms/volt AC and DC; 0/1/5/50/500 AC-DC mils.; 5 resistance ranges from .05 ohms to 10 megs. 5 capacity ranges from .0001 to 200 mfd. Model 4900. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio.—RADIO TODAY.

Comun-a-phone inter-phones

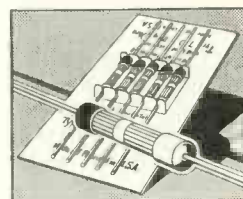


★ Two-way intercommunicating system with amplifier at master station. Sub-station has 6½-inch speaker and signalling button. Pilot light and buzzer on master indicates station calling. List \$49.50 with master and one remote station. Additional stations \$10. Comun-a-phone Systems, Inc., 22 Scott St., Newark, N. J.—RADIO TODAY—see also advt. p. 76.

Condenser kit for oscilloscope

★ Kit of 18 condensers for the Thordarson cathode ray oscilloscope. Units are of the proper capacity and voltage ratings and meet the close capacity tolerances required. Aerovox Corp., 70 Washington St., Brooklyn, N. Y.—RADIO TODAY—see also advt. p. 73.

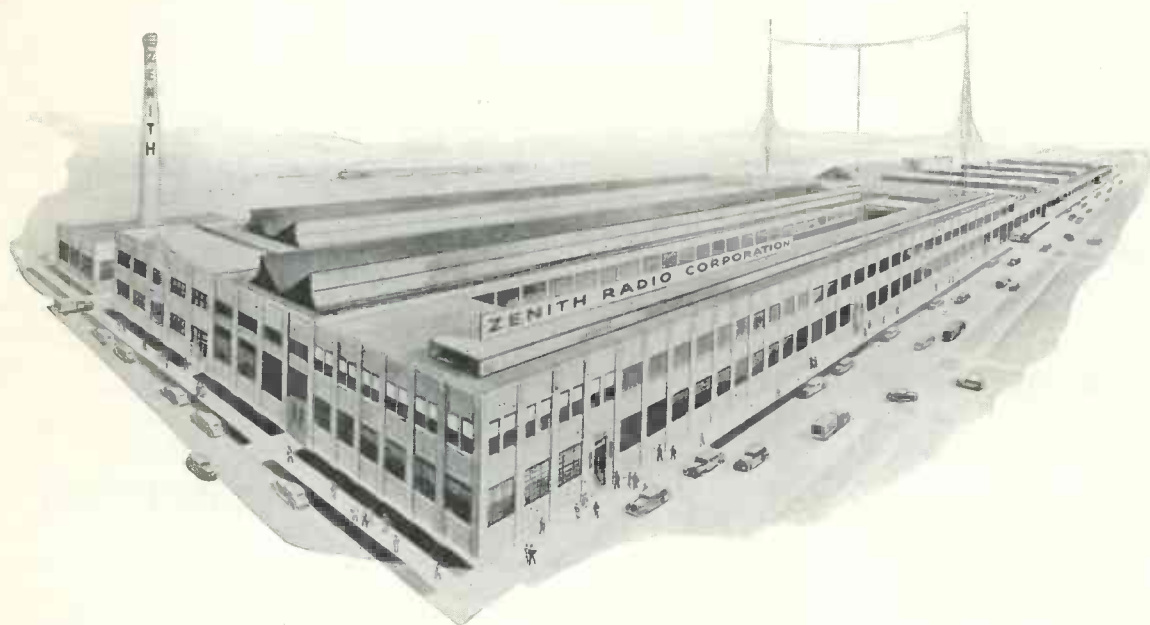
Centralab insulated resistor



★ Insulated type resistor having a ceramic jacket, providing a perfect seal against humidity. Uses standard Centralab resistor element. Type 710 rated at ½ watt. Available in 100 ohms to 10 megs and R.M.A. color coded. Centralab, 900 E. Keefe Ave, Milwaukee, Wis.—RADIO TODAY—see also advt. p. 56.

(To page 34)

Zenith Moves Into World's Largest Radio Factory on One Floor



Reason

Of all major radio manufacturers, Zenith enjoyed the greatest increase in public demand in 1935—and again in 1936. (Zenith has been unable to fill its orders in full during any month since June, 1935.)

But

Zenith, even with its purchase of these enormous new facilities, proposes to continue its conservative policies—protecting the dealer's profits and time payment paper on Zenith Radios—making unnecessary, cut-rate advertising, dumps, excessive trade-in allowances, and other practices that endanger the dealer's investment.

"America's Most Copied Radio . . . Again A Year Ahead"

ZENITH RADIO CORPORATION, CHICAGO

MONEY AT THE CROSS-ROADS

What radio means to farmer, from rural survey just completed by NBC

★ Money, and lots of it, is again being spent at the crossroads store. Cash farm income in 1936 totalled \$7,850,000,000, as estimated by the United States Department of Agriculture. This is the highest total for six years. It is 93 per cent of the 1930 figure, and nearly double the 1932 income. Rural business is now so strongly on the upgrade that the October dollar volume of general merchandise sales was actually 27 per cent better than the 1929-1931 level.

Thirty-five million people live on farms and another twenty-five million reside in small rural communities—a total of sixty million individuals, comprising practically one-half of the Nation's consumers.

Upsurge in radio interest

With returning prosperity, extension of power lines and development of windcharging apparatus, there has been an upsurge in the purchase of radio sets by rural families. Last year, in fact, hundreds of thousands of sets (both house-current and battery-operated) were sold for farm and country use.

Seeking a more comprehensive picture of radio's place in the rural market, the National Broadcasting Company recently retained Charles Morrow Wilson, well known author, to make a nation-wide observational study. For NBC Mr. Wilson visited farm families in 25 states. He lived with them, talked with them, photographed them, and made copious notes of all he learned. He inter-

viewed rural merchants and representative county agents. From these close human contacts he drew the conclusions which follow.

Farmer like other folks

Mr. Wilson's comments are the reactions of a man who has been trained as a student of rural life, a man with an educated marketing outlook. His observations suggest that the rural American is not only being reached to an increasing degree by radio, but also that the farmer is being influenced by radio to an even greater extent than the city listener.

Mr. Wilson found that the favorite programs of rural listeners include many of the same sponsored network programs which rank highest with the industrial and city population—evidence that the farmer does not belong to a race apart, and that his tastes are becoming increasingly similar to those of the city dweller. But in addition the farmer has an especially vital interest in radio, because it is his only means of close daily contact with authoritative national sources of agricultural information.

The following conclusions present an approximate consensus of opinion in the 209 farm homes visited. This summary also takes account of the views of 41 representative county agricultural agents.

1. Radio is the fastest-growing medium of farm entertainment at the present time.
2. On the better type of farm, radio

is building for itself a distinctive place in the routine of farm living. It has substantially moved back farm bedtime.

3. Today radio has an outstandingly significant place in the problems of farm youth.
4. The farm appetite for entertainment is pretty uniformly distributed among all age groups.
5. There is no one best type of farm radio program. Farm interests are broadened to a point where they are genuinely cosmopolitan.
6. On the other hand, a great many widely known radio programs are definitely limited of rural appeal and merchandising value.
7. Music is definitely the surest bet in valid radio entertainment for a rural audience.
8. Creation of successful farm radio entertainment is a field of outstanding challenge.

RADIO CALMS CHICKENS' NERVES

★ A new use for radio in the poultry house has been brought to light by Harold Weaver, manager of Braewood Farm in Locust Valley, L. I., N. Y. At present a set is used in the "developing room" to maintain a constant background of music and speech—this has the effect of keeping the chickens quiet and when anyone enters the house they are not frightened as they are already accustomed to considerable noise.

So successful has this experiment been in the developing room of this modern poultry farm, that the laying houses will soon be equipped with sets.

For the wide-awake dealers, this is a new market for those old radio sets that customers have traded in or wish to get rid of. For this use tone quality is unimportant—all that is needed is a set that will operate continuously for 12 to 15 hours a day. There are probably many poultry farms with electricity that could be sold on this idea.

WINKING GIRL

★ Flasher display featuring "Miss Sylvania" winking her right eye and holding a couple of tubes, has been released by Hygrade Sylvania Corp., through jobbers. Gadget has tricky color and lighting and comes in a miniature size for counter use, also.



Zenith adds dist. mgrs. to its field sales staff: J. H. Souther, F. H. Strayer, C. H. Wilks, G. A. Lyons, J. H. Hickey, R. E. McGreevy and J. H. McKee.

NOW! PROFITS FOR YOU IN EVERY WINCHARGER YOU SELL!

REG. U. S. PAT. OFF.

✓ COUPON RESTRICTIONS REMOVED!
 ✓ ANY DEALER CAN STOCK WINCHARGER!
 ✓ LIST PRICE WITH RADIO \$17.50 ✓ WITHOUT RADIO \$25!

✓ NO INCREASE IN FACTORY PRICE!
 (PRICES APPLY ONLY IN U. S. A.)



THERE IS ONLY ONE GENUINE WINCHARGER

Look for These Features:

- Six-Foot Albers Airfoil Propeller, Copper-Tipped and Copper-Sheathed
- Positive-Acting Auto-Type Brake
- Ball-Bearing Turntable
- Heavy 4-Leg Steel Tower
- Double-Brush Collector Ring
- Famous Wincharger Generator
- Complete Instrument Panel
- Patented Speed Governor
- Extra Braces on Tower Feet

NOW you can use the 6-volt DeLuxe Wincharger to spur sales of *all* your farm radios! You can sell it to anybody, with or without farm radio, *and make a profit on every sale!* All red tape—all complications—have been removed from the Wincharger merchandising plan. It's easy for you to sell this amazing invention which has revolutionized farm radio in the last two years! And it's easy for your customers to buy!

Millions of Ads to Help Your Selling!

More than eighteen million ads have carried the story of 6-volt Wincharger to readers of leading national farm papers this year. During the balance of 1937 this advertising campaign will be greatly expanded to include leading state farm papers as well as displays at fairs and other farm gatherings. Wincharger is spending thousands of dollars to make it easier for you to sell Winchargers and farm radios.



Free Circulars Printed with Your Name

Send us the names of your radio prospects and we'll mail them **FREE OF ALL EXPENSE TO YOU**, this bright, strong-selling, two-color circular with your name and address printed on every one! Wincharger is willing to spend money to help you make money!



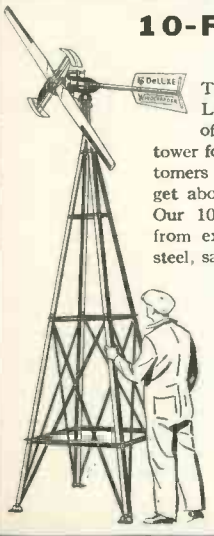
NEWS FLASH

Wincharger Cuts Out Radio Interference!

Wincharger engineers, after months of research and experiment, have perfected a device which eliminates all radio interference in the broadcast band and reduces short wave interference to a minimum. *This device is exclusive with Wincharger*, and will be furnished free to any of your customers who are experiencing interference from Wincharger!

Speed radio sales and build profits with the genuine 6-volt DeLuxe Wincharger! No other wind-driven generator can offer you all Wincharger's advantages! No other is now bringing modern radio reception to more than 500,000 listeners! Order direct from the factory today! **No Coupons!—No Red Tape!—No Complications!**

10-Foot Tower Available



The genuine 6-Volt DeLuxe Wincharger is also offered with a 10-foot tower for use where your customers need extra height to get above wind interference. Our 10-foot tower is made from extra heavy rail angle steel, safe to erect anywhere, and **SAFE TO CLIMB**. In severe tests this Wincharger 10-foot tower withstood 800 pounds pull at the top, proving it nearly three times as strong as any other nationally advertised 10-foot charger tower.

WINCHARGER CORPORATION

SIoux CITY, IOWA

WORLD'S LARGEST MAKERS OF WIND-DRIVEN GENERATING EQUIPMENT

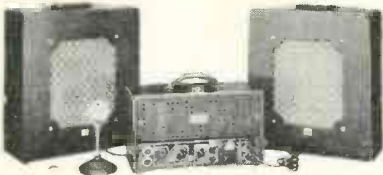
NEW THINGS

Knight communicator



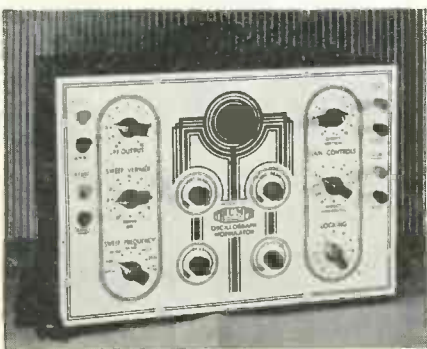
★ Recent addition to Allied's sound dept. are 3 interfone systems. 2-unit, master and multiple types are available. Illustrated is the master system, which will handle up to 4 remote stations. Amplifier using 3 tubes housed in master unit. Sub-stations consist of a speaker unit and call switch. Housed in walnut cabinets. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.—RADIO TODAY.

Bell sound system



★ 20-watt portable system with gain of 112 DB. Frequency response within 2 DB from 35-10,000 cycles. Dual channel input. Crystal mike—dual speakers with infinite baffle. Tone control. Carried in 2 compact cases covered in black Keratol. Type PA-4-C. Bell Sound Systems, Inc., 61 E. Goodale St., Columbus, Ohio—RADIO TODAY.

Oscillograph-wobbulator



★ Complete oscillograph with 913 cat-ray tube. Thyatron linear sweep amplifier—15-35,000 cycles. Horizontal and vertical amplifiers. Electronic wobbulator variable from 0 to 55 KC. Synchronizing lock control. Beam adjustment, focusing, intensity controls. Weight only 13 pounds—13¼ x 9½ x 8 inches. Model 77. Triumph Mfg. Co., 4017 W. Lake St., Chicago, Ill.—RADIO TODAY—see also advt. p. 55.

G-E auto aerials

★ Four types of antennas for auto radios. "Top-flo" (KA-20) is held in position by rubber suction cups that are cemented in place. "Hinge-rod" (KA-10) attaches at the front door hinge. "Fish pole" (KA-30) is fastened to rear bumper. "Double hairpin" (KA-40) is a rubber-covered under car aerial. List \$3.15 to \$4. General Electric Co., 1285 Boston Ave., Bridgeport, Conn.—RADIO TODAY.

Midget R.F. relay

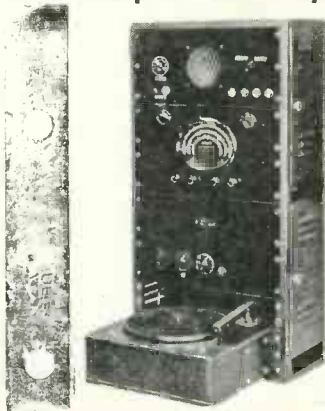
★ Radio frequency relay for antenna switch-over and other similar uses. Midget size with 3-inch square base. Micalax insulating base and cross arm—available in 4 and 15 amp. sizes for 6-volt DC and 110 AC operation. Double pole double throw contacts. Ward Leonard Electric Co., Mt. Vernon, N. Y.—RADIO TODAY.

Vari-volt transformer



★ Variable voltage transformer for the serviceman to use in checking set at normal and abnormal voltages. Supplies 0-256 volts in 2-volt steps and 0-128 volts in 1-volt steps. Rating 250 watts maximum. Halldorson Co., 4500 Ravenswood Ave., Chicago, Ill.—RADIO TODAY.

Rack and panel sound system

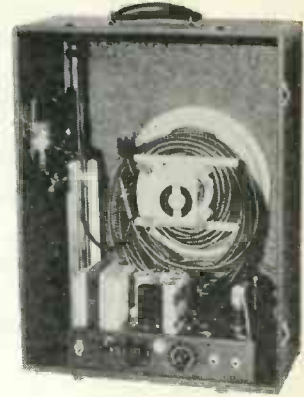


★ Co-ordinated sound system designed for factories, schools, churches, etc. Permits personal calling or mass announcements. Will rebroadcast radio programs and reproduce phonograph recordings. Operates from 110 AC. Wholesale Radio Service Co., 100 Sixth Ave., New York, N. Y.—RADIO TODAY.

Handset

★ Telephone type handset with crystal microphone—designed for use at voice frequencies. Magnetic type receiver. Moulded in a 1-piece unit. Turner Co., Cedar Rapids, Iowa.—RADIO TODAY.

Recording amplifier



★ High-gain resistance coupled speech recording amplifier. Has low and high-pass filters for tone regulation. High and low impedance input—output for 6-ohm speaker or 15 ohm cutting head. Entire outfit consists of velocity mike, speaker, mike stand, carrying case and connecting cables. Universal Microphone Co., Inglewood, Calif.—RADIO TODAY.

RCA aerodynamic mike

★ Dynamic type of microphone—streamlined. May be operated up to 1000 feet from amplifier—not affected



by wind or weather. Shielded from RF and AF fields. Requires no external excitation. Operating level minus 69 DB. Frequency range 100-6000 cycles. Net weight 1¼ pounds. Model MI-6226—list, less stand, \$26.50. RCA Mfg. Co., Front and Cooper Sts., Camden, N. J.—RADIO TODAY.

Speaker units for interphones

★ Five and six-inch Nokoil speakers for use in intercommunicating systems. Speaker is used as both reproducer and pick-up. Cabinet available to house speakers. Wright-DeCoster, Inc., 2233 University Ave., St. Paul, Minn.—RADIO TODAY—see also advt. p. 76.

Heavy-duty aerial

★ All-wave antenna for use where severe weather and wind conditions are encountered. Uses 60-foot 7-strand No. 18 phosphor bronze wire for pick-up. Additional 50 feet supplied for supporting aerial. 100 feet of special transmission line with extra-heavy rubber covering. Furnished with 4 8-inch glass insulators and 4 8-inch stand-off insulators. No. 45-1242—list \$32.50. Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY.



Inductance Forms by ISOLANTITE are

1. **EFFICIENT**—Low dielectric losses increase power output.
2. **ECONOMICAL**—Large or small quantities can be produced without expensive tools.
3. **PRECISE**—Uniformly close tolerances ensure accurate fit.
4. **STURDY**—Winding and mounting are accomplished without breakage.
5. **CLEAN-CUT**—Appearance of equipment is improved.

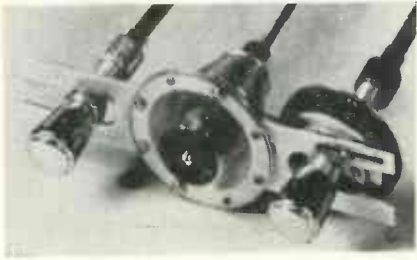
● Leading manufacturers of military, naval and commercial short wave radio equipment specify ISOLANTITE inductance forms.

● Why adapt your equipment to a coil? ISOLANTITE builds the coil to fit the equipment. Special forms, costing but little more, ensure the ultimate in performance.

ISOLANTITE
INC.
CERAMIC INSULATORS

233 Broadway, New York, N. Y.

NEW THINGS



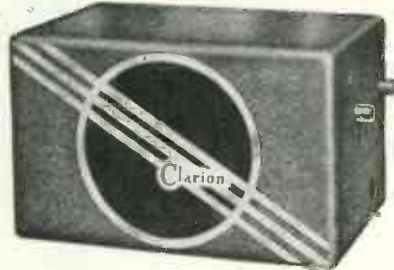
Universal auto-radio control head

★ Adjustable type of control head to fit all cars and all radios. Volume control and tuning control mounted on slotted piece—can be moved to fit holes of any spacing. Fits without drilling and filing. Dial pointer driven by small belt from tuning shaft—illuminated full-vision dial. Escutcheons to match all 1935-6-7 cars. Star Machine Mfrs., Inc., 1371 E. Bay Ave., Bronx, N. Y.—RADIO TODAY—see also advt. p. 65.

General Electric tubes

★ New line of G-E tubes is comprised of 103 glass types and 19 metal. Both the metal and glass tubes are packed in sealed tamper-proof cartons. The glass line includes both the octal and old type glass. Obsolete tubes not included—but tubes such as 01-A, 71-A, 11-A, X-99 are in the line, since there is considerable replacement activity in these types. General Electric Co., 1285 Boston Ave., Bridgeport, Conn.—RADIO TODAY.

Clarion auto sets



★ New auto radio line is comprised of 12 models. Five 6-tube, five 7-tube, two 8-tube models for all makes of automobiles. List \$34.95 to \$69.95. Clarion Corp., 35 E. Wacker St., Chicago, Ill.—RADIO TODAY—see also advt. p. 1.

Thordarson oscilloscope kit

★ Low cost cat-ray oscilloscope kit for the serviceman. Completely designed by Thordarson engineers. Uses standard parts mostly. Features linear sweep circuit, vertical and horizontal amplifiers. Uses new type 913 1-inch tube. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.—RADIO TODAY—see also advt. p. 59.

Streamlined amplifier

★ 20-watt amplifier with 122 DB gain. Dual input channel for high-impedance mikes. Frequency response with 2½ DB from 50-12,000 cycles. 6L6 beam power output tubes. Output

impedance of 500 ohms. Tone control and 6E5 overload indicator tube. Cabinet of heavy gauge steel with rounded corners. Model 20-C—list \$62. United Sound Engineering Co., St. Paul, Minn.—RADIO TODAY—see also advt. p. 73.

Tapped volume controls

★ Assortment of 14 tapped controls taking care of past and present production of sets. Permit immediate replacement of any defective control with full assurance that total resistance and taps satisfactorily match original units. Clarostat Mfg. Co., Inc., 285 N. 6th St., Brooklyn, N. Y.—RADIO TODAY—see also advt. p. 75.

Midget x-mitting condensers

★ Line of small variable condensers for medium powered transmitters. Single-hole or stand-off insulator mounting. Available in 35, 50, 75 mfd. sizes—2000 volt peak. 100 mfd. at 1250 volt peak. Bud Mfg. Co., 1937 E. 55th St., Cleveland, Ohio—RADIO TODAY.

Erla receivers



★ 5-tube dual band table model superhet—tunes 540-1720, 2300-6300 KC. AC operated—4 watts output. Six inch dynamic speaker—tone control. Large rectangular illuminated dial. Sensitivity of 10 microvolts on broadcast band. Model 72A-T—list \$19.95.



All-wave console with 9 metal and 2 glass tubes. Power output of 9 watts. 12-inch dynamic speaker. Tunes 535-1720, 1680-5700, 555-18,500 KC. Call letters of selected stations indicated on dial. Set has automatic frequency control—push-pull output tubes. Model 76AC—list \$89.95. Electrical Research Laboratories, Inc., 2222 Diversey Pky., Chicago, Ill.—RADIO TODAY.

Universal line filter

★ Line filter with multi-section capacitor blocks and dual line chokes. Choice of condensers permits match-

ing of filter to individual conditions. Has 4 condensers each of .1, .25, .5 mfd. at 220 volts AC. Housed in steel case with knock-outs. 5 to 30 amp. sizes. Model 7819 5 amps.—list \$15.50. J. W. Miller Co., 5917 S. Main St., Los Angeles, Calif.—RADIO TODAY.

Million test instruments



★ New Million instruments have been completely restyled—feature new panel indicator escutcheons and illuminated meters. Available as multimeters, tube checkers, and set analyzers. Million Radio & Television Labs., 397 W. Superior St., Chicago, Ill.—RADIO TODAY—see also advt. p. 74.

Solar razor interference filter



★ Capacitive-inductive type of filter to overcome interference produced by electric razors. Inserted between plug and convenience outlet. Elimostat type AE. Solar Mfg. Co., 599 Broadway, New York, N. Y.—RADIO TODAY—see also advt. p. 67.

Tobe Xmitting condenser

★ Oil-processed 2000-working-volt condenser for transmitter and amplifier equipment. Sealed in metal housing with wet process insulators mounted on top. Tobe Blue Ribbon Micranol condenser. Tobe Deutschmann Corp., Canton, Mass.—RADIO TODAY.

Variac transformer

★ Continuously variable auto transformer for supplying 0-135 volts from a 115-volt line. Improved type 200-B Variac will now supply 1-1½ amps on 60 cycles. Table or panel mountings. Ideal for testing sets at voltages above and below line voltage and for correcting abnormal line voltages. List \$10. General Radio Co., 30 State St., Cambridge, Mass.

★ Through an error on the part of RADIO TODAY, the price of the American Carrier-Call intercommunicating telephone was incorrectly listed on page 32 of the March issue. The Carrier-Call instruments are correctly priced at \$79.50 per pair.

THERE is STILL TIME to Enter
the RAYTHEON CONTEST!



• Picture shows Mr. Eddie Riedel, Raytheon General Sales Manager, and Mr. Earl Dietrich, Manager of Distributor Sales, photographed with Grand Prize Sound Truck.

WE ARE *Giving Away this Truck!*

OR \$600.00 CASH—FIRST PRIZE
ALSO 500 OTHER FREE PRIZES

There is still time to enter! The contest does not close until May 1. It is the easiest contest you ever saw. All you need to do is just write a sentence. There are going to be 500 winners of valuable prizes! And the winner of the V-8 Truck will be personally advertised in the Saturday Evening Post in a Raytheon Advertisement!

Ask your jobber *today* for an entry blank!

RAYTHEON

RAYTHEON PRODUCTION CORPORATION

420 Lexington Ave., New York, N. Y.
55 Chapel Street, Newton, Mass.

445 Lake Shore Drive, Chicago, Illinois
555 Howard Street, San Francisco, Cal.
415 Peachtree St., N. E., Atlanta, Ga.

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



New multi-station system by Carrier-Call allows user to select any one of 5 other stations, talk without others hearing. "Carrier-Eye" used for busy signal.

PLUGGING INTERCOMMUNICATORS

- gadgets demonstrated, displayed profitably
- outside selling helps move new phones

★ QUIETLY CLICKING in hundreds of offices are the new wonder-gadgets of the radio biz, intercommunicators. Clicks of another sort are heard in the cash registers of many radio dealers.

As sales plans for the inter-room communicators get themselves organized, radio men stock the new merchandise and outline their methods for plugging this new adjunct to the radio-electrical set-up.

Inter-phones are being advertised nationally, and in some ways the popular demand is ahead of dealer activity. Radio merchants who have not fallen for the gadgets are now willing because they have had enough inquiries to support promotion.

1937 pushover

N. Goldman, of the Goldman Electric Co., New Rochelle, N. Y., is an example of a dealer who noticed the demand before he had the merchandise on his floors. Local people noted the new features of the systems, thought that Goldman's was the logical place to find them.

Persons who are prospects for intercommunicating systems have turned out, naturally, to be the more substantial types of customers. Office executives, hotel managers, own-

ers of elaborate homes, dentists and physicians are among typical prospects and nearly all of them either have the cash or are certainly OK credit risks.

This has been one of the factors which attract radio dealers into the field. Also, many of the sales are being made to establishments such as hospitals, libraries, newspapers, schools, etc., where the question of payment is not something for salesmen to be worried about.

Summer profit

Radio outlets have discovered that there are usually a dozen or so good prospects in the same block. Any store which has occasion for office-to-cashier, floor-to-floor, or inter-department communication, should respond to demonstration, particularly if it is a neighbor.

For those who note a lull-time in summer radio selling, the new loud-speaking items have their points. Unlike other fill-in merchandise plugged from May to August, intercommunicating systems are not limited in their appeal; in fact, many extra prospects for them show up in summer months. Summer resorts, night clubs and beach establishments are among the newcomers to prospect lists.

One sales course which dealers seem inclined to follow is to start with lists of names already on their records. These are checked through with the idea of selecting all those prospects in any way connected with spots where interphones could be used.

Where office executives or owners of big homes are themselves old customers, the sales plans are easy to make. And when old customers are employees at offices where the systems can be used, they can often furnish invaluable leads as to where and how their employers should be approached.

Outside angle

Due to the fact that this market is one of the least-worked in the radio field, the use of special outside salesmen has been recommended. Even if these gents start out from the shop with a list of appointments and hot prospects, it has been found that one call leads to another. Whether it's in the residence field or in the office section, a smart salesman will make friends and pick up leads as he goes along, when he's got this type of merchandise.

Few items can be as dramatically demonstrated as these inter-room talkers. Of course dealers keep a system installed in their stores so that a demonstration can be the first move when an inquiry is made. In such cases, dealers are encouraged to use as many units as possible, rather than exhibiting the simplest installation that can be set up.

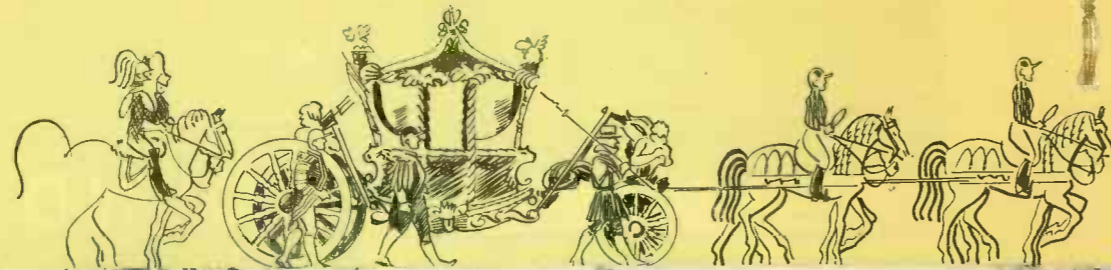
Trick demos

When the gadgets are being demonstrated, it seems discreet to have a series of sales paragraphs worked out for use while speaking through the inter-phones. Earlier in the game, salesmen were apt to show off the instruments by reciting numbers or letters of the alphabet. But such sentences may as well be used to describe the features and advantages of the merchandise. Naturally, the prospect should also be encouraged to test his own voice through the system.

For window displays, many dealers favor photographs of office or home situations, with remarks of the subjects lettered in as in comic strips. Blueprints of office floors, with lights behind them and with intercommunicating systems shown in colors, also make effective window stoppers.

All the World's a Neighborhood—

Thanks to Radio!



RADIO MAKES THE CORONATION A NEIGHBORHOOD AFFAIR

On May 12, 1937, the first British Coronation ever given to the world by radio will come to America... "RCA all the way!"

GREAT BRITAIN'S neighbors all over the world will tune in on the Coronation. They will hear the sound of tramping feet, hoof-beats, the wheels of the royal coach, from Buckingham Palace to Westminster Abbey and back again... bands playing... the rattle of sabres... the cheers and remarks of millions of onlookers... the service in the Abbey... and a running-fire description from the lips of skilled commentators.

NBC's picked staff will tell the story, using microphones and transmission equipment built by RCA Victor. RCA Communications will speed the description across the Atlantic. NBC's Red and Blue Networks will carry it into millions of American homes, where

RCA Victor radios will reproduce it with faithful accuracy. While this is going on, RCA Communications will also be sending photographs of the procession across the Atlantic, and you can see the pictures in your afternoon paper while the parade is still actually going on in London!

In today's world-neighborhood of radio, the RCA Victor dealer occupies an outstanding position. He connects the RCA family of radio services with 25 million families of radio patrons. He shares the prestige of the only organization active in every branch of radio. His merchandise embodies the complete range of actual radio experience... from microphone to receiving set... expressed in the phrase "RCA all the way!"

Listen to "The Magic Key" every Sunday, 2 to 3 p. m., E. S. T., on NBC Blue Network

RCA MANUFACTURING CO., INC. RCA INSTITUTES, INC.
RCA COMMUNICATIONS, INC. RADIOMARINE CORP. OF AMERICA
NATIONAL BROADCASTING CO.

RADIO CORPORATION OF AMERICA • Radio City, New York

Everything in radio for service in
Communications . . . Broadcasting . . . Reception

SOUND SALES WIDEN

—spring has a bearing on the business
—more names added to prospect lists

SYNCHRO-OPERA

★ It's been found that many-pieced orchestral effects, as well as many-voiced choral ones, can be put on sound film and used again and again in connection with opera performances.

In this way you can get a small group of artists to go through the motions of an opera, but with the sound film to supplement them, get the effect of a huge company. Of course the voices and instruments of the visible artists have to be synchronized with what the sound system reproduces.

Synchro-opera, it's called, and it's the idea of an American conductor, Vladimir Shavtch. He recently convinced the musical experts in Moscow that the thing was OK, and that it was the ideal way to bring opera to the masses without dragging along a big orchestra and chorus.

If the idea should click in America, it appears to have enormous significance for all those in the sound business.

ADD FOX FARMS

★ Latest and most curious place to use microphones has been located by the sharp-eyed gentlemen of the Brush Development Co. They've been installed on a fox farm, in "nest houses" where the foxes are born.

It is a problem, in fox breeding, to prevent the young from being killed before an attendant arrives. So small

mikes were put in the nests, to pick up disturbances and transmit them to a centrally stationed attendant. In this way the keeper could check on a lot of nests at the same time, and efficiently protect the young animals.

TOURISTS' CABINS PROSPECT FOR SOUND

★ Groups of tourists' cabins along motoring highways, bid fair to become a new prospect of sound equipment this year. A few proprietors of these overnight wayside caravansaries have already experimented with sound circuits with such success, that "sound" or "radio in every cabin" may soon become a standard requirement of the better-class stopping places.

The loudspeaker installed in each cabin is used for radio music in the early part of the evening. Later it can be used to make announcements. And when separate circuits are run to each cabin, the speaker can be used to waken at dawn any unhappy itinerants who leave word "at the front cabin" that they want to get started early.

SELLING SOUND THROUGH JOBBERS

★ "A week or so ago, one of our dealers from out of town dropped in to see us. We were awfully glad he did, because we like to meet the users of our products and discuss our mutual problems," explains Albert R.

Kahn, president of Electro-Voice Mfg. Co., South Bend, Ind.

"It was a very pleasant visit. He seemed a little perturbed at first, because we declined to extend the jobber's discount to him. 'Why?' he asked, with every justification, 'should the jobber make a profit when I can just as well order direct from you?'"

"We explained: That, first of all, it was an established policy which was proved sound after seven years of manufacturing microphones.

"Selling costs form a definite part of the price paid by the dealer, whether he buys from a jobber or direct from the factory. It is obvious that it costs the factory much less to reach several hundred jobbers than thousands of dealers. Of course, a factory cannot sell both the distributing trade and direct, for, as the old saying goes, 'You cannot carry water on both shoulders.'"

Jobber's wider assortment

"The jobber, quite naturally, can carry a wider assortment to take care of individual needs than is practical for the dealer. The jobber can supply the correct instrument from stock, eliminating delay. This is worth something.

"In any industry, particularly ours, it is desirable to have several checks on any product. We believe that the legitimate manufacturer is more particular than the jobber; the jobber more than the dealer; and the dealer more critical than the ultimate user. It is largely because of this that the jobber carries a superior brand of merchandise than is sold direct. He gets into a lot of trouble if he doesn't.

Replacements

"A distributor has close contact with the factory and has recourse because of any failure of a product. Replacements are usually made immediately. There is no delay or unpleasantness that often occurs when a factory deals direct with thousands of individuals.

"A volume production is necessary to the manufacturer. With a quality product, the right jobbing setup will provide far steadier and greater volume than any other method. This not only results in lower dealer cost but makes it possible to provide engineering and tools that will turn out a constantly better product at a still lower price.

"When we concluded our sermon, the dealer seemed very much in accord with our ideas. Anyway, he gave us a nice order to be shipped through his jobber and everybody was happy."



FLEXIBILITY FIRST was the sales theory of John Thomas, New Rochelle, N. Y., when he made this sound outfit adaptable to all types of outdoor events.



THESE "INTER-COM" SYSTEMS Sell on Sight



Beautiful designs. . . . Colors to harmonize with any surroundings. . . . Sparkling performance. . . . Competitive prices. . . . The natural choice of dealers who know.

OXS — Inter-Communicating System . . . two stations employing one amplifier.
OC-2 — Inter-Communicating System for two-station inter-communicating.
OCM — Inter-Communicating System for any number of stations up to 10. Each station can talk to each other station.

THIS 12-WATTER IS BREAKING ALL RECORDS



A REAL PRICE LEADER, TOO!
Portable, carried in one case. . . . Two Speakers
Crystal Microphone. . . . Two Electronic High Gain Inputs for Crystal, Velocity, Velotron and Phone Input for dual mixing. . . . Suitable for audiences indoors to 1,500 people.

SOUND PROFITS With the BIG 3

More and more dealers are turning to sound. Right now is the time to get started, get set before the Spring-Summer buying season. . . . Investigate the BIG 3:

- (1) "UP-TO-THE-MINUTE" MERCHANDISE— A completely new line with all the latest improvements and many exclusive Webster-Chicago features. It is currently returned to market requirements, priced to sell in real volume.
- (2) THE SOUND FIELD— Webster-Chicago has been in the sound business since it started. Webster-Chicago installations with years of satisfactory service are to be found everywhere. Highest quality maintained by large staff of engineers. . . . Full R.M.A. guarantee on every product.
- (3) POWERFUL DEALER HELPS ASSURE RAPID TURNOVER— The dealer who sells the Webster-Chicago line has the advantage of a wide assortment of dealer helps designed to meet local conditions and open doors. With these helps the aggressive dealer can literally "go to town."

1937 CATALOG— Ready now . . . 16 pages of the latest in P.A. Systems, Sound Equipment and Accessories. It's FREE— Use Coupon.

NEW WEBSTER-CHICAGO

NOTICE TO DEALERS
WEBSTER-CHICAGO
5622 Bloomingdale Avenue, Chicago, Ill.
Gentlemen:
Without obligation please send me
 New 1937 Catalog
 Information on Inter-Communication Systems
 Information on Model PA-712.

Name _____
Address _____
City _____ State _____

- Fully Licensed
- Strict Dealer Plan
- Time Payment Plan

YOU ARE LOOKING AT THE
**1937
 OPERADIO
 LINE**



Model 108
 8 Watt Portable P. A. Unit
 List Price \$83



Model 117
 14 Watt Portable P. A. Unit
 List Price \$117



Model 835
 35 Watt Amplifier
 List Price \$120



Model 110-R
 20 Watt Portable P. A. Unit
 List Price \$190



Model 124-W
 22 Watt Portable P. A. Unit
 List Price \$198



Model 132-BAC
 25 Watt Mobile P. A. System
 List Price \$240



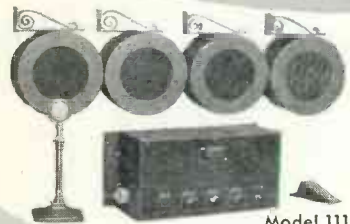
Model 855
 55 Watt Amplifier
 List Price \$180



Model 870
 70 Watt Booster Amplifier
 List Price \$125



Model 145-10
 Intercommunicating System
 Obtainable in both Wood
 and Steel Cabinet
 List Price from \$38 to
 \$56.25 per station



Model 111
 Amplifier Paging System
 List Price \$220



Model 135
 Intercommunicating System
 Obtainable in both Wood
 and Steel Cabinet
 List Price \$57.50
 per pair

*Also a complete line of
 P. A. and Radio Replace-
 ment Speakers

*All Prices
 INCLUDE Tubes

OPERADIO

MANUFACTURING COMPANY
 ST. CHARLES • ILLINOIS

April, 1937

IT'S A COMPLETE LINE
 IT'S A PRICED RIGHT LINE
 IT'S A LIBERAL DISCOUNT LINE
 IT'S THE 1937 PROFIT LINE

**New Catalog
 Describes NEW LINE**

MAIL COUPON

■ Operadio Manufacturing Company, Department R4T, St. Charles, Illinois
 ■ Please send me your NEW 1937 Illustrated Catalog describing the COMPLETE
 Operadio Profit line for 1937.

■ Name.....

■ Name of Firm.....

■ Kind of Business.....

■ Street Address.....

■ City..... State.....

■ My Jobber is.....

■ Address of Jobber.....

Model	I.F.	GT-8-69	175
Chassis	Peak	GT-10-69	175
		GT-10-88	175
		GT-10-99	175

Continued from
March

RADIO TODAY			
GREBE*			
61-R	456		
89	175		
140	456		
250	456-RC		
360	456		
361	456		
370	456-RC		
371	456-RC		
380	456-RC		
381	456-RC		
620	456-RC		
730	456-RC		
731	456-RC		
830	456-RC		
831	456-RC		
930	456-RC		
931	456-RC		
1240	456-RC		
1650	456-RC		
2150	456		
4110	456-RC		
5140	456-RC		
5240	456-RC		
5240	456-RC		
B-37	456-RC		
HS-3	175		
HS-4	175		
HS-5	175		
HS-6	175		
HS-7	175		
HS-8	175		
HS-12	175		
Letters A, C, D,			
E, H, KC, LC			
after model No.			
indicate cabinet			
style.			
GRINGSBY-GRUNOW*			
"Majestic"			
10	1000		
11	1000		
11-A	262		
15, 15B	175		
20	175		
21	175	340B	
22	175	344	
23	175	353	
25, 25B	175	360	
35	175	363	
44	456	370	
45	456	371	
49	175	373	
51	175	390	
52	175	393	
55	175	400, 400A	
56	175	411, 411A	
57	175	413, 413A	
58	175	440	
59	456	450	
60	175	460	
61	175	461	
62	175	463	
66	175	490	
67	175	491	
68	175	493	
69	175	500	
75	456	520	
77	175	550	
85	175	560	
86	175	566	
94	456	570	
95	175	600 AC-DC	
105	175	666	
111	175	776	
111-40	175	800	
114	175	886	
116, 116A	456	996	
118, 118P	175	998	
120	175	F-50	
120-B	175		
121	175		
123	175		
GRUNOW*			
2A	262-RC		
4A, 4B	455-RC		
4C	490-RC		
465-RC			
4NB	465-RC		
5A, 5B	455-RC		
5C, 5D	455-RC		
5E	455-RC		
5G	465-RC		
490-RC			
5H, 5J	465-RC		
5K, 5L	465-RC		
5NB	465-RC		
5O	465-RC		
5R, 5S	465-RC		
6A, 6C	262-RC		
6D, 6F	455-RC		
6G	465-RC		
490-RC			
6HB	465-RC		

I. F. PEAKS and COLOR CODING

PART VI • RADIO TODAY • APRIL, 1937

Model	I. F.	Chassis	Peak
6J	465-RC	650	262-RC
6M	490-RC	651	262-RC
7A, 7B	465-RC	660	262-RC
7C	455-RC	661	262-RC
7DB	455-RC	662	262-RC
7M	465-RC	670	455-RC
7NB	455-RC	671	455-RC
7NB	455-RC	680	465-RC
8A, 8B	262-RC	680	490-RC
8D, 8E	455-RC	681	465-RC
8H	455-RC	681	490-RC
9A	262-RC	690	455-RC
9B, 2A	262-RC	691	455-RC
9C	262-RC	700	262-RC
9E	455-RC	701	262-RC
11A,	262-RC	711	455-RC
11B	262-RC	720	465-RC
11C	455-RC	721	465-RC
11G	465-RC	723	465-RC
12B,	465-RC	731	465-RC
12W	465-RC	733	465-RC
12A	455-RC	735	465-RC
15W	455-RC	750	262-RC
410	465-RC	751	262-RC
411	465-RC	752	262-RC
450	455-RC	753	262-RC
451	455-RC	761	455-RC
460	455-RC	801	262-RC
461	455-RC	821	262-RC
490-RC	823	455-RC	831
465-RC	831	455-RC	835
455-RC	835	455-RC	835
501	455-RC	833	455-RC
502	455-RC	861	455-RC
503	455-RC	871	455-RC
510	465-RC	901	262-RC
520	455-RC	902	262-RC
530	455-RC	921	262-RC
465-RC	941	455-RC	1101
465-RC	1101	262-RC	1151
455-RC	1151	262-RC	1152
465-RC	1152	262-RC	1161
465-RC	1161	262-RC	1162
455-RC	1171	455-RC	1191
465-RC	1191	456-RC	1191B
465-RC	1241	455-RC	1291
455-RC	1291	465-RC	1297
465-RC	1297	465-RC	1541
465-RC	1541	455-RC	
HALL-CRAFTERS*			
5T	456		
S10	1600		
S11	465		
S12	1600		
S14	465		
S15	465		
HALSON*			
4M	456		
6L6	456		
15	456-RC		
18M	456		
20B	456		
25	456-RC		
35	456-RC		
50, 50M, 50R	456		
50RL, 50S, 50V	456		
50X	456		
53C	456		
56U	456		
60, 60L, 60M	456		
65	456		
66AW	456		
72	456		
75	456		
78	456		
100, 100M	456		
101	456		
102	456-RC		
103	456-RC		
104	456-RC		
106	456-RC		
520	456		
505	456		
530	456		
535	456		
536	456		
540	456		
560	456		
570	456		
580	456		
606	456		
610	456		
620	456		
630	456		
770AW	456		
1200	456		
1500	456		
1900	456		
AW6	456		
CA5	456		
CA8	456		
CM5	456		
CM8	456		
237	175		
322	175		
351	262		
352	262		
362	262		
392	175		
530	175		
535	175		
872	175		
925	175		
3225	175		
3226	175		
3521	175		
3525	262		
3622	262		
455-RC	262.5		
3622-A	262		
3722-A	262		
3925	175		
8726	175		
O5A	262		
O6-W	262		
O62A	262		
T 6W (Auto)	262		
T 6W 1	262		
V 6 Z2	262		
Z 6 Z 1	262		
HALL-CRAFTERS*			
5T	456		
S10	1600		
S11	465		
S12	1600		
S14	465		
S15	465		
HALSON*			
4M	456		
6L6	456		
15	456-RC		
18M	456		
20B	456		
25	456-RC		
35	456-RC		
50, 50M, 50R	456		
50RL, 50S, 50V	456		
50X	456		
53C	456		
56U	456		
60, 60L, 60M	456		
65	456		
66AW	456		
72	456		
75	456		
78	456		
100, 100M	456		
101	456		
102	456-RC		
103	456-RC		
104	456-RC		
106	456-RC		
520	456		
505	456		
530	456		
535	456		
536	456		
540	456		
560	456		
570	456		
580	456		
606	456		
610	456		
620	456		
630	456		
770AW	456		
1200	456		
1500	456		
1900	456		
AW6	456		
CA5	456		
CA8	456		
CM5	456		
CM8	456		
HARRIS ELECTRO-TONE*			
500	465-#		
501W	465-#		
600	465-#		
700	465-#		
701W	465-#		
800	465-#		
900	465-#		
1000	465-#		
1201W	465-#		
HATRY & YOUNG*			
HY-S-6	175		
HY-7	175		
HY-7B	175		
HETRO			
6LB	456		
6SB	456		
22	115		
31	175		
71	456		
209	456		
257	456		
259	456		
295	456		
297	456		
412	456		
466	456		
HUDSON MOTORS			
650-HD	252.5		
651-HE	252.5		
660-TD	252.5		
661-TE	252.5		
680	252.5		
CB6	260		
H6	260		
HUDSON ROSS			
59	456		
69	456		
80	456		
HOODWIN			
See Aero			
HOWARD			
1 (auto)	465		
5-3	456		
6A	465		
8A	465		
20	175		
25	175		
30	175		
32	175		
35, 35-A	175		
40	175		
45	175		
47-A, 47-U	175		
52	456		
57-A, 57-AUS	456		
57-UA-SW	456		
58, 58-A	465		
58-B	465		
60 (AVH)	175		
60, 60-SW	456		
67, 67-C	465		
67-T	465		
68-C, 68-CA	465		
68-T, 68-TA	465		
68-TB	465		
77, 77-C	465		
77-T	465		
88-C, 88-T	465		
99, 99-C	465		
99-T	465		
400	175		
410	175		
420	175		
500	175		
501	175		
502	456		
626	456		
670-A	175		
1626	465		
1267	465		
A	680		
AP	175		
AVH	175		
AVO	175		
B-13	456		
C-14	456		
CC-23	456		
CC-24	456		
D	456		
D-8	465		
D-15	465		
D-16	465		
DL	175		
E-14	456		

AMPERITE VELOCITY MICROPHONES

Distinguished in Performance, Design, and Construction. Used in Leading P.A. Systems.

Considered by P.A. Men As the Greatest Values in Microphones Available Today.

PERFORMANCE!

"A magnificent instrument. Despite the climate here, results are marvelous and could not be bettered, I am sure." — D. Hopkins, Raffles Hotel, Singapore.

DESIGN!

"Your streamline mike is going over big with our trade. Congratulations on its fine design and performance." — R. Ruben Saugus, Mass.

CONSTRUCTION!

"We believe no other mike could take the punishment it has and still give such excellent reproduction." — Johnston P.A. Service, Oneonta, N. Y.

VALUE!

"The finest type microphone that I ever used. . . . Please duplicate my order." — Ridley's P.A. Systems, Inc., Tulsa, Okla.



FEATURES

The Amperite Velocity is compact, streamline, modern. Embodies the latest technique in microphone design, featuring . . .

1. Output: increased 6 DB.
2. Triple Shielded—against all RF or magnetic fields, entirely eliminating hum pickup.
3. Eliminates feedback troubles.
4. Excellent for close talking and distant pickup.
5. Acoustically designed to eliminate any possibility of cavity resonance.

A POPULAR AMPERITE VELOCITY \$22.00 LIST

A Velocity Microphone of very high excellence. Built to Amperite standards. Used for both speech and music with great success. No peaks. Flat response over audible range. Output—69 db. Triple shielded. Fitted with shock absorber and swivel bracket. MODEL RAL (200 ohms) with 8 ft. of cable; MODEL RAH (2000 ohms) high impedance, with 12 ft. of cable

\$22.00 LIST
CHROME OR EGG SHELL . . . \$23.00 LIST



PASTEL COLORS on Microphones and Stands.

Amperite now furnishes microphones and stands in EGG SHELL or other pastel finishes to suit decorative schemes. The stands feature the patented positive, non-sliding clutch. Complete line of desk, banquet, floor and studio stands. Available in Chrome or Egg Shell at \$1.00 LIST extra per stand.

Write for Bulletin ST-66

LEADING MODELS

MODELS RBHn (High Impedance); RBMn (200 ohms); with cable connector and switch, \$42.00 LIST

Chrome, or Egg Shell \$43.00 LIST

MODELS RBSn, RSHn, streamline design, slightly lower output than above, with switch only, \$32.00 LIST

With cable connector \$34.00 LIST

FINISHES: All microphones have the new standard gunmetal finish.

Chrome or Egg Shell, extra \$1.00 LIST

OTHER PASTEL SHADES extra \$2.00 LIST

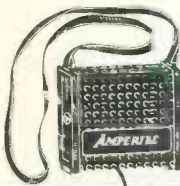
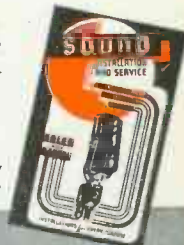
FREE TRIAL OFFER TO STUDIOS

A Two Weeks' Trial Offer of the Amperite SR-80 Velocity is extended to broadcasting studios only. No deposit, obligation, or strings attached. Give the SR-80 an exhaustive two weeks' test. Then you may either return the microphone or keep it on our very attractive terms. Write, specifying either MODEL SR-80 (low impedance); or SR-80 H, high impedance. LIST \$80.00, with New Special Discount to Studios.

FREE: WINDOW DECAL

A striking window decal advertising your SOUND SERVICE. Size, 5 1/4 x 9 1/4, finished in 4 colors.

Free to Jobbers, Dealers, and Service Men. Write for it today.



AMPERITE JUNIOR

A "lapel" Velocity of surpassing quality. Size of a match box. Ideal for lectures and specialty acts. Can be hidden under coat. Output constant with any position of the head. Transformer included in microphone case. MODEL 7J (200 ohms); or MODEL 7H (2000 ohms) . . . \$30.00 LIST

AMPERITE Company 561 BROADWAY, N. Y. U.S.A. ALKEM, NEW YORK

VELOCITY **AMPERITE** MICROPHONES

CURING EXTERNAL CROSS-MODULATION

How to recognize and locate a new source of radio interference

Interference with broadcast reception was reported recently from various cities, of a sort which indicated that a new type of cross modulation interference had appeared late in 1935. Many of the cases reported were very serious and the circumstances often were mysterious.

Investigation has revealed that most of this interference arises, not from any deficiency in receiver design, but from conditions external to the receiver and its antenna, though in its immediate neighborhood. Remedies have been found for most cases.

The following material, prepared for RADIO TODAY by Arthur VanDyck of the RCA License Division Laboratory, gives a brief description of the phenomenon and the cures found effective. In it Mr. VanDyck quotes liberally from an article in John F. Rider's "Successful Servicing" reporting tests and studies carried out by the RCA License Laboratory bearing on this new interference source.

* * *

These reports of cross modulation have been increasing in recent months, particularly in certain localities. The effect is typically that of

cross modulation, the programs of one or more strong local stations being heard at other than their normal frequencies. When the station combination frequencies are such that they fall on a channel having a station from which reception is desired, the desired station is masked by the program from the other station or stations.

This cross modulation effect has been reported in the vicinity of the following cities: San Francisco, New York, Chicago, Cincinnati, Washington.

High field intensities

The difficulty is not general through the area where it is experienced, but is found only where high field intensity exists (0.1 volt per meter or more) and in such areas only in certain locations. It may exist in a given house whereas an adjacent house is free from the trouble, the same receiver being used in each case. In places where the cross modulation occurs, the effect is substantially the same on all makes of receivers.

In past years interference of this type was largely due to defects with-

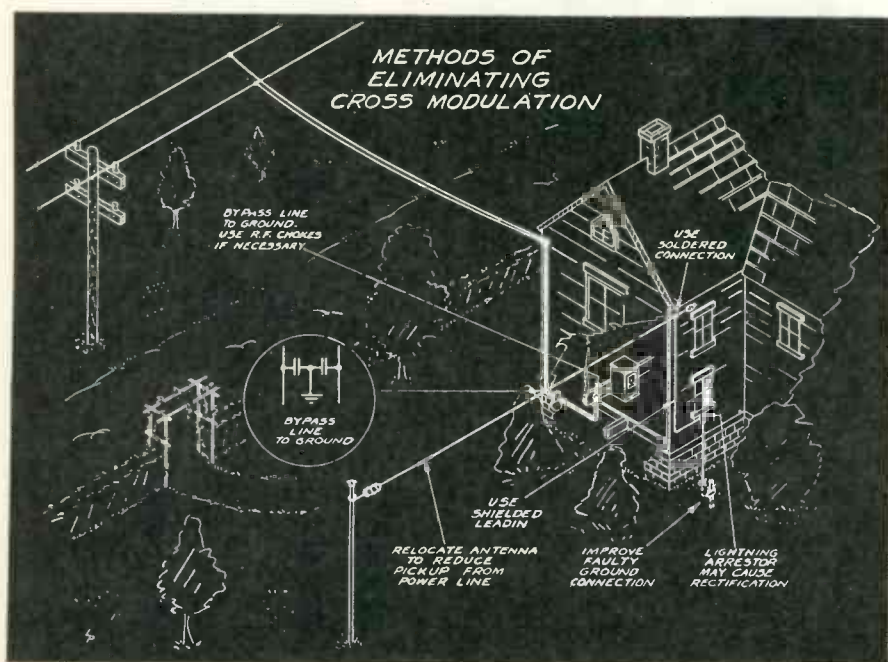
in the receiver itself. These defects were largely eliminated when the variable-mu tube was introduced. By reducing greatly the amount of rectification in the amplifier stages of the receiver (especially pronounced with the volume control retarded for the reception of strong signals), the use of these tubes has made possible improved volume control design and eliminated the generation of harmonic and combination frequencies which were largely responsible for the cross modulation.

We are not concerned in this article with the type of cross modulation which is due to conditions present in the receiver and which is generally understood by servicemen. However, we might mention in this connection that a reduction in the length of the antenna and the replacement of sharp-cutoff tubes with variable-mu tubes (with the necessary circuit changes, of course) are two of the most effective ways of eliminating cross-modulation which occurs as a result of conditions within the receiver.

Interference by rectification

With the advent of high powered stations, which are frequently located within comparatively short distances of each other, a new type of cross modulation has made its appearance, which is being called "External Cross-Modulation." Representative of this new interference effect, are numerous cases that have occurred in the vicinity of New York, where both WJZ and WOR operate 50 kilowatt transmitters within ten miles of each other. WOR operates on 710 kc., while WJZ operates on 760 kc. In these cases, in localities not far distant from these stations, it was found that WOR and WJZ interfered with WNYC (810 kc.) and WFAF (660 kc.). That is, it was possible to hear the program of WJZ and WOR while listening to the program of either WFAF or WNYC and in many cases the interference was so strong that satisfactory reception was impossible.

It is well known that when two signals are passed through a rectifying element, certain combination and harmonic frequencies are produced. If in this case we represent



Suggested procedure to remedying cross-modulation due to rectification taking place external to the radio set.



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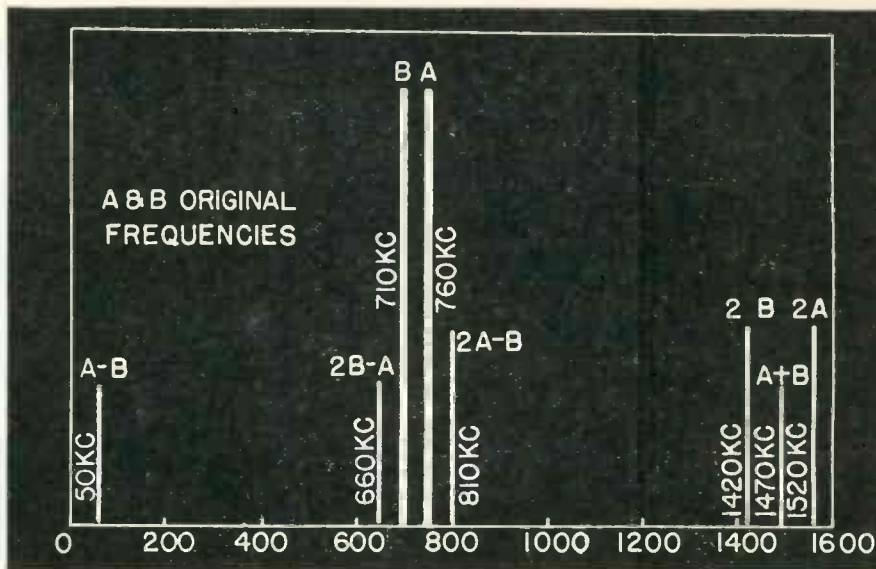
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Cross-modulation products produced by rectification of two original frequencies A and B. New frequencies introduced may cause interference.

the 760-kc (WJZ) frequency by A, and the 710-kc. (WOR) frequency by B, then the following frequencies and effects are produced:

A + B = 1,470 kc. No interference resulted in this case because there is no useful station operating on this frequency in the New York area.

A - B = 50 kc. No interference resulted in this case because this frequency lies outside the broadcast band.

2A = 1,520 kc. WJZ can be heard at this point on the dial but there is no station to interfere with. If there were, interference would be produced at this point.

2B = 1,420 kc. WOR can be heard at this point on the dial but there is no station to interfere with. If there were, interference would be produced at this point.

2A + B = 2,230 kc. } No interference in
2B + A = 2,180 kc. } these cases because both these signals lie outside the broadcast band.

2A - B = 810 kc. This is the frequency of WNYC. Both WOR and WJZ are heard on this frequency in some locations.

2B - A = 600 kc. This is the frequency of WEAFL. Both WOR and WJZ are heard on this frequency in some locations.

The above analysis explains how the frequencies originate that are responsible for the cross modulation in the New York area.

Similar types of cross modulation have been reported in the vicinity of San Francisco, Chicago, Cincinnati, and Seattle. The difficulty is not general throughout the area where it is experienced, but only where a high field intensity exists (of the order of 0.5 volt per meter) and then only in certain locations. It may exist in a given house, whereas an adjacent house is free from the trouble—although the same receiver is used in each case. In place where the cross modulation occurs the effect is substantially the same on all makes of receivers.

Locating the source

So much for the manner in which the presence of a non-linear or rectifying element is capable of accounting for the type of cross modulation produced. The question now arises, where is the rectifying element which produces the effect?

Observation and experiment have disclosed that the most common source is the power wiring, the effect being present generally where the power mains are of the exposed overhead type.

The rectifying element may be a poor ground connection, it may be an oxidized copper conductor in contact with another copper surface, and may even be electrolytic in nature, if the soil where the power wiring is grounded be moist. Another possible source of rectification is in certain types of lightning arrestors.

When such conditions exist, namely exposed wiring in a region of high signal strength and the presence of a rectifying element—even though it

(To page 50)

110 VOLTS AC ANYWHERE

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MOVIE RECORDS

Tie in with new films to sell more discs
Fifty-five records now involved

★ ORGANIZED YELL from record dealers has been for some plan whereby they can promote new recordings just when the same tunes become hits at the local movie houses.

Listed herewith are important films which will come to your town soon after you read this. With them will come a sure-fire demand for records of tunes from these pictures. RADIO TODAY presents this information in time for you to connect with your local theatre manager and your record distributor, thus to be ready to attract the extra business.

Dealers can get a series of "stills"—scenes from the pictures—and an assortment of other music display material issued in connection with the movies. This is the stuff that makes snappy displays for record shop windows and counters. Ads, circulars, letters and telephone calls add to the tricky promotion.

Here are the pictures to work with now, their tunes, and all the records involved in the uproar:

A DAY AT THE RACES (MGM)

"A Message From the Man in the Moon"

Decca—Ted Fio Rito and orchestra.
Victor—Guy Lombardo and his Royal Canadians.

"Blue Venetian Waters"

Bluebird B6836—Johnny Hamp and orchestra.
Decca—Ted Fio Rito and orchestra.
Victor—Richard Himber and orchestra.

"Tomorrow Is Another Day"

Bluebird B6836—Johnny Hamp and orchestra.
Decca—Ted Fio Rito and orchestra.
Victor—Guy Lombardo and his Royal Canadians.

SHALL WE DANCE (RKO)

"I've Got Beginner's Luck"

Bluebird B6878—Shep Fields and Rippling Rhythm.
Brunswick 7855—Fred Astaire with Johnny Green and orchestra.
Melotone 7-05-18—Dick McDonough and orch.
Victor 25544—Tommy Dorsey and orchestra.

"Let's Call the Whole Thing Off"

Bluebird B6878—Shep Fields and Rippling Rhythm.
Brunswick 7857—Fred Astaire with Johnny Green and orchestra.
Decca 1204—Jimmy Dorsey and orchestra.
Melotone 7-05-14—Joe Haymes and orchestra.

"Shall We Dance"

Brunswick 7857—Fred Astaire with Johnny Green and orchestra.
Decca 1204—Jimmy Dorsey and orchestra.
Victor 25552—Paul Whiteman and orchestra.

"Slap That Bass"

Brunswick 7856—Fred Astaire with Johnny Green and orchestra.
Decca 1203—Jimmy Dorsey and orchestra.
Melotone 7-05-14—Joe Haymes and orchestra.

"They All Laughed"

Bluebird B6873—Ozzie Nelson and orchestra.

Brunswick 7856—Fred Astaire with Johnny Green and orchestra.
Decca 1204—Jimmy Dorsey and orchestra.
Melotone 7-05-16—Nat Brandwynne and orch.
Victor 25544—Tommy Dorsey and orchestra.

"They Can't Take That Away From Me"

Bluebird B6873—Ozzie Nelson and orchestra.
Brunswick 7855—Fred Astaire with Johnny Green and orchestra.
Decca 1203—Jimmy Dorsey and orchestra.
Melotone 7-05-16—Nat Brandwynne and orch.
Victor 25549—Tommy Dorsey and orchestra.

TURN OFF THE MOON (Paramount)

"Jammin'"

Brunswick 7863—Leon Belasco and orchestra.
Victor 25553—Tommy Dorsey and orchestra.

"Turn Off the Moon"

Brunswick 7863—Leon Belasco and orchestra.
Victor 25553—Tommy Dorsey and orchestra.

WAKE UP AND LIVE (20th Century Fox)

"It's Swell of You"

Bluebird B6896—Ozzie Nelson and orchestra.
Brunswick 7860—Alice Faye, vocal with orch.
Brunswick 7862—Emery Deutch and orchestra.
Decca 1212—Ruth Etting.
Decca 1213—Chick Webb and orchestra.
Victor 25545—Guy Lombardo and Royal Canadians.
Vocalion 3498—Little Jack Little and orchestra.

"Never in a Million Years"

Bluebird B6896—Ozzie Nelson and orchestra.
Brunswick—7860—Alice Faye, vocal with orch.
7862—Emery Deutch and orchestra.
Decca 1210—Bing Crosby.
Decca 1211—Glen Gray and Casa Loma orch.
Victor 25545—Guy Lombardo and Royal Canadians.

"Ooh But I'm Happy"

Vocalion 3498—Little Jack Little and orchestra.

"There's a Lull in My Life"

Decca 1211—Glen Gray and Casa Loma orch.
Decca 1212—Ruth Etting.
Vocalion 3500—Tommy Tucker and orchestra.

"Wake Up and Live"

Decca 1213—Chick Webb and orchestra.
Vocalion 3500—Tommy Tucker and orchestra.

HOW'S YOUR FRONT?

★ Cheery reports on how radio dealers have gone to town by modernizing their store fronts are current in the trade. They get much of their materials from the Pittsburgh Plate Glass Co. and that firm can see a trend; two typical cases from its files are:

Roseland Music Shop, Chicago, got itself a beautiful front and the bill was metal, \$359; polished plate, \$172; carrara, \$259; tapestry, \$87; glazing and labor, \$338. Total was \$1,215.

Phoenix Electric Co., New Haven, Conn., startled its neighbors with a classy new front installed at a cost of \$775, not including the underwork or the lettering. C. A. Giorgio,

Phoenix manager, says that "we find modern fronts and interiors a great aid in increasing business."

SALES FROM AN ISLAND FIXTURE

★ Set salesmen are enthusiastic about the "island fixture," or an isolated group of sets displayed away from the walls of the store.

Model fixture of this type is 8 feet in diameter, 55 inches high, with partition wings curved from the top to the floor. Top may be covered and used for display, but if it is higher than eye level, it is not a likely stunt. Linoleum on the shelves and ledges and washable wall paper or wood veneers on the wings and back look better than painted surfaces, and have obvious upkeep advantages.

"WE GUARANTEE—"

★ At Birmingham, Ala., the firm of Loveman, Joseph & Loeb places its seal and coat-of-arms on each radio sold, not so much as a bid for service-calls, but as an added guarantee, backing up that of the manufacturer.

"Ours is a 50-year-old institution and we find that our name helps to sell radios and other appliances just as does the name of the manufacturer," said W. L. McAllister. "That is why we attach our 'Gift from Loveman's' seal on each unit sold. We are out to sell our name as much as that of the manufacturer, helpful though the latter be."



Alice Faye, screen star, has made two new records for Brunswick.

RED TOP GAS-O-LECTRIC POWER PLANTS

\$49.95
LIST

6 Volts 175 Watts—Push Button Starter
D. C. ONLY



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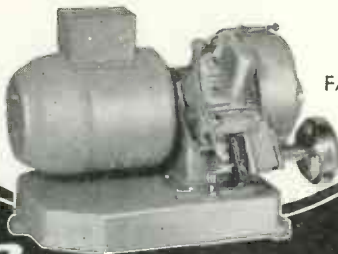
Line up now with this exclusive dealer-jobber profit-producing line. This portable low-cost light plant has "caught on" in a big way wherever "city" electricity is not available . . . especially the unique combination A.C.-D.C. unit for producing electricity to operate radios, lights, electrical equipment and appliances and for charging batteries. Go RED TOP in 1937. D.C. plants only as low as \$49.95 up, f. o. b. Chicago. Mail coupon for discounts, literature, etc.

COMBINATION A. C.—D. C. PLANTS

In one plant—both 110-V., A.C., 300 watts for lighting, household appliances, small electric tools, pumps, etc.; and up to 325 watts D.C., for charging 6, 12, and 32-V., batteries. Prices from \$89.95 f. o. b. Chicago. Push button starter.

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FOR
A.C. - D.C.



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IN 1937!
THE COMPLETE EXCLUSIVE DEALER-JOBBER LINE

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Dept. No. R-2D, 466 West Superior Street, Chicago, Illinois.
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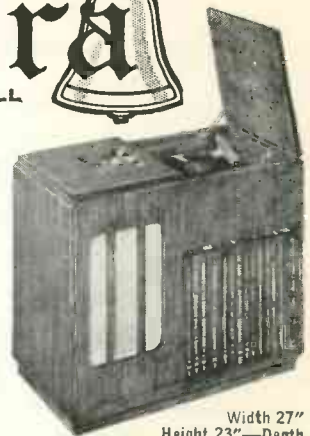
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Height 23"—Depth
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- 1 Exquisite End Table—Suitable for finest homes.
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- 4 Splendid superheterodyne—Has new 25L6 high power Beam Tube. Foreign and American wave bands. Available for AC or AC-DC.

Never before has there been available a compact, handsome low-boy arm chair model like this which may be placed conveniently against the wall, or next to a comfortable arm chair where you can relax and control either phonograph or radio at your finger tips.

The Sonora "Melody" reproduces the realism of the concert stage or the opera at any time in your own home. Its faithful reproduction will amaze and delight you. Here is a high fidelity phonograph, a record library compartment, a standard and short-wave radio, all combined in a beautiful end table, walnut, mahogany or maple.

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Write for complete literature

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514 SIXTH AVENUE - NEW YORK, N. Y.

Licensed by R.C.A. & Hazeltine Companies

SERVICE NOTES

(From page 48)

be a relatively poor rectifier—the interfering frequencies will be generated. These frequencies will then be picked up by the antenna and introduced into the receiver.

Also, it has been found that the trouble can be caused by contacts between electric conduits, plumbing pipes, and even from contacts of such piping with metal lath in walls through which they pass. In short, any electrical conductors exposed to high power signals, and having a rectifying contact, can generate the spurious frequencies. Incidentally, perhaps a great many cases arise from faulty contacts in the antenna and ground circuit wiring of the receiver installation itself.

Applying the cure

If you have been experiencing trouble from this type of cross modulation, the first step is to eliminate all poor contacts and joints which may be present in the antenna and ground circuits. These connections should be clean and preferably soldered. If the cross modulation still

persists, one or more of the following remedies will probably clear up the situation:

1. Ground the neutral of the house wiring at the house in addition to retaining the ground at the distribution transformer.
2. Use an improved ground at the receiver.
3. Install r-f bypass condensers from the power line to ground at the point where it enters the house, near the receiver, or in both places.
4. In some cases, it is necessary to install r-f chokes in the line, as well as the bypass condensers.
5. Relocate the antenna so that there is less pickup from the power line to the antenna or lead-in. Use a shielded lead-in where necessary.

In determining the source of the trouble and its location, a small battery set equipped with a short antenna is useful. With its aid the place where the interfering frequencies are being produced can be deter-

mined with little effort, so that the appropriate steps can be taken.

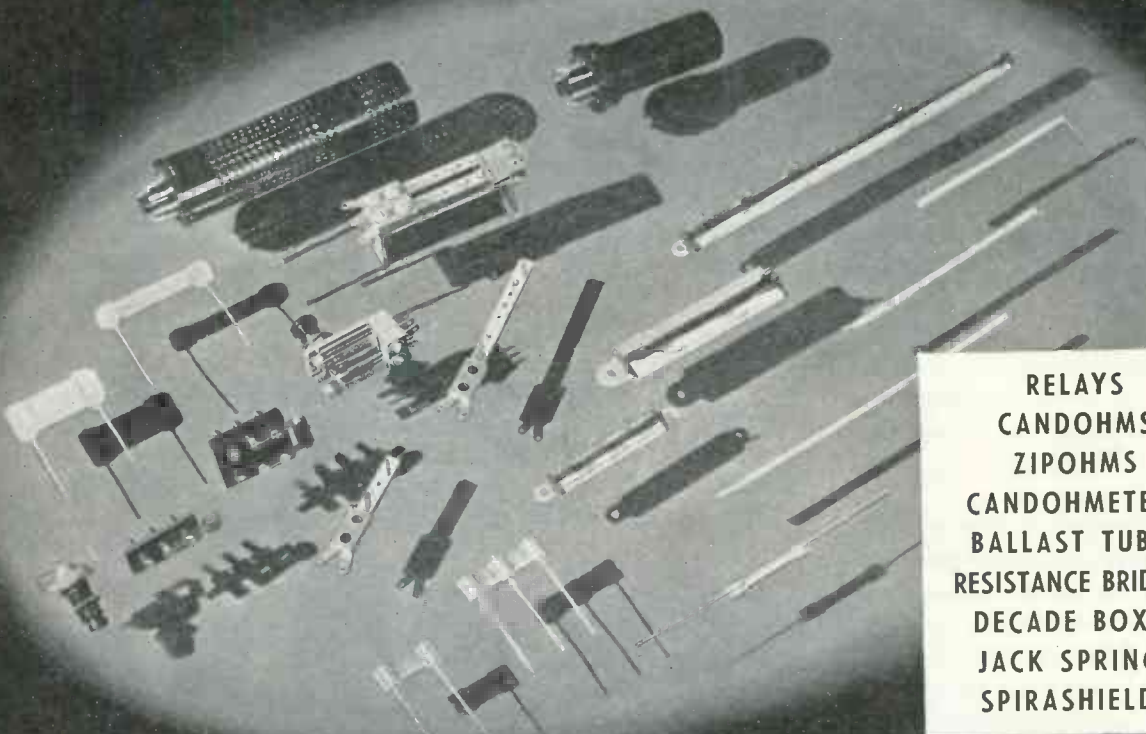
The above remedies have been found very effective in eliminating a great deal of trouble which has been due to the presence of r-f voltages on the power lines and house wiring. Familiar experiences of this type are those in which the output of the receiver varies in accordance with whether certain light switches are turned on or off. Cases have also been reported where the cross modulation effect was so related to the lighting circuit that it was produced only when a certain switch was closed.

House wiring

These cases have been cleared up by the same general procedure described above, which operates on the basic principle of the removal of r-f potentials from the power line and the elimination of any rectifying elements or contacts.

In general, summarizes Mr. Van Dyck, the principle of curing this type of interference, after making sure that there are no bad contacts in the antenna, lead-in, or ground wiring of the receiver, is to remove radio frequency potentials from the power lines of the house, and to eliminate any rectifying contacts.

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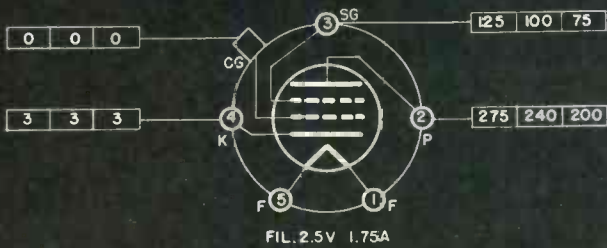
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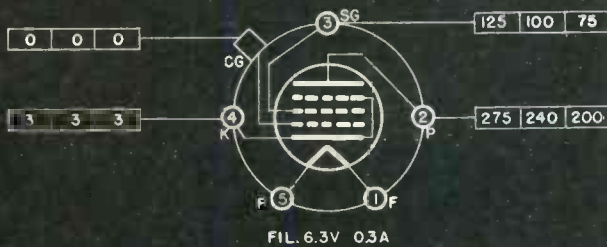
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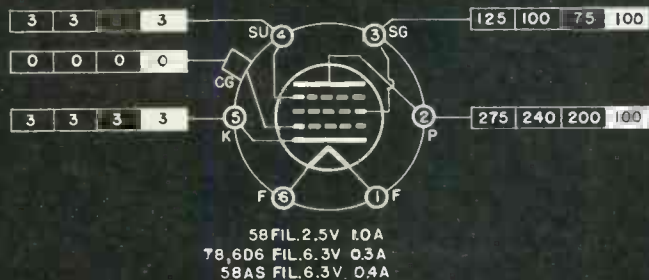
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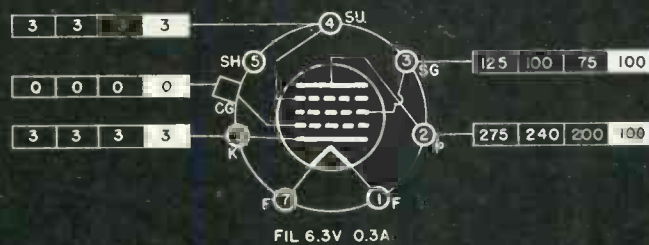
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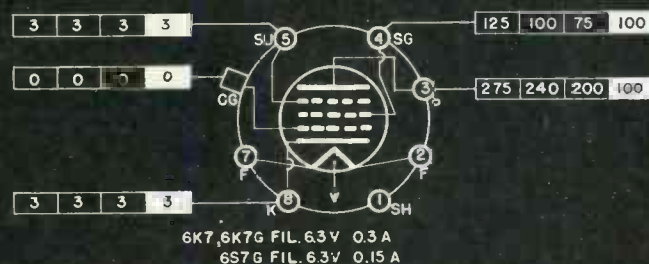
TYPES 58, 78, 6D6, 58AS



TYPE 6E7

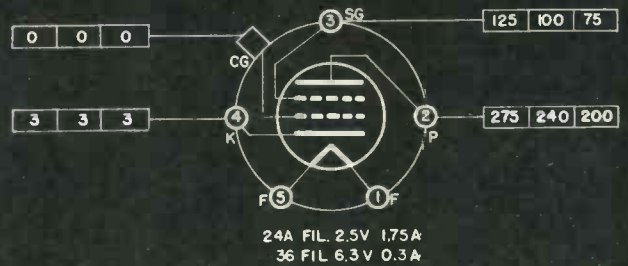


TYPES 6K7, 6K7G, 6S7G

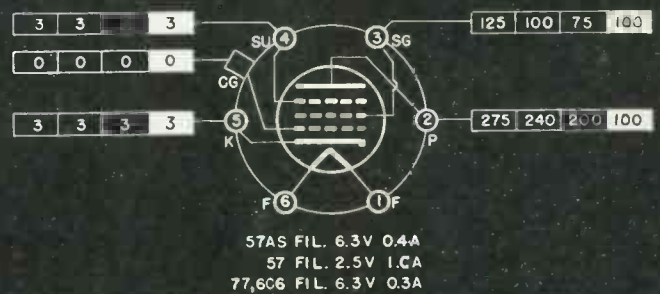


SHARP CUT-OFF TUBES

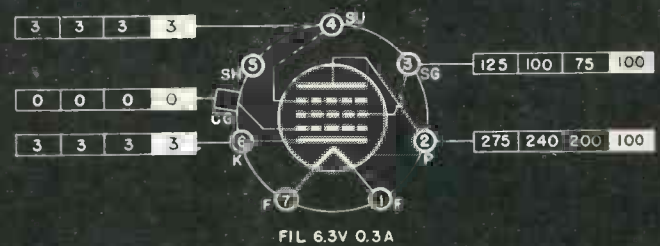
TYPES 24A, 36



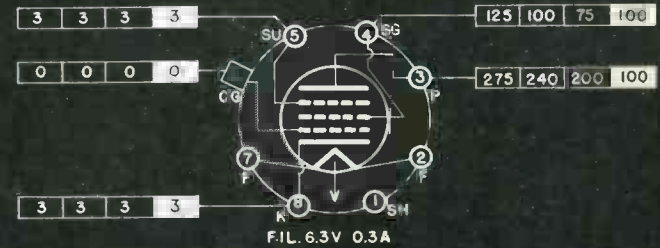
TYPES 57, 77, 6C6, 57AS



TYPE 6D7



TYPES 6J7, 6J7G



TOP VIEW OF SOCKETS

AVERAGE VOLTAGES (TO GROUND OR B-) AS USED IN SETS

(left group — high, middle — usual, right — low)

White blocks give voltages for AC-DC operation at 115 volts

Three sets of voltages are given for AC operation of tubes—these represent the normal range found in present-day radios. The left hand set of potentials represents the highest voltage usually encountered. The middle group is most commonly found, while the right hand listing is the lowest set of voltages ordinarily used. For any particular tube, use either the high, low, or middle group of voltages exclusively.

Tubes having the same socket wiring and voltages are grouped together—these tubes are equivalent but not necessarily interchangeable.

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RADIO TODAY

"Ken-Rad Radio Tubes are 'just what the doctor ordered' for my set. My whole family enjoyed the Christmas season much more by having the radio in good shape. With the old tubes it took so long to heat up that you would lose patience waiting. It is entirely different now, just turn it on and there you are. All the factors aiding in reception were improved so I am as tickled as a boy with a pair of red-topped boots."

Don Carpenter
 Mr. Don Carpenter
 2421 So. 4th Street
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"I am as tickled as a boy with a pair of red-topped boots"



Manufacturers of a complete line of Standard Glass Types, C Series, and Genuine All-Metal Radio Tubes.

Here's customer satisfaction, and it's typical of Ken-Rad users. Join the profit parade of Ken-Rad dealers. You, too, can earn increased profits and build good will with dependable Ken-Rad Radio Tubes. Write for our dealer plan.

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There's a big field for profit in electric light bulbs. The Ken-Rad name means quality performance.



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SERVICE NOTES

AFC CIRCUITS SIMPLIFIED

★ Widespread use of automatic frequency control for rapid, easy tuning has brought forth numerous circuits, most of which are basically the same. In this article a number of the circuits will be interpreted and explained—the circuits have been re-drawn so as to be easily followed.

Before discussing the circuits as used in production sets, we shall review the basic principles briefly (for a more complete explanation see RADIO TODAY, June, 1936, page 32).

The output of the I.F. amplifier tube is fed to the discriminator transformer which consists of a center-tapped secondary coupled through a condenser to the plate side of the primary winding. The diodes of a 6H6 tube are connected to either side

of the secondary winding (see Fig. 1).

When a signal of exactly the I.F. frequency is applied to the discriminator circuit, equal and opposite voltages are developed by the diodes across the resistors R. Since they are opposite in polarity, the sum of the voltages from the top diode cathode to ground is zero. If the signal is not exactly equal to the I.F. frequency, the voltages developed are unequal and they do not cancel out—therefore a potential or voltage exists from the top cathode to ground. It may be either negative or positive with respect to grounding depending upon whether the applied I.F. frequency is too high or low.

The AFC voltage for the control tube is taken off at the top and passed through an isolating resistor R_1 . Note that the junction of re-

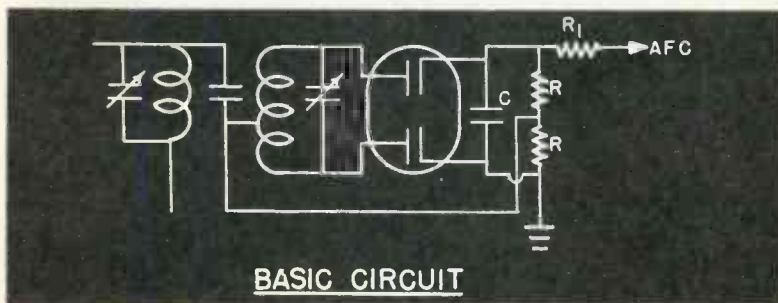


Fig. 1—Basic circuit of the discriminator used with automatic frequency control.

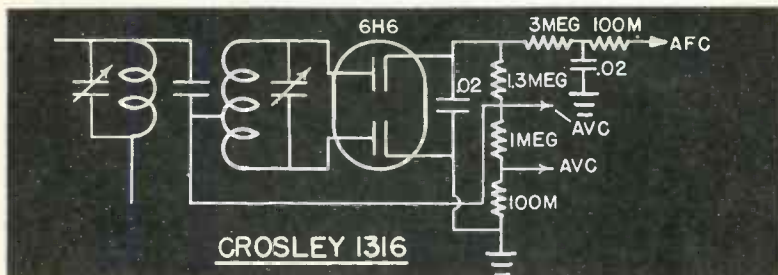


Fig. 2—Crosley's discriminator supplies AVC voltages in addition to AFC.

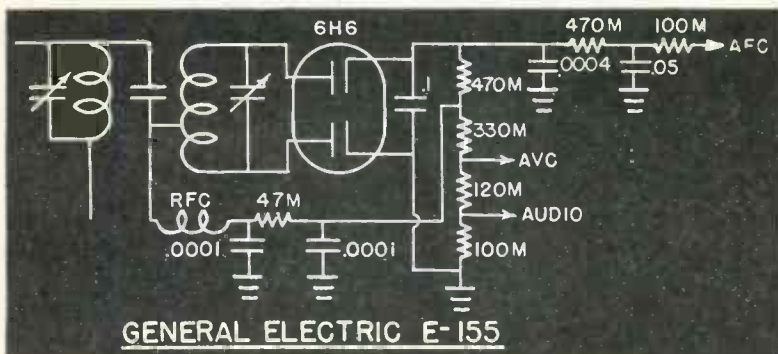


Fig. 3—Audio voltage plus AVC and AFC are utilized by General Electric.



Why Pay More?

Triumph Model 77 is an Oscillograph - Wobbulator combination for the amazing low price of \$49.95! Both instruments are combined in one attractive unit for less than half the price of any two equivalent devices on the market! You can't analyze a receiver with an Oscillograph alone! Triumph's Model 77 saves you \$50 to \$60. It is a complete Oscillograph-Wobbulator in one unit which performs all oscillograph tests!

Oscillograph, \$39.95

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Triumph offers the only complete line of low price quality test instruments. Triumph instruments are the most profitable and fast selling units available. Write for substantial jobber discounts.

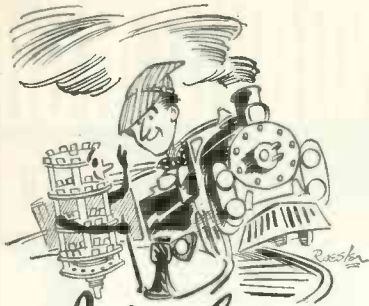
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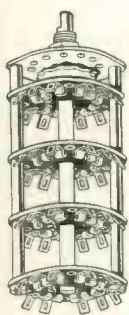
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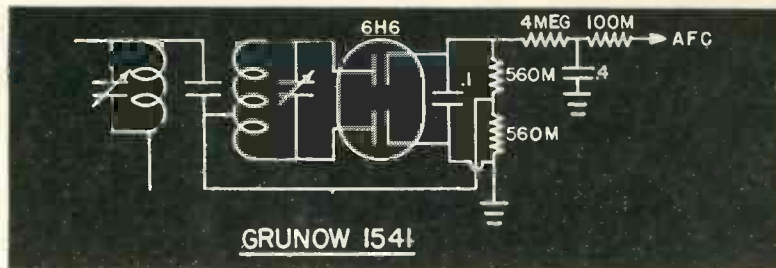


Fig. 4—The Grunow discriminator supplies only AFC voltages.

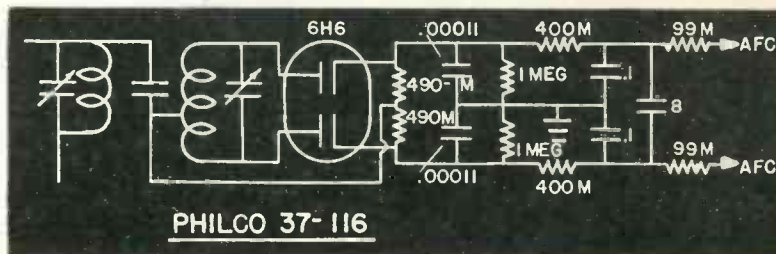


Fig. 5—Philco's circuit supplies 2 AFC voltages for a dual control tube.

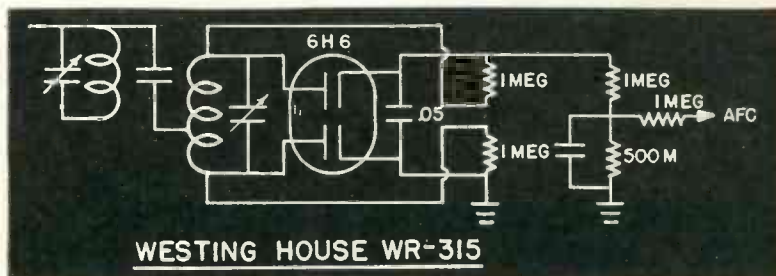


Fig. 6—The load resistors in the Westinghouse circuit are connected back to the high potential sides of the discriminator secondary winding.

sistors R is connected to the center tap of the secondary winding.

Crosley's variation of the basic circuit is shown in Fig. 2. Note that it is substantially the same as Fig. 1 except for the addition of a 3-meg decoupling or filtering resistor in the AFC voltage lead. This circuit is also arranged to provide AVC voltages—their use in no way interfering with the basic operation of the circuit.

Both audio and AVC voltage are obtained in G-E's circuit in addition to the AFC control voltage. Fig. 3 is again similar to Fig. 1 except for the addition of a 4-meg decoupling resistor in the AFC voltage line and a filter in the center-tap lead of the diode. This second filter is comprised of a R.F. choke and resistor with by-pass condensers. The choke effectively isolates the center-tap from the audio load. If it were not present, the audio load would be impressed almost directly across the plate winding of the primary coil through the coupling condenser. The R.F. choke has no effect upon the AFC discriminator circuit.

Grunow's model 1541 (Fig. 4) is required to supply only the AFC voltage so it is essentially the same as

the basic circuit. A 4-meg resistor is used for filtering the AFC voltage.

Basically the circuit (Fig. 5) employed by Philco is similar to Fig. 1. Its difference is that it must supply voltage for a dual control tube, and for this reason the mid-point of the circuit is grounded instead of one cathode. The load resistors of 490M are connected the same as in other circuits, but they are shunted by 1 meg. resistors the center of which are grounded. It is the mid-point of these resistors which determines the grounding point of the circuit. Decoupling resistors are used in both the upper and lower lines of the AFC voltage.

Westinghouse AFC system is utilized in a superhet circuit using 2 oscillators. The AFC controlled oscillator is fixed in frequency, having no tuning condenser. Another oscillator does the tuning and the R.F. is converted to one I.F. frequency. This I.F. is in turn converted to a second I.F.—it is this second I.F. system in which the discriminator is located.

In the Westinghouse discriminator, the load resistors are not connected together and returned to the center-tap of the transformer; but each one,

CINAUDAGRAPH

Magic Magnet Speakers

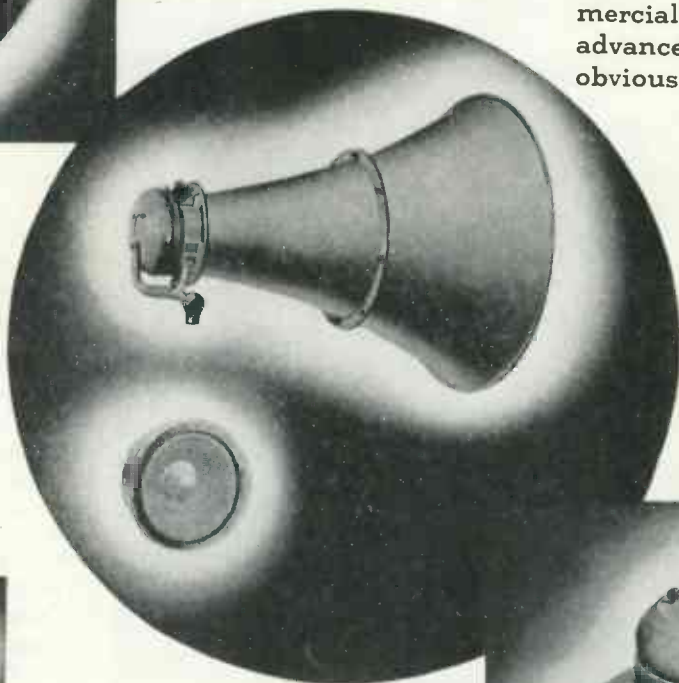


MODEL AZ 8-7

Above . . . A serviceable, precision-built 8" speaker. Radiates sound from either side and projects tone radiation from convex side. Well adapted where depth behind baffle opening is limited. Total depth only 2 3/8". Ideal for extension speaker purposes.

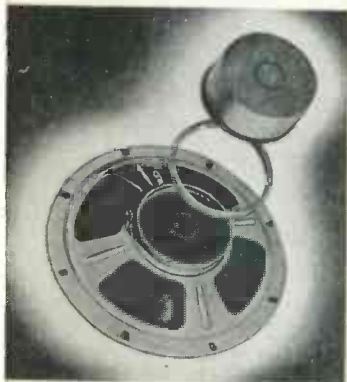
MODEL SUA

Right . . . The model SUA air column sound projectors are the ultimate in exponential speakers. This model has a voice coil of three and one half inches and is capable of handling 30 watts of audio power continuously with peak surges of 40 watts.



MODEL SU 18-12

Below . . . This super eighteen inch speaker with its powerful magnet and its large polyfibrous cone reproduces speech and music with a perfection which we believe has never before been attained. It gives full coupling efficiency for radiation of frequencies as low as 30 cycles, maintaining a flat response up to 10,000 cycles, within plus or minus 5 db.



COUPLING RING UNIT ASSEMBLY

At left . . . Each Speaker consists of two sub-assemblies; cone assembly and magnet assembly, which are attached to each other by a coupling ring, thus forming the complete speaker. This feature is an exclusive Cinaudagraph development and has the important advantage that a damaged cone can readily be replaced.



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CINAUDAGRAPH CORPORATION

RT-4

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Gentlemen:

Please send me immediately copy of your FREE 1937
Catalogue No. 237.

Name

Address

City State



SERVICE NOTES

instead is connected back to the I.F. coil at the high-potential ends. The AFC voltage is filtered and decreased by a voltage divider circuit.

The oscillator frequency control circuits will be discussed in *RADIO TODAY* for May. Complete circuits, simplified and easy to understand, will be included in this feature.

CARE OF INSTRUMENTS

★ F. E. Wenger, engineer of *Trip-lett*, believes in providing a special place in the automobile or truck for the service equipment so that it may be fastened securely and cannot bounce around or be jarred so that it falls from the seat of the car to the floor when hitting a bump in the roadway.

After the serviceman reaches his destination and proceeds to use his testing equipment, he should first make sure of the voltages or currents which he is measuring and select the proper range on the meter. If he is in doubt of the approximate value of the voltage or current which is to be measured, the best procedure would be to use the highest scale available on the tester so he may determine the voltage which the meter is to be placed across and thus, avoid many burn outs, bent pointers, balance weights thrown off balance, dulled pivots or burned springs.

The greatest danger in burning springs is that the temper when removed, decreases the electrical torque of the instrument, and when the electrical torque of the spring is decreased there are consequent errors in the readings. Mr. Wenger is extremely suspicious of the accuracy of any meter which has been violently overloaded, dropped or otherwise damaged, and as

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CA-1 INSULATION
FITS OVER DOOR HINGE HIGH POLISH

ALL ALUMINUM TOPTENNA FASTENS WITH RUBBER SUCTION CUPS

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MADE FOR HOTELS, APARTMENTS, AND OFFICES. FITS ANY WINDOW AND GIVES PERFECT RECEPTION.

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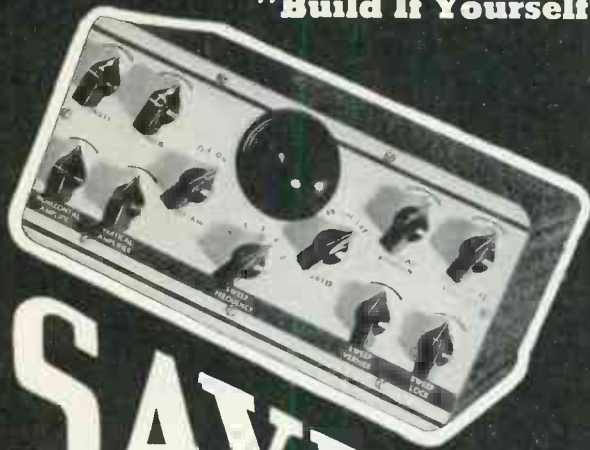
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913**

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By

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MONEY

"BUILD IT YOURSELF"

Thordarson 913 oscilloscope foundation unit offers you every refinement found in most expensive factory built units.

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Today the oscilloscope is an indispensable service test unit. Now you can service accurately and quickly the most difficult radio repair jobs.

HIGHEST QUALITY PARTS

The Thordarson T-11K16 oscilloscope foundation unit consists of drilled steel chassis and plain panel—913 Shield—Complete detailed instructions insure quick accurate assembly.

OPTIONAL ACCESSORIES

2-in. Magnifying lens T-11K20, Etched panel T-11K17, and Cover T-11K19.

OSCILLOSCOPE BULLETIN

FREE FREE FREE FREE
Send now for your copy of Bulletin SD-266. Lists prices, parts and descriptions of Thordarson 913 oscilloscope. Ask your distributor or write factory direct, Dept. RT-74

Check These Features

- Intensity and focusing controls.
- Horizontal and vertical centering control.
- 5 ranges — 20 to 12,000 cycles.
- Vernier control of sweep frequency.
- Positive sweep lock.
- Sweep and signal amplifier stages.
- 60 cycle and external sweep.
- Panel selector switch for linear, 60 cycle or external sweep.
- On and off panel switch for vertical amplifier.

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Demand "Power by Thordarson"

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IT'S TRUE
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LAST LONGER AND
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NO need for you to experiment. We've proved this 1937 UTAH VIBRATOR is the finest and toughest ever made. Manufacturers know it, too. That's why UTAH Vibrators are original equipment in more than a million sets.

Give your customers a vibrator that "can take it." Use UTAH Vibrators on all your replacement jobs. You'll find they work better, last longer—but cost no more. Your jobber has UTAH Vibrators for all radios.

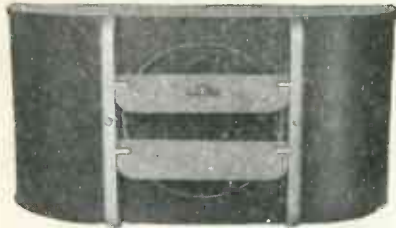
For complete information on vibrators for auto and farm radios, address department RT-4.

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- ★ Deflector Baffles
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Out of the wide Atlas line of Sound Equipment you can make up your own "P.A. Kit" better and more economically — one to fit your needs exactly. See Atlas First!

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SERVICE NOTES

service equipment which is not reliable is of no use to the serviceman, and every day which the service equipment is out of his possession being repaired means real dollars and cents to him, it behooves each and every user of electrical measuring instruments to use every precaution in the care of his instruments. He will be amply repaid for the extra two or three minutes per day required to observe these precautions.

A word might be said about the repairing of instruments in the service shop. Servicemen generally do not have the necessary and expensive equipment for the repair and recalibration of instruments, and these should be, as a rule, returned to the factory for this type of repair.

ALIGNMENT NEEDED

★ Radio sets need alignment periodically just as much as tubes need replacement, comment many of the leading set manufacturers.

As a matter of fact, the replacement of certain tubes requires that the set be realigned if maximum performance is to be obtained. New tubes

plus realignment will give the set new life.

Alignment can be likened to adjustment of the valve tappets in a car — they just get out of adjustment because of use. Again, the alignment process can be compared with carburetor adjustment—a change in the quality of gasoline (tubes) means that the adjustment should be changed for maximum power and efficiency.

Of course, a serviceman should not attempt to realign a set without proper equipment and service data for he may make the set worse than it was. But with proper tools and knowledge, the performance of many of the old sets can be vastly improved by realignment. This service should be sold as energetically as new tubes and other "check-up" campaigns. A chart for this purpose is reproduced on page 13 of this issue.

EXCHANGE BATTERIES, \$1

★ One extra battery for each four put out with radios is sufficient for making battery exchanges under a new plan by which the customer is provided with a freshly charged stock battery when his battery becomes discharged, on the payment of \$1. The set owner thus avoids waiting and

SENDING and RECEIVING with the same Antenna



Amateur demand for a Low Priced Midget Radio Frequency Relay for low powered transmitters has forced us to bring out a brand new instrument. It is described on the new page 6 of Bulletin 507B. Send for it.

WARD LEONARD RADIO SPECIALTIES

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40 South Street, Mount Vernon, N. Y.

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NEW TUBES NEVER MAKE ANY RADIOTECHNIC TESTER OBSOLETE — it is

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ONLY ONE OF 15 **ORTL** FEATURES



NEW TUBES never make Radiotechnic testers antiquated. Models sold before metal tubes were thought of still handle the 90 new types which have since appeared. The total cost to users has been \$1.50 for material, instructions and diagrams. The one time-proven safeguard against obsolescence. There are fourteen other real advantages. Learn about ALL of them!

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1328 Sherman Ave., Dept. RT., EVANSTON, ILL.

SEE YOUR JOBBER

A Complete Line of Tube Test **ORTL** Equipment

RADIOTECHNIC

makes but one trip to his dealer instead of two.

The plan has been in highly successful use by a small-town dealer who was able thereby to build up a very remunerative battery-set business.

It was found, on test, that one additional battery for dealer stock, for each four batteries put out with radios was sufficient reserve. To continually remind the set owner of the convenience and economy of the battery-exchange plan, Bob Herr of Philco has devised special vent-cap tags, acid-resisting and with space for dealer's name. The tag is secured under one of the vent caps of the battery at the time it is sold or recharged.

AUTO-RADIO NOISE

(From page 25)

not so easily affected by wheel static as are those using the running board type aerial which is located near the wheels.

Grounds are an important factor in some cars. Occasionally the muffler, transmission, torque tube, steering column, dash controls, and even the motor itself require grounding.

According to most set manufacturers, suppressors are not required. In the case of stubborn ignition noise the use of suppressors may be necessary. Of recent, new low resistance suppressors have been developed. Their use will reduce losses in spark efficiency to a minimum.

NEW BOOKLETS

★ "Car Radio Service Kit and Manual," presenting information on 1937 Arvins, has been issued by Noblitt-Sparks and may be secured by getting a jobber salesman's signature on a card supplied for the purpose.

★ Wall chart of tube characteristics, listing 137 types and illustrating basing connections has been issued by Arcturus Radio Tube Co., Newark, N. J. It is available free to dealers and servicemen through Arcturus jobbers.

★ Characteristics, applications and prices of various insulating materials is the subject of a new catalog section issued by Westinghouse. Copies may be had from district offices or direct from Dept. 5-N, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

★ Price list bulletin carrying complete information for users of replacement vibrators has been published by the Radiart Corp., Shaw Ave., at E. 133rd St., Cleveland, Ohio.

TRADE FLASHES

★ Board of directors of the Wisconsin Radio, Refrigeration & Appliance Association, Milwaukee, recently elected officers: re-elected president, Frank W. Greusel; re-elected vice-pres., A. F. Seidel; re-elected wholesale vice-pres., Gordon Fairfield; treasurer, Arthur Schleiger; secretary, B. S. Wisniewski.

★ L. M. Herman Co., the Boston jobbers who distribute Pacific sets and Triad tubes, have added the Thomas B. Gibbs line of amplifiers.

★ In a recent annual report to

stockholders, Powel Crosley, Jr., president, Crosley Radio Corp., Cincinnati, presented figures indicating "a continuation of improvement in the company's business which began several years ago." Net profits of the Crosley Corp., after depreciation and federal taxes, was \$1,237,056 for the last fiscal year.

★ Blan, the Radio Man, Inc., New York City's well known parts dealer, will have a new address May 1: 64 Dey St.

★ New manager of Barclay-Warner's radio store at 94 Seventh Ave., N. Y. C., is E. J. Hedges.

The Delicate Balance of "High-Fi" Sets

Easily Adjusted

with

Model 1200-C

VOLT-OHM-MILLIAMMETER

- 5000 Ohms Per Volt D.C.
- Resistance Readings to 7.5 Megohms
- For All Radio Measurements Not Requiring a No Current Draw Vacuum Tube Voltmeter



MODEL 1200-C

DEALER PRICE \$24³³

Has separate A.C. and D.C. instruments in twin case with tilting feature for accurate reading. Ohm Scales separately adjusted. Low loss switch. (Contact error on milliamperes less than 1/2%—no contact error on voltage measurements.) Low Ohms scale requires but 6% milliamperes. Accuracy both A.C. and D.C. guaranteed within 2%. All Metal Case.

Scale Reads: D.C. 10-50-250-500-1000 Volts at 5000 Ohms per volt; 250 Microamperes; 1-10-50-250 Milliamperes; 1/2

to 500 low ohms backup circuit; 1500 Ohms; 1.5 and 7.5 Megohms; A.C. 10-50-250-500-1000 Volts.

The delicate balance of high fidelity sets requires servicing instruments capable of measuring high resistance and all voltages accurately.

Model 1200-C Volt-Ohm-Milliammeter has self-contained power for readings to 7.5 Megohms. The D.C. voltage readings are at 5000 ohms per volt enabling you to read accurately the voltages of low power.

A TRIPLETT MASTER UNIT

SEE YOUR JOBBER
WRITE FOR CATALOG

The Triplet Electrical Instrument Co.
194 Harmon Ave., Bluffton, Ohio

Without obligation please send me more information on Model 1200-C; Complete Triplet Master Unit Line.

Name

Address

City State



DOPE ON DISTRIBUTORS

- jobbers in 10 states reveal inter-phone activity
- they move, re-build, add lines, and otherwise expand

★ Current sport among many big jobbers of the country is to wade into the intercommunicator business. Distributors in California, Kansas, Colorado, Ohio, Nebraska, New York, Delaware, Alabama, New Jersey and Pennsylvania report to RADIO TODAY that they now have a department for this merchandise. This news on selling the inter-

phones is only that which was received within a few weeks, but seems to indicate a national trend in favor of the inter-room talkers. After all, the device belongs to the tube-amplifier type of gadget, and is distinctly a radio item.

Other wholesalers have not yet established a department for the instruments, but exhibit interest.



Anthony (Joe) Dillon, with experience in England, New Orleans, Radio-marine, etc., before starting with Bruno-New York, is a new sales supervisor for that jobber.

Electric Appliance Co., 580 W. Broad St., Elyria, Ohio, is an example.

Is this the kind of stuff that is likely to help remove the low spots in the radio sales curve? Typical "yes" replies came from Gettman's, in Norfolk, Neb., and from Kladag Radio Labs in Kent, Ohio.

★ True & Blanchard Co., Inc., Newport, Vt., jobbers, have a new salesman in the northern Vermont and northern New Hampshire areas: Clarence A. Blossom.

★ Wholesale Radio Service Co., Inc., New York, have begun sponsorship of a series of 26 weekly "RCA Service Meetings of the Air," over local station WNEW. Technical supervisor of the series is F. B. Ostman, RCA service manager, and leading engineers from RCA labs will broadcast by turns. Stunt is designed to discourage amateur attempts at home radio repairing, since the public will be listening. Weekly prizes will be offered technicians.

★ New home of the Crumpacker Distributing Corp., Houston, Tex., has been formally opened with several special features. Ninety-foot main display room is air-conditioned, acoustically treated, has doors with electric eyes. Set-up includes a special radio-bar display, storage room for 12 carloads of sets, and provision for a salesman school twice a month.

★ Coffeyville, Kan., jobbers, Orvil W. Carter Elec. Co., are expanding their parts department. Firm now has products of 13 different companies, will add more.

★ New location of Standard Radio Parts Co., Dayton, Ohio, is at 135 E. Second St. Service and display facilities have been greatly expanded.

★ Krauss Radio Distributors, Inc., Cincinnati, has been named local wholesaler for Emerson. Morris Krauss, firm head, is now looking for larger quarters where the company may establish a spacious home.

**WHEN YOU
REPLACE
RADIO SHAFTS
USE ONLY**

**S.S. White FLEXIBLE SHAFTS
and CASINGS**

***They're standard original equipment
on practically all Auto Radios . . .***

They're specially designed and built for auto radio application.

They provide smooth, sensitive tuning, without "stiff" spots or "jumping."

They assure satisfied customers—and that means more business for you.

**• BE SURE to ask your jobber
for genuine S. S. WHITE
Shafts and Casings.**

The S. S. WHITE

DENTAL MFG. CO.

INDUSTRIAL DIVISION

10 East 40th Street, Room 2310T

NEW YORK, N. Y.

ON THE TRADE TICKER

★ **David E. Bright**, president of Pioneer Gen-E-Motor Corp. of Chicago, has returned to Chicago after several weeks on the Pacific Coast, visiting jobbers and dealers in California, Washington, and Oregon. He was gratified to find the trade keenly interested in his new "Red Top" gas-o-lectric power plants. Inquiries received from representative jobbers in Southern territory will take Mr. Bright as far south as Florida before the month is over.

★ **Miss Helen Staniland**, vice-president of Quam-Nichols Co., Chicago, manufacturer of loud-speaker units, returned recently to her desk after visiting set manufacturers throughout Western territory. She received substantial orders and found all of the factories busily engaged getting ready for their new lines. Quam-Nichols' sales for the first quarter of 1937 were far ahead of the same period of 1936, which was the best in the company's history. Recently considerable interest has been manifested by parts jobbers in

the distribution of Quam-Nichols products.

★ **E. S. Riedel**, sales manager of Raytheon Production Corp. with headquarters in Chicago, has just informed the Midwestern trade of an expansion in the company's warehouse and office facilities whereby it will occupy the entire third floor of the building at 445 Lake Shore Drive. Increased sales volume from manufacturers and jobbers necessitated this additional floor space.

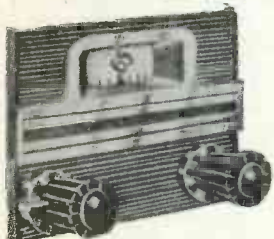
★ To operate as **Aerovox Canada, Ltd.**, the former Polymet Delta Co. of Hamilton, Ontario, Canada, has been taken over by Aerovox and will produce a line of that firm's wet and dry electrolytic condensers, also mica and paper condensers for the Canadian trade.

★ Recent announcement from **Champion Radio Works**, tube makers of Danvers, Mass., was the appointment of **John Q. Adams**, Chicago, as sales manager for the company. Mr. Adams succeeds **Greg Hallam**, who resigned.



Don Dulweber (right), pres., Supreme Instruments Co., discusses ad plans on a new line with Ralph Mathews of Ford, Browne & Mathews.

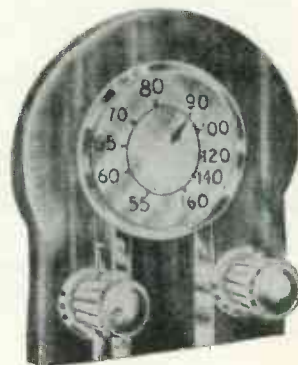
SERIES 700 CROWE PANEL CONTROLS for ANY AUTO RADIO in 1935, 1936 and 1937 cars



Ask for Bulletin No. 202. Gives full details on the new Series 700 remote controls, flexible shafts, end fittings, and other accessories.

NEW DOUBLE-UNIT CONSTRUCTION GIVES YOU:

1. Same control unit in all cars.
2. Airplane or porthole dial (as specified by car manufacturer) *without changing control unit.*
3. Quick installation without drilling, sawing, or filing any instrument panel.
4. Custom control for any make of radio.
5. Full coverage for all ratios, *with or without on-off switch, sensitivity switch, tone control, and other features.*
6. Approved styling for every car.
7. Smooth, dependable operation.



Order from your jobber. Liberal trade discounts.

CROWE NAME PLATE AND MANUFACTURING CO.
1771 Grace St. Chicago—Cable Address: Croname-Chicago

JFD AUTO RADIO
REMOTE-O-CABLE
REPLACER

J. F. D. SHAFTING AND CASING

With the Remote-O-Cable Replacer, a supply of shafting and casing, same as used by leading manufacturers and an assortment of fittings, you can immediately deliver any length or type of Auto Radio Control Cable. Properly connect any auto radio to any dashboard head.

Auto radio jobbers, distributors and servicemen write for full particulars.

J. F. D. MANUFACTURING COMPANY
4111 Fort Hamilton Parkway
Brooklyn, N. Y.

1000% INCREASE!

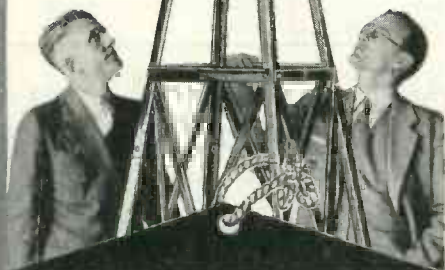
THIS FAST-GROWING BUSINESS
WILL HELP YOU SELL MORE FARM RADIOS

**FIRST
WITH A PROFIT
FOR THE DEALER!**

Over one thousand per cent. increase in sales so far this year! That is the amazing record of the Parris-Dunn Corporation! Our powerful merchandising plan, though widely copied, has never been duplicated in GENUINE PROFIT POSSIBILITIES for the farm radio retailer.

No wonder the Dunn-Charger is "going to town"! The new 1937 features put it in A CLASS BY ITSELF. It has advantages that make it the FIRST CHOICE OF THOUSANDS OF FARMERS. The Hy-Tower makes the Dunn-Charger 27% more efficient, as it puts the charger in the unbroken wind stream and assures effective service with even the very slightest breeze. The extra heavy-duty generator is built from all new parts. Bearings permanently sealed in oil. Absolutely foolproof.

And the merchandising plan puts REAL PROFIT-POWER within the reach of the retailer of battery radios. Mail the coupon! Get details of this plan NOW!



DUN-CHARGER
is Approved by
**AMERICA'S LEADING
RADIO MANUFACTURERS**

MAIL THIS COUPON!

To Parris-Dunn Corporation
Clarinda, Iowa Dept. A29
RUSH FULL DETAILS OF YOUR SENSATIONAL SALES PLAN FOR SELLING MORE BATTERY RADIOS.

Name _____
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Make of Battery Radio Handled _____

RADIO HARDWARE

We carry in stock all standard and many special items of radio hardware used by manufacturers of sets, speakers, sound equipment, testing instruments, parts, etc. You will save valuable time by using our Bulletin 50 as your buying guide for



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Send for a Copy of Bulletin 50 Today

Please Check Manufacturer Jobber

FEDERAL SALES CO., 26 S. JEFFERSON, CHICAGO

JOBBER NEWS

★ Two big jobbers of Atlanta, Ga., have merged; Lamar-Rankin Co. and Dixie Radio Distributors, Inc. Former name will be that of the new company and Mitch Edwards, president of the Dixie firm, will manage the appliance department.

★ At the F. R. Gooding Co., jobbers of Wilmington, Del., George O. Davis has been added to the sales staff to cover lower Delaware and eastern Maryland.

★ George H. King is now city salesman for Stimpson Sales & Investment Corp., distributor firm of Wichita, Kan.

★ Newcomers to the staff of H. E. Dunn, Inc., distributors of Des Moines, Ia., are R. W. Miller and E. H. Alford.

★ Wholesaler's division of the Electric League of Indianapolis recently elected a new chairman: Roy L. Brown, of Wessinghouse Electric Supply Co. Elected vice-chairman: Adolph Wagner, Wagner Radio Co.

★ R. C. Hager, vice-pres. and general manager of the Tracey-Wells Co., distributors, has named an assistant: J. E. Howell. C. O. Tracey, the company's treasurer, also selected an assistant, John P. Castner. Firm has a branch in Cleveland, the Arnold Wholesale Corp., and one in Columbus, Appliance Distributing Co.

★ Howard Dungle and Ray Satchell have been added to the sales personnel of the GE Supply Corp. of Cleveland, Ohio.



M. R. Cooper, chief of Electric & Radio Co., Butte, Mont., jobbers. Firm now has new quarters.



Edgar Morris, pres., Edgar Morris Sales Co., Washington, D. C., new jobbers for Zenith.

★ Spokane, Wash., branch of the F. B. Connelly Co., Seattle, is being remodeled along modernistic lines. New employees there are Q. B. Griffin, office and credit manager; Betty Lou Rooks, secretary; Forrest M. Clark, service dept.; and Clark R. Libbey, shipping dept. Also on the staff are John B. Simons, salesman; Dent Gwinn, assistant office manager; and Lowell Jackson, salesman.

★ Marshall - Wells, jobbers of Billings, Mont., were recently hosts at a 3-day merchandise show which was called an "Associate Congress." More than 100 delegates attended; climax of the affair was a big banquet on the last evening.

★ New Crosley distributor for Nebraska is H. E. Dunn, Omaha. H. E. Dunn is president of the firm and C. I. Alford sales manager.

★ RCA Radiotron distributors are offering to dealers an automatic pencil which is a combination screwdriver and a reference for service data.

★ New line added by D. & H. Distributing Co., Inc., Harrisburg, Pa., is ABC washers.

OTHERS CAN AND DO COPY
THE DUN-CHARGER
10 FT. HY-TOWER
 "THE HIGHER THE TOWER — THE GREATER THE POWER"

BUT THEY CANNOT COPY the PATENTED DUN-CHARGER
 Governing Principle
 — No Broken Propellers
 — No Ruined Batteries

BETTER! BETTER IN 7 WAYS
 than any other WIND DRIVEN CHARGER

- ✓ The Dunn Governing Principle permits the propeller to tilt back and "slip the wind."
- ✓ Requires only 3 working parts (25 to 70 in others).
- ✓ It utilizes positively controlled propeller, eliminating breakage.
- ✓ The simple throw-out collar takes propeller out of the wind when battery is fully charged eliminating battery damage.
- ✓ Chains, pulleys and brakes are eliminated—nothing to wear out, stick or freeze.
- ✓ All weight and controls are taken off propeller so it can run in slightest breeze.
- ✓ Has simple, fool-proof collector ring. No brushes; nothing to wear out.

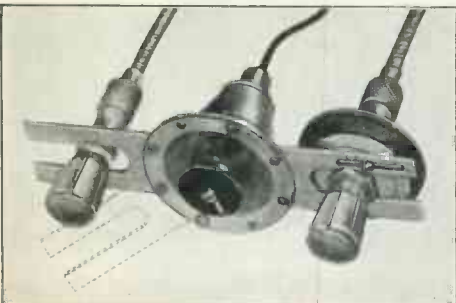
10 FEET TALL

DUN-CHARGER
is Approved by
AMERICA'S LEADING RADIO MANUFACTURERS

35 MILE WIND
20 MILE WIND
5 MILE WIND

STAR AUTO RADIO CONTROLS

Several territories open for factory representation.



- ★ One control unit fits all cars—all radios; regardless of ratios or panel openings.
- ★ Star control has every "ratio" self-contained in one head—small, compact and simple to install—without filing or drilling.
- ★ A really 100% universal control unit—clockwise or counter-clockwise on same dial.
- ★ Aeroplane dial used on all cars—giving ideal visibility.
- ★ Custom-matched plates for all instrument panels of 1935-36-37 cars.
- ★ Write for our illustrated catalog and trade discounts. Distributed through authorized jobbers only.

STAR MACHINE MANUFACTURERS, INC.

Precision Instrument Makers Since 1913

1371 EAST BAY AVENUE

BRONX, NEW YORK



TRADE MARK



6A8G...



... another
ARCTURUS
 ENGINEERING
 TRIUMPH...

Radio technicians everywhere know the Arcturus 6A8G not by any difference in its outward appearance, but by outstanding performance resulting from...

- ... Unique chemical and mechanical treatment of component elements which reduce noise to an exceptionally low level even under severe vibration.
- ... The most severe short wave band test for oscillation that could be devised. (Each tube gets this test individually—then, like all Arcturus tubes, is again tested in an actual radio receiver.)
- ... Great advancement in geometrical construction and processing methods which assure uniformly high sensitivity on ALL wave bands over a long, useful life...

Add these essential factors to the long life of the Arcturus 6A8G and you have a combination unexcelled for long, satisfactory performance.

Try them today. Know them BY RESULTS!

ARCTURUS PIONEERED "G" TUBES

ARCTURUS RADIO
 TUBE COMPANY
 Newark, N. J.

ARCTURUS

INDEPENDENT TUBES FOR DEALERS WHO DO THEIR OWN INDEPENDENT THINKING

ON THE TRADE TICKER

- why not, say field men about higher prices
- nearly every company appoints somebody

★ Interviews with radio men in 10 states indicate what the trade's attitude is in the matter of higher retail prices, this time from the angle of field activity. Opinions were expressed for RADIO TODAY in exactly 15 jobbing centers.

Even dozen said flatly "yes" the public is ready for higher retail prices. An answer from Topeka, Kan., was: "not in this drouth area." A sharp "no" from Nebraska indicates further that those areas have been hit by lack of rain.

Statement from Tuscaloosa, Ala., was: "not ready in this section but resigned to it." Attitude in Colorado is that rising prices are OK, "provided they are kept within bounds."

★ Atlas Sound Corp., Brooklyn, N. Y., announces the recent appointment of the Edwards Sales Co., 565 Bangor Bldg., Cleveland, Ohio, and J. Y. Schoonmaker of 4133 Shenandoah Ave., Dallas, Tex., as sales representatives for their line of public address and sound equipment products. Edwards covers the complete territory of Ohio, and the city of Louisville, Ky. Schoonmaker covers the entire states of Texas and Louisiana.

★ At the Wm. H. Block Co., big department store of Indianapolis, Ind., radio manager Lawrence has enlarged his displays, and has started a 6-weeks ad campaign in local newspapers. Keene Jackson, sales manager of International Radio Corp., Ann Arbor, Mich., checked up and found that Block's is now carrying the complete Kadette line of 21 models.

★ Radio division of General Electric, Bridgeport, Conn., has a new manufacturing engineer, Aubrey R. Goodwin. Appointee has had a long experience as head of manufacturing operations, in this country as well as in Canada, Argentine, Chile and Brazil.

★ Ansley Radio Corp., New York, makers of Ansley Dynaphone, have a new sales manager, George P. Lohman. For the past 4 years, he has been working with New York's leading radio retailers; prior to that he was active in factory promotions at Stromberg-Carlson and at RCA. Mr. Lohman is on a long journey through cities of the East and Middle West.

★ In an annual summary of operations for the Ken-Rad Tube & Lamp Corp., Owensboro, Ky., Roy Burlew, president, reveals that "this company is now the second largest manufacturer of metal tubes in the country." Mr. Burlew also stated that Ken-Rad is prepared to expand, with general business continuing to expand, and conditions within the tube industry more stable.

★ V. A. Gwyer, vice-president, Transducer Corp., New York, has picked up an unusual item from Union Sound Service, Allentown, Pa.: a customer, using a TR-3 "Bullet" mike, had an accident in which the mike fell off the stage and hit a concrete floor 8 feet below; it is still being used although the case and mounting ring were broken.



First radio contract under the N. Y. Fair Trade Act, being signed with Ansley Radio Corp. by P. R. Bowers of the R. Wurlitzer Co. Left is Arthur C. Ansley; right, Ray S. Erlandson, Wurlitzer sales mgr.

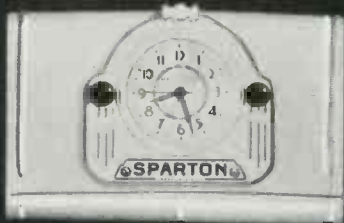
SPARTON

"COLD AND SILENT AS A WINTER NIGHT"

EXCLUSIVE AUTOMATIC CLOCK DEFROSTING



Model S-817



The Enchanted Clock
*Just silently and efficiently defrosts daily—
 Reducing Power bill and making SPARTON
 100% Automatic*

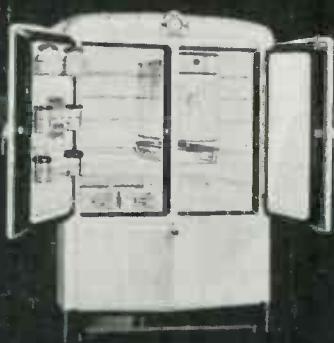
Saves Motor and Meter



Model D-817



Model D-747



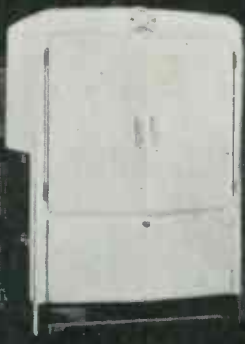
Model D-847



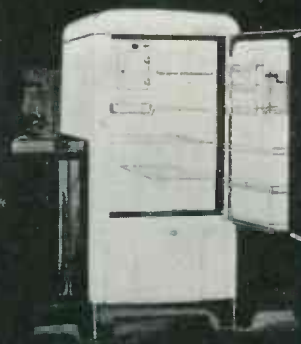
Model D-747



Model D-167



Model D-817



Model D-187

THE SPARKS-WITHINGTON CO., JACKSON, MICHIGAN



THE SPARTON VEGABIN



THE SPARTON COMPRESSOR

HANDSOMELY
 STYLED
 EVAPORATORS



THE
 SPARTON
 THRIFTER



PEP-PRODUCTS AMONG APPLIANCES

Higher temperatures mean cooling merchandise on radio sales floors

★ **WARM-DAY** business needs stimulating and not a few radio dealers are going to bat for the room-cooler business.

Manufacturers of these portable summer air conditioners have designed themselves into the kind of merchandise that packs a great sales wallop. At this point they give the consumer color, economy, streamlines, casters, flexibility, five years to pay, etc.

Conditioner engineers have settled down to a long list of precision devices for cooling, dehumidifying, washing and circulating the air. Those selling modern coolers have been awarded a series of talking points not available before 1937.

Appeal widened

Radio men are particularly interested in the fact that air conditioner sales for homes are swiftly increasing as compared with commercial installations. In 1936, 25 per cent of all installations were residential; year before, the figure was 17 per cent.

Installation problems have been simplified and service aspects are today on a comfortable basis. New merchandise is presented as beautiful, compact, quiet and fool-proof.

Here is a list of some of the makers of the new-type summer gadgets:

Air Devices Corp., 210 Clark St., Chicago, Ill.

Airtemp, Inc. (Chrysler), Dayton, Ohio.

Carrier Engineering Corp., 850 Frelinghuysen Ave., Newark, N. J.

Climax Engineering Co., 121 E. Morris St., Indianapolis, Ind.

Corozone Air Conditioning Corp., Cleveland, Ohio.

De La Vergne Engine Co., Chester Pk. and Simpson Ave., Philadelphia, Pa.

Delco-Frigidaire Conditioning Division, General Motors Corp., Dayton, Ohio.

Fairbanks, Morse & Co., Indianapolis, Ind.

General Electric Co., Bloomfield, N. J.

Kelvinator Corp., Detroit, Mich.

Norge Division, Borg-Warner Corp., Detroit, Mich.

Plesantaire Corp., 304 E. 45th St., New York, N. Y.

Servel, Inc., Evansville, Ind.

Standard Air Conditioning, Inc., 50 W. 40th St., New York, N. Y.

Strang Air Conditioning Corp., 215 E. 20th St., Kansas City, Mo.

Westinghouse Elec. & Mfg. Co., Mansfield, Ohio.

York Ice Machinery Corp., York, Pa.

"CAPACITOR" MORE DESCRIPTIVE THAN "CONDENSER"

★ There are condensers and condensers in the electric refrigeration art. A condenser may be of the vapor type, intended for the condensation of gaseous refrigerants. Again, it may be of the electric type, intended for motor-starting functions. Hence the term is confusing and often misleading.

In place of "condenser," the term

"capacitor" is being urged by Aero-vox Corporation of Brooklyn, N. Y., for electrical and radio functions. Employed for some time past in radio terminology, the use of the term "capacitor" is even more important in refrigeration to avoid possible confusion between electrical and mechanical devices.

ZONING SALESMEN MAKES FRIENDS

★ A zoning system for radio and electrical-appliance salesmen is used by Evans Electric Appliances, Birmingham, Ala. This prevents the men from spending too much time jumping from one part of the town to the other and causes them to work their territories more intensively.

"We figure that the more friends a salesman makes in a neighborhood the more sales he should make," said J. M. Evans, proprietor. "Call-backs on customers result not only in other sales to them, but in service business as well, besides developing names of other prospects in the neighborhood.

"Some of our salesmen have been quite successful selling radio owners loud-speakers for the woman of the house to use in the kitchen, also in the sale of extra sets for the bedroom. Sometimes the owner of the home can be sold a radio for his office or for his summer cottage."

★ New retail sales manager for **Boren Bicycle Co.**, Little Rock, Ark., is **E. B. Matkin**. Boren's recently held a feature showing of 1937 **Crosley Shelvadors**, for dealers of the state.

★ **Norge** distributors and dealers in Boston and New England areas began last month to sponsor a series of 39 quarter-hour broadcasts on **WBZ** and **WBZA**. Program is called **Norge All Star Varieties** and will feature famous dance bands, comedians and singers.

★ **Tom Killian, Inc.**, Denver, Colo., automotive distributors, have opened a new branch devoted to **Crosley** products. **H. C. Royer**, former **Crosley** wholesale man, has joined the department; dealerships and service schools have been held as a part of a vigorous merchandising campaign. Similar activity has been noted at **American Electric Co.**, Kansas City, Mo., jobbers.



Example of likely summer merchandise: window "Air Pilot" by Standard.

Sell

THE ELECTRIC REFRIGERATOR
THE ENTIRE NATION IS BUYING

THE NEW 1937 **CROSLY SHELVADOR**

THIS MUCH MORE EXCLUSIVELY IN A CROSLY SHELVADOR



Stora-drawer

Electrosaver

Built-In Thermometer

Beetleware Cups

Ice Tray Release

Removable Shelf Section

It's the sales-sensation of the year—this new 1937 Crosley Shelvador. Everybody's talking about it . . . everybody's buying it. "Mrs. America" has put her unreserved approval on the Shelvador because it alone offers her all the features she demands—MORE BEAUTY, MORE ECONOMY, MORE CONVENIENCE, MORE USABLE SPACE, MORE ACCESSIBILITY . . . plus the EXCLUSIVE, fully insulated shelves-in-the-door. Dealers are enthusiastic over the Shelvador because it gives them powerful selling features that can be convincingly demonstrated. It's a lot easier and more profitable to



The Crosley Electrosaver—15 Hermetic Unit—insures high efficiency, low cost refrigeration that means more sales and greater customer satisfaction.

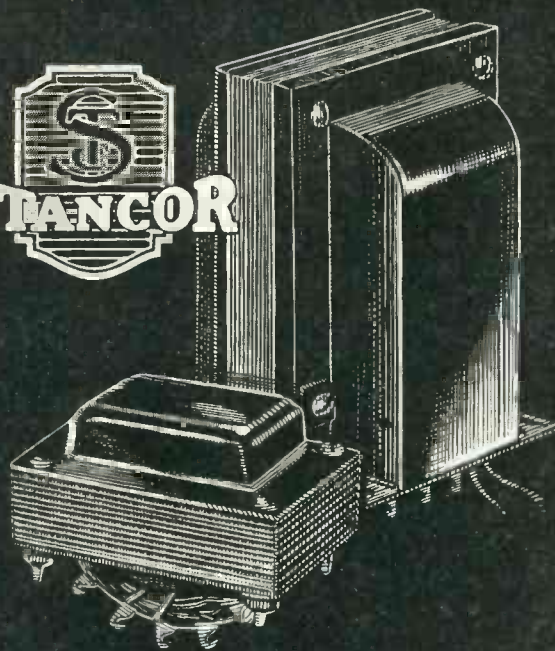
follow the trend than to buck it. Line up with the Crosley Shelvador and sell the electric refrigerator that everyone is buying. See your Crosley Distributor today for details of the Crosley Franchise.

Model shown above is the DeLuxe HL5-71. Capacities: Net cu. ft. 7.1; shelf area 16.77 sq. ft. Features: Shelvador, Electrosaver, 18-Point Temperature Control, Built-In Thermometer, Automatic Interior Light, Stora-drawer, Tilting Shelves, Removable Shelf Section, Beetleware Cups, Crosley Crisper. Ten other standard and DeLuxe Shelvador models priced from \$99.50.

THE CROSLY RADIO CORPORATION - CINCINNATI
Home of "the Nation's Station"—WLW—70 on your dial

POWEL CROSLY, Jr.
President

CROSLY SHELVADOR



There's Nothing Finer Than

STANCOR TRANSFORMERS

STANCOR has disproved the old bro-
 mide, "One make is as good as an-
 other" . . . for (in a few short years)
 Stancor has attained a reputation in the
 industry for **SUPERB QUALITY** . . .
 achieved through careful engineering,
 the closest kind of inspection and spe-
 cial manufacturing equipment, much of
 which was designed in our own plant
 for exclusive Stancor processes.

If it's a **STANCOR** *it's Good*

**STANDARD
TRANSFORMER
CORPORATION**
850 BLACKHAWK STREET, CHICAGO

"RIDER MANUAL OWNERS ARE THE KEY MEN OF THE SERVICE FIELD"



SAYS THE SALES PROMOTION MAN OF
ONE OF THE BIG SET MANUFACTURERS

"Almost without exception the most successful servicemen
in America are owners of complete sets of Rider Manuals."



VOL.
VII
Covering
1936-
1937
\$10.00

This fact is convincing evidence that those shops which are able to perform the more intricate, more unusual, more profitable jobs, are the ones which recognize the time and money saving advantages of having authentic service data at their finger tips at all times.

Better be sure YOU have all seven volumes or fill in your set at your jobber's today!

**RIDER
MANUALS**
NOW IN SEVEN VOLUMES

2 New RIDER BOOKS —AND THE THIRD EDITION OF—

**ALIGNING
PHILCO RECEIVERS**

This new book presents authentic and complete instructions for fast and accurate alignment operation on ANY of the 8,000,000 Philco receivers. Every trimmer is located for you. 176 pp. Hard cover . . . Only **\$1.00**

"Hour a day with Rider"
on **ALTERNATING CURRENTS
IN RADIO RECEIVERS**

Familiarizes you with the different forms of alternating currents present in a radio receiver. Illustrated with drawings and oscillograms . . . **60c**

SERVICING

SUPERHETERODYNES

Revised edition has complete list of i-f. peaks of commercial receivers. 324 pp. Over 100 illus. . . . **\$1.00**

JOHN F. RIDER, Publisher, 1440 Broadway, N. Y. C.

5000 OHM CONTINENTAL Carbon Spark SUPPRESSORS



CONTINENTAL Carbon's new 5000-ohm low-voltage coefficient spark suppressors effectively squelch ignition interference, thus releasing the avc circuit and the full sensitivity of your set.

Make this test—tune in a distant station while driving on a country road at 30 to 50 miles per hour. Shut off your ignition and note if the radio reception is better. If it is better with the motor shut off, you need CONTINENTAL suppressors.

For spark plug suppression select S27, S20A, or S21, in 5000-ohm resistance. Use T13 or T11 for the distributor in 10,000 ohms; T17 for Ford V-8 distributors. Available from leading radio jobbers.

Complete every auto noise-suppression job with CONTINENTAL Carbon by-pass condensers; heat resistant, moisture proof, economical. Handy Pocket Data on Radio Interference Elimination, 10c postpaid.

CONTINENTAL CARBON Inc.

13910 Lorain Ave., Cleveland, Ohio (Toronto, Canada)
Please send FREE, Auto Radio Engineering Bulletin 101 A.

Name
Address
City Jobber

TRADE FLASHES



M. F. Klicpera, vet "sound" man, now heads Webster-Chicago's Western sales.

★ **Precision Apparatus Corp.**, 821 E. New York Ave., Brooklyn, N. Y., has announced that their instruments will now be available on a time payment plan.

★ **J. H. Clippinger**, vice-president and sales manager of the **Continental Radio & Television Corp.** of Chicago, announced recently the appointment

of **S. B. Galitzky** as sales representative for **Admiral sets** in Michigan territory, with headquarters in Detroit. "Sam" is well known in the Michigan trade, having called upon dealers in this section of the country for many years.

★ **United Sound Engineering Co.**, St. Paul, Minn., has announced that its sound systems and intercommunicators are now fully licensed by arrangement with **Electrical Research Products, Inc.**, under patents owned and controlled by **American Telephone & Telegraph Co.** and **Western Electric Co., Inc.**

★ Recently the **Brush Development Co.**, Cleveland, moved to its own building at 3311 Perkins Ave. Brush thus celebrates its expansion from 1,000 sq. ft. floor space in 1932 to the present 4-story building.

★ Popular president **N. P. Bloom** of **Adler Mfg. Co.**, Louisville, Ky., has resigned. Mr. Bloom retires from the post after 20 years of service and "at the conclusion of the most successful year the company has ever known." His statement to "Radio Today" also reveals plans for "a much needed rest for a while, with no particular plans as yet for the future. . . . I leave with the knowledge that our organization is functioning better than it ever has and in the hopes that our friends



M. Lehman, president, **Lehman Radio Salon, N. Y. C.**, has announced that the mfg. division of the Salon is now called **Port-O-Matic Corp.**

and customers will continue the pleasant business relations with the **Adler Co.** that have held in the past."

★ **H. R. Peters**, president, **National Union Radio Corp.**, reports several additions to the firm's engineering staff. Most important is **Dr. Frederick Holburn**, now chief engineer for NU, who was educated abroad and was since employed by leading American companies. Other newcomers at NU are **Paul Schwerin** and **H. A. Wilder**.

"If I could only get EVERY service man to SEE them!"



So said a jobber who immediately recognized the finer appearance and plus value of these Simpson Instruments. And he is right. Pictures and words just can't do them justice—but one inspection will tell the story to you who know instrument quality and value.

Read the facts about these two great Simpson Instruments, which cover every class of work. But—in fairness to yourself and your jobber—see them, see the finer construction, the plus features, the finer panels, the finer cases. You'll thank us for the suggestion!



20,000 OHMS PER VOLT!

This new Simpson Set Tester sets a new "high" in sensitivity and value. Negligible current consumption (20,000 ohms per volt) means incredibly accurate voltage readings on ranges of 2.5-10-50-250-1,000. Same ranges for A.C. at 1,000 ohms per volt. Current readings from 1 microamp to 500 milliamps. Accurate resistance readings as low as 1 ohm up to 40 megohms. Built and mounted as only Simpson Instruments are built. Send coupon for details covering range of tests. SEE IT!

Model 250 (20,000 ohms per volt model)—Net Price \$38.50
(Time Price \$8.00 down; 6 monthly payments of \$4.50 each)
Also built in 10,000 ohms per volt model, Net Price, \$29.50

12 DISTINCT SCALES AT YOUR FINGER TIPS!

The "Roto-Ranger" feature—an exclusive Simpson principle—makes this the most convenient of all Tube and Set Testers. See it. Turn the selector switch, and watch the 12 long, clear, independent scales flash into view as the proper circuit is cut in automatically. Utilizes latest tube testing circuits. Has filament return selector. Tests all types of condensers on separate scales. Has independent resistance scales of 100 ohms, 100,000 ohms, 100 megohms. Three separate D.C. scales of 8-300-1,000 Volts at 2500 ohms per volt.

Model 220—Net Price \$57.00
(Time Price \$11.40 down and 6 monthly payments of \$8.75 each)
Other Roto-Rangers include Set Testers and Volt-Ohm Milliameters)

ASK YOUR
JOBBER

SIMPSON Instruments
that **STAY** accurate
(Sold on deferred payments)

THIS COUPON BRINGS DETAILS

Simpson Electric Co., 5216 W. Kinzie St., Chicago

Send facts covering No. 250 No. 220

Name _____

Address _____

EVERYBODY'S GOING... *Don't miss it!*



Conducted by Radio Parts Manufacturers National Trade Show—Endorsed by Radio Manufacturers Association and the Sales Managers Club.

GO TO THE SHOW, by all means! It will pay you to see this huge exhibition of radio's latest developments.

In connection with the show, RADIO TODAY is publishing a big DOUBLE NUMBER—the June Issue—containing manufacturers' 1938 announcements, up-to-date set specifications and complete reports of the show—all in one issue, for ready reference and file purposes.

If you are not yet a subscriber to RADIO TODAY, here is a good reason why you should become one at once:

With your one-year subscription at ONE DOLLAR (or 3 years for \$2) you will receive, absolutely free, a copy of the 1937-1938 Radio Year Book, giving you 1,000 pages of merchandising and servicing data, including 20,000 facts.

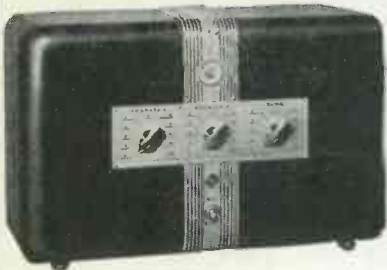
But, you must act quickly. The edition is limited and the offer may be withdrawn at any time.

If entered now, your subscription will start at once and will include the big double number in June, as well as the new edition of the Radio Year Book. And yet you pay only \$1 per year for the magazine itself!

USE THE POST CARD HEREWITH—MAIL IT AT ONCE



The **20-C AMPLIFIER** Type



- 20 Watts output
- Dual mike input
- Electric Eye Monitor

Modern in appearance and performance

A complete line of sound systems for every application illustrated in U.S.E.'s new 16-page catalog.

Write for new catalog No. 107 and proposition

United Sound Engineering Company

Manufacturers of Electronic Equipment
2227 UNIVERSITY AVENUE
St. Paul, Minn.

Licensed by arrangement with E.R.P.I. under patents owned and controlled by A. T. & T. and Western Elec. Co., Inc.

FITS LOOKS **Right!** WORKS



★ Make no mistake about it; there's nothing to equal an AEROVOX Exact-Duplicate Replacement condenser!

★ Restores any set to original NEW status. And that's what fussy trade expects.

★ You save time, bother and real money when you use AEROVOX exact duplicates.

Free DATA Latest AEROVOX catalog contains several pages of exact duplicate condensers. Copy sent on request.



NEW BOOKLETS

★ Complete line of wet and dry electrolytic, and paper exact replacement condensers is listed in a new catalog offered by Solar Mfg. Corp. Motor starting replacements are included; booklet is available either from jobbers or from Solar headquarters at 599 Broadway, New York City.

★ Literature listing the Precision Apparatus Corp.'s instruments, recently announced as available on a time payment plan, may be secured by writing to the company at 821 E. New York Ave., Brooklyn, N. Y.

★ Quam-Nichols Co., Cottage Grove and 33rd Place, Chicago, has issued new bulletins No. 52 and 53, describing respectively a new series of speakers with interchangeable transformers, and a new group of permanent magnet dynamic speakers.

★ New folder on 5-point summer air conditioning has been released by Climax Machinery Co., Indianapolis, Ind. Item has a place for the dealer's imprint.

★ Elaborate folder on replacement vibrators has been issued by Utah Radio Products Co., 820 Orleans St., Chicago.

★ Eight-page, highly illustrated bulletin on Globe radio batteries is available from Globe-Union, Inc., 900 E. Keefe Ave., Milwaukee, Wis.

★ Obtainable through National Union jobbers is a new 16-page vest pocket edition of a booklet, "Your Pocketbook—What About It?" Besides information on tube profits, the volume includes handy data not concerned with radio.

★ Ready to be sent on request is a new Industrial Capacitor Replacement Catalog, issued by Aerovox Corp., 70 Washington St, Brooklyn, N. Y. All types of capacitor-starting motors are listed, and the most popular items are cross-indexed.

★ For dealers and servicemen, the Radolek Co., 601 W Randolph St, Chicago, announces the release of their new Fall and Winter 164-page Profit Guide. Booklet is profusely illustrated, lists "everything in radio."

★ Allied Radio Corp., 833 W. Jackson Blvd., Chicago, will send free on request its new 156-page Spring 1937 catalog. Of interest to dealers, servicemen, amateurs, experimenters and sound specialists, it lists complete merchandise for those groups.

★ Ready for distribution to dealers and jobbers is a new general public address catalog issued by United Sound Engineering Co., St. Paul, Minn. This 16-page booklet, No. 107, is specially designed to simplify figuring of sound installations.

EVERY JOBBER

WILL WANT THE NEW SERIES OF



QUAM DYNAMICS

"Radio's Favorite Voice"—with sensational advances in design, quality, craftsmanship and tone.

- Interchangeable transformers
- Standardized voice coil impedances
- Armored field coils
- Completely dust-proofed
- Attractively packaged

5 to 12 in. 3.5 to 12 watts

Write or wire for bulletin No. 52 & 53

Licensed under QUAM Patents

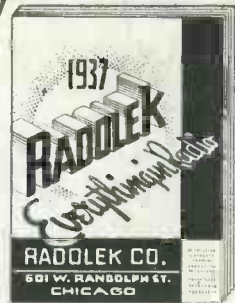
QUAM-NICHOLS CO.

CHICAGO—33rd Place & Cottage Grove Avenue
NEW YORK, N. Y.—1674 Broadway



Send for your free copy-

New Revised **RADOLEK** Profit Guide
1000 New Radio Items



The Spring and Summer edition of the 1937 Radolek Profit Guide is just off the press. The most up-to-date and complete Radio Supply Book. 1000 NEW ITEMS—MANY PRESENTED EXCLUSIVELY—an Oscilloscope using a new 2" Cathode Ray Tube, automatic tuning auto radios, etc. 164 pages of valuable, detailed radio buying information . . . contains the most complete replacement parts listings of volume controls, condensers, transformers, and vibrators. OVER 12,000 REPAIR PARTS—THE RIGHT REPLACEMENT ITEMS FOR EVERY RADIO THAT YOU WILL BE CALLED UPON TO SERVICE. A complete new selection of Radios and P.A. Sound Amplifiers. Every page of this catalog will bring extra profits to you. Radolek Quality is guaranteed—Radolek Prices are right—Radolek Service is fastest and most reliable. This is your Profit Guide—it's FREE. Send for your copy NOW!

RADOLEK

601 W. RANDOLPH, CHICAGO, DEPT. D-6
Send me the Radolek Radio Profit Guide FREE.

Name

Address

Serviceman? Dealer? Experimenter?

MAKE
every
TEST—
FIND
every
SHORT
or LEAK

with



MODEL TV—Dealers' net only \$27.95.

MILLION

TEST INSTRUMENTS

MODEL TV, shown above, with brilliantly illuminated meter, combines the features of our finest tube tester and analyzer. All measurements are made using built-in power supply, giving voltages of 0-30-300-900 at 5000 ohms per volt and resistance readings to 15 megohms.

Neon test lamp in calibrated circuit shows shorts and leaks, up to 6 megohms, between elements with tube HOT. Finds cause of poor sensitivity and selectivity; oscillator instability, etc.—seldom shown on other testers.

OTHER FEATURES

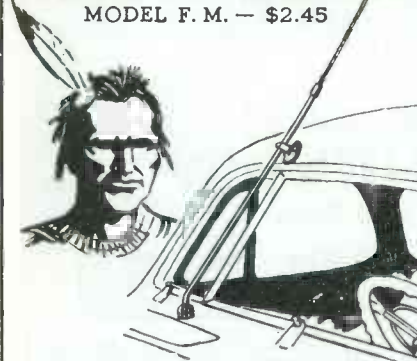
Continuous line voltage adjustment—current ranges from 300 microamperes to 9 amperes—Direct reading by-pass condenser scale, .01 to 3MF—Large 3-in. square D'Arsonval meter with GOOD-BAD scale—Tests emission of all tubes; electrolytics for polarity and leakage—Power circuit fused and insulated from test circuits—Meets all requirements of portable and counter type—Weight 8 lbs. If your jobber cannot supply you order direct, giving name of your jobber.

MILLION RADIO AND TELEVISION LABORATORIES

397 West Superior St. Chicago, Ill.

Introducing the CHIEFTAIN

MODEL F. M. — \$2.45



WARD'S NEWEST TOP AERIAL

Made of Stainless Steel and Brass—Chromium Plated—Telescopic

WARD PRODUCTS CORPORATION
MANUFACTURES THE WORLD'S
FINEST LINE OF AERIALS

TOP -- POLE -- UNDERCARR
SEND FOR CATALOG TODAY

WARD PRODUCTS CORP

WARD BUILDING

CLEVELAND, OHIO

ON THE TRADE TICKER

★ Walter J. Bauman, veteran radio man, has been appointed sales manager of the **Ariston Manufacturing Corp.** of Chicago, manufacturer of speakers and condensers. Wallie, as he is known throughout the trade, was previously identified with **Crosley, United Reproducer Corp., Bremer-Tully** and most recently with **Radio Speakers, Inc.**

★ New vice-pres. and general sales manager for **Gemloid Corp.** and its affiliated divisions is **Philip Richland.** General offices are at 425 Fourth Ave., New York; president is **J. Frank.**

★ **Taylor Tubes, Inc.,** 2341-43 Wabansia Ave., Chicago, have received notice from the Federal Communications Commission that Taylor tubes have been approved and given power ratings for use in broadcast transmitters. The ratings are for both high level modulation or plate modulation and low level modulation operating as linear power amplifiers.

★ Just-made-public report for the year 1936 on the net income of the **Stewart-Warner Corp.** and its subsidiaries shows the figure to be at the highest level since 1929. Net for 1936 was \$2,113,234, compared with 1,724,313 for 1935.

★ Late last month **Leon L. Adelman,** sales manager for **Cornell-Dubilier,** began a record-breaking trip on which he expects to cover 15,000 miles of his territory in 7 weeks. By May 16th, Mr. Adelman will have visited CD jobbers in nearly 48 states, stopping at 35 principal cities and covering 12,000 miles by plane.

★ **Manufacturers representative N. A. Patchin,** 212 North 4th St., Albuquerque, N. M., is covering Arizona and New Mexico for **Pioneer Gen-E-Motor Corp.** That firm is now featuring a new line of **Red Top** gas-electric plants.

★ **Walter "Irish" O'Halloran,** GE radio salesman, won a gold watch at a recent meeting of the **Chicago Sales Executives Club,** in a contest designed to test a salesman's ability outside his regular line.

★ **Fred Transformer Co.,** 100 Sixth Ave., New York City, have moved their coil factory and engineering labs to larger quarters at 9702 150th St., Jamaica, L. I., New York. Main office, shipping and assembly headquarters remain at the first address.

★ **John S. Meck** has announced his resignation as general sales manager of **Clough-Brengle Co.,** Chicago. He will work on the formation of a new corporation, to engage in the making of radio precision test apparatus.

★ New weekly program for the radio amateur started April 3 at 12 midnight on **WMAQ,** Chicago **NBC** station. Series is called "200 Meters and Down," is sponsored by **Wm. J. Halligan,** president of **Hallcrafters, Inc.,** makers of communication receivers. At the conclusion of each broadcast, remarks by **Lt. Comdr. R. H. G. Mathews, W9ZN,** central division director of the **ARRL,** will be featured.

★ New radio service department has just been organized by the **Stromberg-Carlson Telephone Mfg. Co.,** Rochester, N. Y. This division of the company is entirely separate from factory routine and will hike delivery and service schedules. New department will be under the direction of **Charles E. Angle,** and will be staffed by shifts from the sales and factory divisions of the company.

Department will handle repair parts orders, customer repairs, inquiries concerning radio troubles, merchandising and promotion of **Stromberg-Carlson** repair parts and the issuance of engineering data sheets, repair parts catalogs, and a bulletin "Solder Nuggets" which is issued frequently and contains service hints.

NEW...

Over 2,000 Items!

The CATALOG you have been waiting for

EVERY manufacturer, laboratory man and amateur experimenter will have steady use for the splendid new catalog we are now bringing off the press. It lists hundreds and hundreds of items which we ourselves MANUFACTURE . . . for this is not a wholesale house but a comprehensive producing unit that designs and makes what it advertises. Steel, copper, brass, bakelite, composition . . . from a tiny lug to a complete installation. Get on our list for the new catalog!

American

RADIO HARDWARE CO.
Inc.

476 Broadway New York City

TRIAD

THE CHOICE
OF SERVICEMEN
BECAUSE
THEY ARE USED
BY LEADING SET
MANUFACTURERS

TRIAD
MANUFACTURING
COMPANY, Inc.
Pawtucket, Rhode Island

The Quality Name in Radio Tubes



Profitable!

- ★ CLAROSTAT Exact Duplicate Controls, Resistors and Ballasts save time, trouble, money, kickbacks.
- ★ Fit in place. Function correctly. Look the part. A real servicing job.
- ★ Restore any set to original factory status. Satisfies the set owner.
- ★ Most extensive listings of sets and replacements eliminate all guesswork.

See Us at I.R.E. Show or at National Parts Show. Meanwhile, write for free Guide and Catalog.

CLAROSTAT

MANUFACTURING CO.
Incorporated

245 North Sixth St.
Brooklyn, N. Y.



H. W. Blakeslee, named by Zenith to head promotion on parts and access.

TECHNICAL MEETINGS AT I. R. S. M. CONVENTION

★ Lectures for the forthcoming I.R.S.M. Convention, June 10 to 13, will be of a more varied type than the Institute has ever arranged before. Technical lectures on timely subjects, clinics, and similar sessions will be supplemented by inspirational talks delivered by men whose names have made radio.

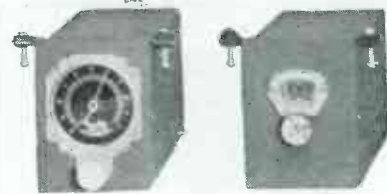
Among those who will appear on the Convention program are E. T. Cunningham, Pres. of RCA Mfg. Co.; O. H. Caldwell, former Radio Commissioner and now Editor of RADIO TODAY; Robert Herzog, Editor of SERVICE; Harold Olsen, of Weston; Walter Jones, of Hygrade-Sylvania.

Keeping pace with developments in the electronic art and in response to repeated inquiries from servicemen, arrangements have been made for a discussion of the use of radio frequency in intercommunicating systems for offices and homes. The speaker on this subject will be either Herbert H. Frost, head of the Frost-Minton Corp., or Frank Hayes, his Chief Engineer.

It is planned also to devote an evening to a "Set Clinic" to allow technical representatives of the set manufacturers to explain in an informal manner the engineering and service aspects of their apparatus. Clinics on test apparatus and public address are also being planned.

★ At the April 1st meeting of the Emporium, Pa., section of the Institute of Radio Engineers, speaker was R. H. Langley, well known radio consulting engineer. Subject was "Some Studies of Magnetic Materials at High Frequencies."

★ George Norris, veteran representative in Seattle, Wash., for Triumph Mfg. Co., has been re-appointed to represent the firm in lining up new distributors. Triumph has branches out from the contract buyer and export business; increased production facilities now permit sales through distributors and parts jobbers.



Model 600

Model 500

SHORT WAVE CONVERTERS FOR CAR RADIOS

Can be attached to any car radio. Has on and off switch. Does not affect the reception on the standard broadcast bands. MODEL 600—covers 49, 31, 25, 20, 19 and 16 meter bands. Designed for reception of American and Foreign short wave broadcast. Especially adapted to use in tropical countries and the more remote parts of the world. Distance range 5000 to 10000 miles. A very attractive unit.
List Price \$24.95
MODEL 300—covers 6000 to 20000 kilocycles. Has variable condenser with illuminated dial.
List Price \$19.95

For Use of Police and Other Law Enforcement Officers

MODEL 100—police converter with fixed condenser. Covers 1500 to 2600 kilocycles. List Price \$11.95
MODEL 200—police converter with variable condenser and illuminated dial. Covers 1500 to 5500 kilocycles. List Price..... \$17.95
MODEL 400—police converter with fixed condensers. Covers 5 to 10 meters. Also adapted for use of amateurs. List Price..... \$13.95
MODEL 500—police converter with two metal tubes, variable condenser and illuminated dial. Very sensitive. Exceptional distance range. List Price \$21.95
ALL WAVE ANTENNAS—Model B—under car and Model C—Fish Pole Type. List Price.... \$5.00

JOBBERS AND DEALERS WANTED

ABC RADIO LABORATORIES

3334 N. New Jersey Street
Indianapolis, Indiana, U. S. A.

NEW!



Latest
Western Electric
Mike gives high quality
at low cost!

This low-priced "Salt-Shaker" mike is a winner! Bell Telephone Laboratories designed it for broadcasting and public address.

It's both directional and non-directional—assures regular Western Electric quality at a new low price!

Distributed by GRAYBAR Electric Co.
In Canada: Northern Electric Co., Ltd.

GRAYBAR ELECTRIC CO., RT-4-37
Graybar Bldg., New York.

Please send bulletin describing the new Western Electric 633A microphone.

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



CERTAINLY!

Phonograph Records Played Faultlessly Pays Set Makers

GET the performance that puts pep in radio-phonograph sales. Install General Industries FLYER motors, for smooth, even playing. Silent induction type, self-starting motor with reserve power for absolutely uniform speed, regardless of record drag and weight of pickup. Laminated bakelite gears, self-enclosed, running in oil, and long oversize bearings, insure silence and long motor life.

Order a test motor NOW. Available for AC, DC, or universal AC-DC. Be sure to specify frequency and voltage you use.

The GENERAL INDUSTRIES CO.
3738 TAYLOR ST., ELYRIA, OHIO



COMUN-A-PHONE

A New, Instant, Two-Way System That Is Flexible and Efficient.

COMUN-A-PHONE is a superior quality inter-office communicating system. A special feature is the buzzer and light system showing which station is calling.

Comun-A-Phone gives you instant communication plus PRIVACY. Merely flip a switch and speak back and forth.

The list price is \$39.50 for master station and \$10 for each remote station.

For exclusive distributor rights and details write

STANDARD SOUND PRODUCTS CO.
55 WEST 42nd ST., NEW YORK, N. Y.

TRADE FLASHES

SALES MANAGERS CLUB, CHICAGO, JUNE 11

★ Ralph Hill of Ohmite Mfg. Co., and Charles Golenpaul of the Aerovox Corp., chairmen of the Western and Eastern divisions of the Sales Managers Club, respectively, were in conference in New York in preparation for the 1937 Chicago Convention of the Sales Managers Club, to be held during the National Trade Show at the Stevens Hotel in Chicago in June. The Convention will open at 10 a.m., Friday, June 11, and it is anticipated that there will be the highest percentage of attendance ever recorded for a meeting of the Club.

Organized more than two years ago, the Sales Managers Club has attacked many of the problems of the parts manufacturers, and has had remarkable success in their solution. Twice each year the Eastern and Western divisions have held combined meetings concurrent with the Chicago and New York Trade Shows. Now that the Trade Show is under the management of the Radio Parts Manufacturers National Trade Show, the formation of which was of considerable interest to the Sales Managers Club, the meeting activities are to be broadened into a convention.

Kenneth C. Prince, a Chicago attorney and executive secretary of the Western division of the Sales Managers Club, will discuss some of the recent legislation and its import from the standpoint of the members of the Club.

TWELVE BLOTTERS

★ Series of 12 hi-colored blotters with photographs of big-time radio stars on them has been issued by National Union. Suggestion is that they be released by service-dealers to customers at regular intervals, imprinted with the dealer's name and address. They are to be had through NU jobbers at a moderate charge.

SLANTED DISPLAY

★ Finished in 4 colors, a collapsible all-metal stand is offered by GE to aid salesmen in demonstrating auto radios. Item is designed to feature safety tuning, has a compartment at the base for the battery. It comes assembled with necessary holes punched, accommodates two models.

FIRST PRIZE, A TRUCK

★ The big contest sponsored by Raytheon Production Corp. for radio dealers and servicemen will continue to May 1st. Contest entries are to be had from Raytheon jobbers; first prize among the 500 awards is a service truck with a complete sound system, and other items to be given away include service instruments, radios, candid cameras, etc.



Robert L. Barr, the new general sales manager for Clough-Brengle, Chicago.

AUTO RADIO SALES AID

★ Philco has issued a new series of sales helps for those plugging auto radio, spring and summer style. Material includes bill-board posters, streamers for store windows and dealers' trucks, two types of display boards, a 4-page tabloid newspaper carrying the dealer's imprint, folders, a recently announced booklet, "Official Baseball Facts," and a series of 8 dealer advertising mats.

NOKOIL SPEAKERS

Make the Perfect TALK-BAK* Systems



Model 482TB

5" Special Talk-Bak* Speaker

Only **\$4.82** List

The 5" model shown above is the most popular, but these speakers which are designed especially for Talk-Bak* Systems can be had in other sizes.

Write for general catalog, special information and drawings on Talk-Bak* Systems.

Ask for the name of our nearest distributor. Wright-DeCoster distributors are always anxious to cooperate.

WRIGHT-DeCOSTER, INC.

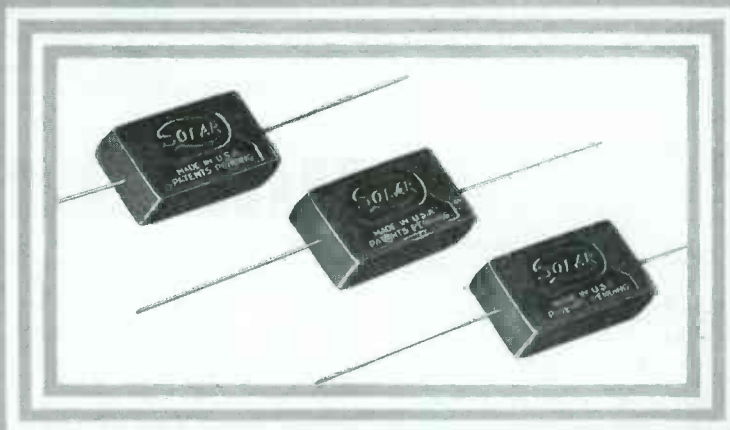
2265 University Avenue, St. Paul, Minnesota
Export Dept.: M. Simons & Son Co., New York
Cable Address: "Simontrice"
Canadian Office: Associated Sales Co., Guelph, Ont.
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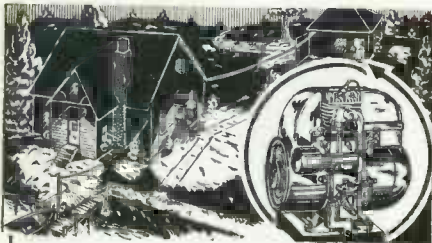
Solar DOMINO



molded BAKELITE paper capacitors

QUALITY
ABOVE ALL!

SOLAR MANUFACTURING CORP., 599-601 BROADWAY, NEW YORK



Complete Electric Plants

ONAN ALTERNATING CURRENT GENERATING PLANTS furnish the same electricity as city power lines. Made in sizes 350 to 10,000 watts to meet the requirements of those who must provide their own electricity for Farms, Summer Camps, Cottages, Boats, Commercial Purposes.

OPERATE A. C. RADIO

These A. C. Plants operate RADIO, HOUSEHOLD APPLIANCES, WATER PUMP, MOTORS — anything that normally would operate from city lines. Will run Public Address Systems, Demonstrating Car Equipment, Talking Moving Pictures, X-Ray.

MODERN CONSTRUCTION

ONAN PLANT Engines are like the Motor Car, Truck or Tractor Engines. Operate on Gasoline, Gas or Distillate. Wiring and Installation is the same as for standard applications. Also 32 volt, Direct Current Models. Write for Details

D. W. ONAN & SONS

572 Royalston Ave. Minneapolis, Minn.



C. T. Wandres, ad. manager of G E Radio, talks over the new complete GE tube line with H. A. Crossland, tube sales manager.

TRADE FLASHES

★ Announced by Clarostat Mfg. Co., Inc., Brooklyn, N. Y., is a new sales representative for New England area: Harry Gerber, 49 Portland St., Boston, Mass.

★ Huge new music store, Westchester Piano Co., has been established at 524 North Ave., New Rochelle, N. Y. Proprietors A. F. Olsen and J. J. Burggraf plan to enlarge and develop the radio department, under the direction of any suitable radio expert who is seeking a mutually profitable arrangement.

★ New radio store, Eveready Radio Service, Inc., has been opened by Jack Davis at 135 E. 57th St., New York City. Davis has a record department, is active in sound work. Radio lines stocked include Emerson, GE, Philco, Westinghouse, Stromberg-Carlson, Zenith, Air-King, RCA and DeWald.

★ C. J. Stevens, Des Moines, Ia., has been named district manager for Crosley Radio Corp. in Iowa, Illinois and Nebraska.

★ A group of Chicago capitalists has purchased the internationally known radio trade-name Clarion and has started to manufacture a complete line of radio sets bearing this well known name. Clarion Corporation will have executive offices in the Pure Oil Building, Chicago. R. B. Lacey, capable and popular radio executive, becomes vice-president and general manager and announces company will manufacture home, automobile and farm radios, to be sold only through wholesale distributors on a restricted distributor's territorial basis, with Clarion automobile radios as the first product available for the trade.

"Bob" Lacey has been identified with radio merchandising for many years, having been for the past five years general sales manager of the Wilcox-Gay Corp., and previously for a number of years general sales manager of the Perryman Tube Corp.

★ M. Lehman, president of Lehman Radio Salon, Inc., 1013 Madison Ave., New York City, has received a letter from the famous orchestra leader, Leo Reisman. Letter speaks of Port-O-Matic, the Lehman product: "Of all the machines I have ever owned, I find that this one reproduces sound most accurately." Mr. Lehman pioneered the portable automatic phonograph-radio combination.

★ Further expansion on the part of the American Zinc Products Co., Inc., Greencastle, Ind., is the opening of a new Chicago office at 43 E. Ohio St. All sales activity in the Chicago area will be handled through the new office under the direction of F. Clifford Estey, veteran district manager.

★ Radio division of GE has announced the opening of a new factory branch at 1321 S. Washington St., Peoria, Ill.

★ E. F. Johnson Co., Waseca, Minn., makers of radio transmitting parts, are now occupying a new factory and office building which will triple available space. Personnel has been hired and equipment added. L. W. Olander, formerly an RCA engineer and at one time with the Bell Telephone Labs, is the new chief engineer for the Johnson firm.

★ One of the state universities of the Middle West recently conducted a series of tests of recording apparatus and equipment. Experimenters took products from 6 U.S. manufacturers; Universal Microphone Co., Inglewood, Cal., was notified that it had won first place with its products.

*P.A. is
Big Business
... Lafayette*

**WILL HELP YOU
GET A PROFITABLE
SHARE OF IT!**

P. A. is Big Business today! LAFAYETTE answers this fact with CO-ORDINATED SOUND SYSTEMS—completely assembled—pre-tested—easy to install—ready for instant and faultless operation. Priced right, they offer a system for every conceivable P.A. application. Send for FREE 116 page catalog now listing in detail all LAFAYETTE CO-ORDINATED SOUND SYSTEMS and component parts. MAIL COUPON NOW!

WHOLESALE RADIO SERVICE CO. INC.
NEW YORK, N. Y. • CHICAGO, ILL. • ATLANTA, GA.
100 SIXTH AVENUE • 901 W. JACKSON BLVD. • 430 W. PEACHTREE ST., N. W.
BRONX, N. Y. • NEWARK, N. J. • JAMAICA, L. I.
342 E. FORDHAM RD. • 219 CENTRAL AVE. • 90-08 165TH STREET
MURKIN ROAD

WHOLESALE RADIO SERVICE CO., Inc.
100 Sixth Avenue, New York, N. Y.
Rush FREE catalog No. 68-12D7 □



Name.....

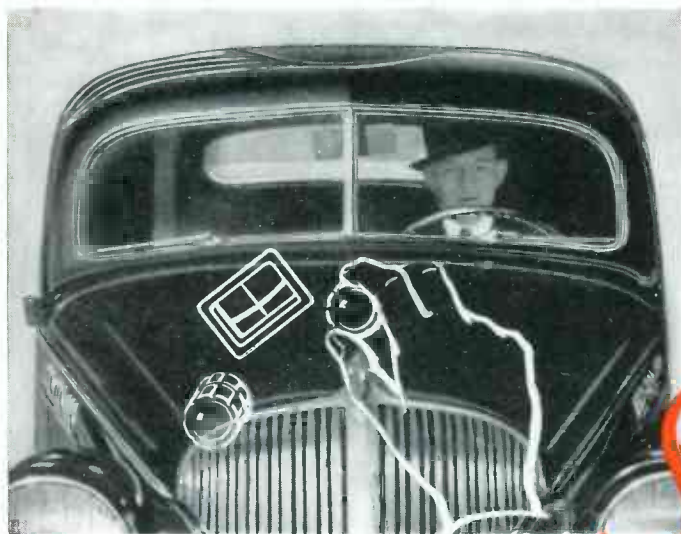
Address.....

City.....

FREE!

THE FASTEST WAY TO SALES AND PROFITS

IS WITH GENERAL ELECTRIC'S AUTO RADIO



AFC

EQUIPPED
AUTOMATIC FREQUENCY CONTROL

FOR

Safety Tuning

"FLICK . . . There's Your Station"

It's a hot sales feature . . . a real contribution to the DRIVE SAFELY Campaign. The driver merely turns the dial to approximately the station's dial position . . . and "PRESTO!" . . . the program comes in instantly. No dial rocking necessary to find the station's correctly tuned position.

"CUSTOM-BUILT" INSTRUMENT PANEL CONTROLS FOR ALL CARS



MODEL FA-80

Eight Metal Tubes. AFC. Compensating AVC. Class "B" Amplification. Antenna Circuit Matching System. 3-point Tone Control. 7 Watts Output. 6 1/2-inch Built-in Electrodynamical Speaker

Stations hair-lined tuned . . . At a flick of the dial!
Eyes concentrated on the road while driving and tuning!

You can really "go to town" this year with GENERAL ELECTRIC'S AUTO RADIO MERCHANDISING PACKAGE. See the assortment of FOUR new 1937 G-E AUTO RADIO MODELS, plus a big kit of SALES PROMOTION SELLING AIDS, plus a sensible plan on "custom-built" instrument panel mounting plates. It contains everything you need to speed up sales and profits.

Ask Your G-E Radio Distributor For Full Details.

FOUR G-E AUTO ANTENNAS DESIGNED FOR ALL TYPES OF CAR INSTALLATIONS

MODEL FA-61
Six Metal Tubes. 6 1/2-inch Speaker. Antenna Circuit-matching System.



MODEL FA-60
Six Metal Tubes. 6 1/2-inch Speaker. Antenna Circuit-matching System.



GENERAL  ELECTRIC

Auto Radio

APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONNECTICUT

IT'S HOT!

DEALERS SAY IT'S AMERICA'S
FASTEST SELLING AUTO RADIO

Motorola

WITH THE NEW **ACOUSTINATOR**



Model "65" ACOUSTINATOR EQUIPPED
LOW BATTERY DRAIN
6 Tubes—8" Electro Dynamic Speaker
List, \$49.95



Here's today's greatest auto radio feature! Motorists all over the cuntry are insisting on it! The ACOUSTINATOR actually SELLS Motorola! Sensationally new, the ACOUSTINATOR is easily and convincingly demonstrated. Be wise... tie up with Motorola and tie into big profits from quick sales. Write today!

MOTOROLA
"TOPPER" AERIAL

MOTOROLA FEATURES *that help you sell!*

- Acoustinator Personal Preference Selector
- Permanent Magnet Dynamic Speakers
- Ortho-Acoustic Separate Speakers
- Exactly Matches Dash of All Cars
- "Adapto" Broad Range Antenna System
- Reversible-Phase "Magic Elimnode"
- Low Battery Drain
- New "E-Z" Controls



CLEAR COUNTRY RECEPTION



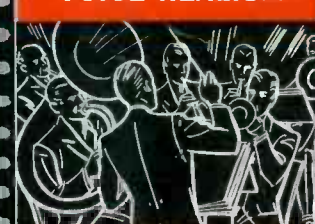
NO CITY STATIC



NO STREET CAR NOISE



VOICE REALISM



BALANCED MUSIC



EMPHASIZED BASS



"GOLDEN VOICE"
MOTOROLA
The Aristocrat
of Radio
8 Tubes

MOTOROLA HOME RADIO — Easier Tuning . . . that you can Prove; Finer Tone . . . that you can Hear; Better Performance . . . that you can Demonstrate. And, the new cabinets will be beautiful too! Ready in May.
NEW . . . DIFFERENT . . . BETTER

MODEL "70"
DE LUXE
6 Tubes



2" Permanent Magnet Dynamic Speaker
LOW BATTERY DRAIN
ACOUSTINATOR EQUIPPED
List, \$69.50



MODEL "35" THE CHALLENGER
NEW LOW PRICE—BIG VALUE
6 Tubes—3-Gang Tuning Condenser
List, \$29.95



Model "45" REMARKABLE PERFORMANCE
6 Tubes—6" Electro Dynamic Speaker
Local-Distance Switch and Tone Control
List, \$39.95



8" Permanent Magnet Dynamic Speaker
LOW BATTERY DRAIN
ACOUSTINATOR EQUIPPED
List, \$54.95

GALVIN MFG. CORPORATION

847 WEST HARRISON STREET, CHICAGO, ILLINOIS