

# RADIO TODAY

\$1 Yearly OCT 21 1935

Caldwell-Clements, Inc., 480 Lexington Ave.

New York City

## Radio Trade Outlook

- sets sold this year may cross 5,000,000 first time in history
- manufacturers report production far behind orders
- passing 1929 peak in unit and \$ volume considered probable this season
- set manufacturers report October 20% ahead of September, and 50 to 100% over last year
- retail trade preparing sales promotion plans to win every possible sale
- interest in higher-priced models one of brightest spots in picture

## Broadcast Billings Mount

- October continues upswing enjoyed during 1st 9 months '35
- NBC October revenue up \$471,000 over Oct., '34
- CBS billings up \$117,400 over October, last year
- total broadcast advertising this month tops 1934 by 13%

## Tubes Today

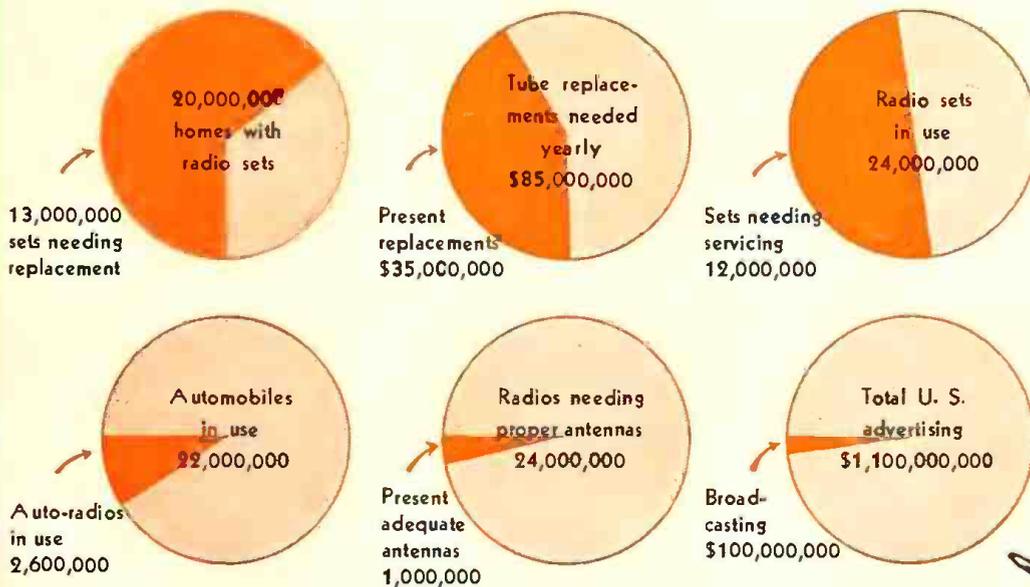
- 150,000 metal tubes now produced daily
- set-makers needs met in 60 days

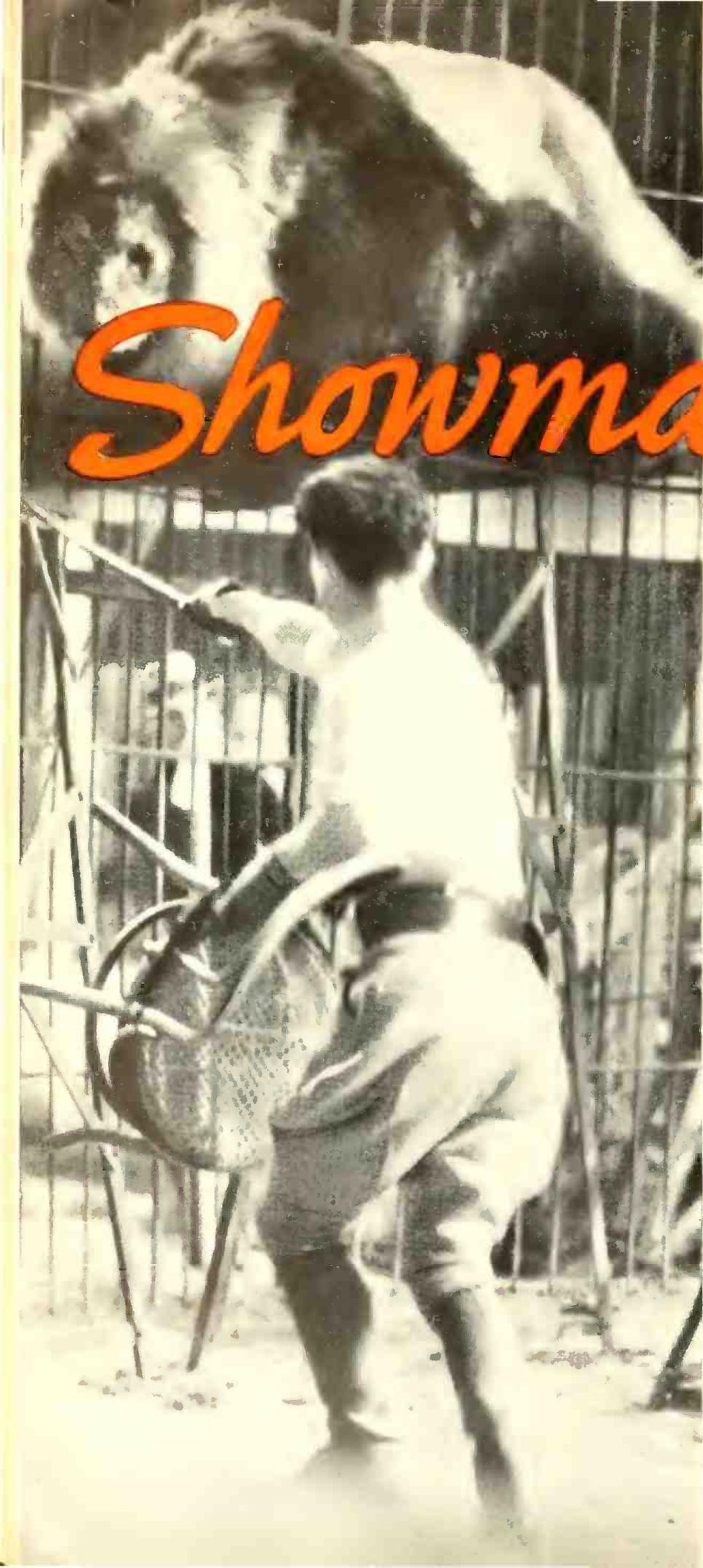
- few service kicks from metal sets in use
- tube sales up 18% during '35

## General Business

- index levels off after 2-month increase
- still about 14% above 1934
- automobile sales 29% over last year
- earnings, employment definitely up
- retail buying spree in N. Y.
- \$300,000,000 gold to U. S. from Europe
- copper prices up due to war scare

## RADIO'S UNTAPPED MARKETS. Today's business is ONLY THE BEGINNING!





*On the Air,*  
as in the Big Cage—

# Showmanship

wins the crowds!

Whatever the show—Showmanship wins. The animal trainer, master showman of vicarious thrills. The radio stars, welcome guests in the homes of a vast unseen audience. Showmanship gives the whole world the entertainment it wants—thrills, love, tears and laughter. Without these, there is no entertainment—no audience—and no receiver sales.

Sponsored and sustaining programs on NBC networks are notable examples of the top-flight radio showmanship of progressive advertisers, advertising agencies and the NBC Program Department. Programs on NBC networks are consistently voted the winners by the greatest air audiences in the world.

*These audiences are your immediate prospects. They listen to their radios because of the nationally famous programs they hear.* NBC Showmanship therefore makes a constant and an invaluable contribution to your business.

For maximum sales effectiveness, feature not only the fine instruments you have for sale, but also the outstanding NBC programs. They are one of your greatest sales assets, providing the incentive for better receiving sets.

*Tune in the RCA Magic Key Program every Sunday 2 to 3 P. M., E. S. T. on WJZ and associated NBC stations.*

NATIONAL BROADCASTING COMPANY, INC.

*A Radio Corporation of America Subsidiary*

NEW YORK • CHICAGO • WASHINGTON • SAN FRANCISCO

Photograph from Universal Pictures Corporation picture, "The Big Cage", based on the Appleton-Century book of the same name, written by Edward Anthony and Clyde Beatty.

HOWARD

**Can Deliver!**

## METAL TUBE SETS

HOWARD foresaw the present shortage of materials and bought for the future with the largest commitments in HOWARD's long history.

As a result HOWARD *can deliver* the complete line including *metal tube sets!*

Nine receivers. 4- 5- 6- 7- and 9-tube models from \$17.95 to \$124.50. *Plus* the world's finest radio receiver—the 19-tube grand at \$295.00.

DISTRIBUTORS AND DEALERS WRITE OR WIRE FOR DETAILS! YOUR TERRITORY MAY STILL BE OPEN

# HOWARD

## HOWARD RADIO COMPANY

1731 BELMONT AVENUE, CHICAGO  
AMERICA'S OLDEST RADIO MANUFACTURER

RADIO TODAY, published monthly by Caldwell-Clements, Inc., 480 Lexington Avenue, New York City. Subscriptions yearly, \$1 in U. S.; \$2 in Canada and foreign countries. Special charter subscription, U. S. only, good for a limited time—14 Months \$1. Copyright 1935 by Caldwell-Clements, Inc.

# IS OUR FACE RED?

What they said about RADIO TODAY'S first issue.

## GREAT

"On a business trip and hauled along Vol. 1, No. 1, 'Radio Today.' Have read, scrutinized and analyzed the issue. It is great. Heartiest congratulations to you, your staff and the radio industry."—**Alfred J. McCosker**, President Bamberger Broadcasting Corp. (WOR), New York City.

## INFORMATIVE

"If the first issue of 'Radio Today' is any indication of the high-tone and informative publication that we might expect monthly, you may feel assured that we will greatly enjoy every issue."—**Maurice B. Isaacs**, Mory Sales Corp., Philco distribution, New Haven, Conn.

## GOOD

"I believed that if Mr. Caldwell or Mr. Clements had anything to do with a new magazine, it just had to be good!"—**Morris E. Skidmore**, Patterson, New York.

## RIDER TOPS

"Your magazine is O.K. Rider's articles are the tops. We congratulate you."—**O. S. Magee**, Magee Radio sales and Service, Bethesda, Md.

## FRANK

"I believe there is a definite place for your magazine if the comments are kept brutally frank and free of prejudice."—**W. L. McAllister**, Loveman, Joseph & Loeb, Birmingham, Ala.

## SOUGHT

"If the first is a fair sample of issues to follow, I want to be on your mailing list. Here's my dollar."—**Walter M. Marvin**, Montgomery Fair, Montgomery, Ala.

## SOMETHING

"My comment to a traveling man, after looking through the first issue of 'Radio Today' was: There is a magazine that looks like it will be something in the trade paper field."—**R. L. Gerwing**.

## UP-AND-COMING

"Frankly, 'Radio Today' has all the earmarks of something-up-and-coming. I am very favorably impressed with its terse style; the very clear manner in which you report the entire radio field, and the concise treatment without the use of too many adjectives."—**Porter T. Bennett**, Superior Radio Service, Dallas, Texas.

## ENJOYABLE

"'Radio Today's' lay-out is fine. I enjoy your offering, and it is a pleasure to send my subscription order."—**James Miller**, Atlanta, Ga.

## PEER

"Congratulations on the fine magazine. It's the peer of all trade magazines."—**T. V. Clark**.

## COVERS FIELD

"I have read with a great deal of interest your new magazine 'Radio Today.' I think it covers the radio field in a manner in which it has not been covered up to this time."—**O. B. Hanson**, Chief Engineer, National Broadcasting Co., New York City.

## LOOKED SO GOOD

"I saw a copy of 'Radio Today' at one of our Philco distributors, and it looked so good I am enclosing check. Please list me as subscriber."—**Peter Kain**, Mgr., Atlantic Div., Philco Radio & Television Corp., Philadelphia, Pa.

## WELL-HANDLED

"I feel that you should be very much complimented on the first issue of 'Radio Today.' Factually, it contains more information than I have ever seen in one issue of any trade magazine."—**Paul S. Edison**, Hygrade Sylvania Corp., New York City.

## NEWSY

"I find the first issue of 'Radio Today' very newsy and interesting."—**Percy R. Bowers**, Rudolph Wurlitzer Co., New York City.

## PLEASING

"Well pleased with the September issue. At present I do not subscribe to any radio publication except yours."—**William L. Winslow**, Winslow Radio and Merchandise Co., Douglas, Wyo.

## TALENT

"When I saw the list of talent connected with your publication, I naturally concluded it had to be good, and was not a bit disappointed in your first number. I am particularly interested in trade magazines that will give the news reliably and unprejudiced."—**Adolph Wagner**, Wagner Radio Co., Indianapolis, Ind.

## HIT

"I have read 'Radio Today' with great interest and I feel sure that you have hit on a method of interpreting the radio news, personnel, and development."—**Louis K. Constock**, President, Merchants Association, New York City.

## SUCCESS

"I hasten to send you my congratulations and best wishes for the prompt success of your effort."—**Wilson N. Durham**, Broadcasting Abroad, Ltd., New York City.

## GOOD JOB

"Knowing the good work you have done in the past, I wish you every success, and believe you will be able to do a very good job for everybody. Money order attached."—**O. F. Mungay**, Managing Director, Australian Radio Publications, Ltd., Sydney, Australia.

## RIGHT

"The first issue of 'Radio Today' seems to fill a very definite need. Covering the important phases of conditions of general interest to the industry is a large and important task, but apparently you are setting about to do it in the right manner."—**J. C. Rapp**, Station KMA, Shenandoah, Iowa.

## EXCELLENT

"The birthday issue of 'Radio Today' is most interesting and well assembled. I note the wider field it covers and also the excellent advertising coverage of RMA members."—**Bond Geddes**, Radio Manufacturers Assn., Washington, D. C.

## STREAMLINED

"During my 26 years in radio I have seen a great many publications dealing with the industry, but I am frank to state that of all those I have seen none can compare with 'Radio Today.' 'Streamlined' is the best word I can think of."—**R. E. Smiley**, Continental Electric Co., Saint Charles, Ill.

## FINE

"I extend my congratulations on the first issue of 'Radio Today.' If future issues have the same fine style of reporting and authoritative items, I predict a long and successful career for the 'radio baby' that started out like a man!"—**Tom Joyce**, RCA-Victor, Camden, N. J.

## HEARTY WISHES

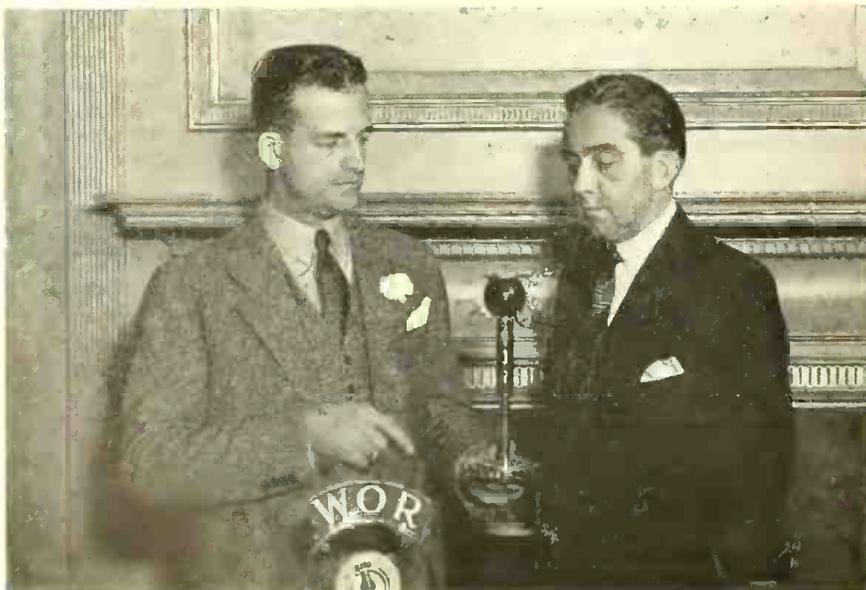
"My heartiest wishes for your success."—**C. M. Jansky, Jr.**, Jansky & Bailey, Washington, D. C.

## HELPFUL

"Have enjoyed reading the first issue of 'Radio Today.' This magazine will no doubt help the radio engineers and technicians to understand the 'bread and butter' side of the industry, which is a very important part, too, because it keeps the wheels going around."—**George Krivitzky**, Station WKBZ, Muskegon, Mich.

## RECOMMENDED

"Your magazine looks very good. I congratulate you and wish you plenty of luck. I am recommending it and hope it becomes the leader."—**B. Fredericks**, Los Angeles, Calif.



Reader A. J. McCosker (right) just celebrated his 13th anniversary as chief of WOR. Engineer Poppele shows him WOR's newest wrinkle in mikes.

## COMPLETE

"'Radio Today' is certainly most complete and up to the minute, and I believe that any one connected with any of the electronic industries can not afford to miss it."—**Louis Gerard Pacent**, Pacent Engineering Corp., New York City.

## WELL-PRESENTED

"Congratulations. Your magazine is well-presented, timely and interesting."—**Richard C. Patterson, Jr.**, Exec. Vice-Pres. NBC, New York City.

## BRILLIANT

"I compliment you on the birth of this latest development in radio journalism, your brilliant issue of 'Radio Today.' It is treated with courage and independence, and I can predict that 'Radio Today' will become the forum of the radio art."—**Capt. O. Fulton**, Fultograph, Inc., New York City.

## CORRECT

"You seem to have the correct approach in 'Radio Today' that should wake everybody up and do a lot of good. It certainly is full of pep."—**C. R. Underhill**, Lower Bank, N. J.

## GO FAR

"I have just completed reading your first issue. 'Radio Today' should go far, as it is without doubt the greatest publication of its kind to hit the market."—**Kenneth W. Stowman**, Station WCAU, Philadelphia, Pa.

## BEAUTIFUL

"You are certainly to be congratulated. It is a beautiful number and we have all found it intensely interesting."—**John Parkerson**, Transradio Press Service, New York City.

## HAS BACKGROUND

"I feel confident that 'Radio Today' will prove a brilliant success in view of the background of yourself and associates."—**L. F. Muter**, The Muter Co., President RMA, Chicago.

## ALL THE LUCK

"Here's to wish you all the luck in the world! Enclosed is my check."—**Roy S. Durstine**, Batten, Barton, Durstine & Osborne, New York City.

## BEST WISHES

"I extend my best and sincerest wishes for the success of your undertaking. I certainly want a subscription."—**E. K. Cohan**, Director of General Engineering, Columbia Broadcasting System.

## LIKED

"I have seen your first issue of 'Radio Today' and I like it. I congratulate you both upon its appearance and the subject matter."—**John W. Van Allen**, Gen'l Counsel, RMA, Buffalo, N. Y.

## BEST

"'Radio Today' is the best I have ever seen . . . timely, snappy, newsy, good sales and service helps."—**W. T. Bula**.

## DESERVING

"Congratulations on the fine book you have turned out. I wish for you and it the success you deserve."—**Herbert Metz**, Graybar Electric Co., New York City.

## ADMIRABLE

"The high standard of 'Radio Today' is worthy of admiration. Our buyers and servicemen speak in the highest terms of it."—**C. Keut**, Rich & Co., Saginaw, Mich.

## FINE EDITORSHIP

"Good luck and every good wish in publishing 'Radio Today.' With your enthusiasm and fine editorship, success should crown the new creation."—**Orrin E. Dunlap, Jr.**, Radio Editor, New York "Times."



RADIO TODAY's first California subscriber, **Roy F. Bledsoe**, Bakersfield, Calif., with (he writes us) "two reasons for being in radio today."

## NICE

"The first issue of 'Radio Today' is a nice piece of work and I congratulate you both on the editorial make-up and the amount of lineage carried."—**Herbert H. Frost**, New York City.

## VIGOROUS

"'Radio Today' reflects the present and presages the future of radio. It is snappy, vigorous and informing. I prophesy a splendid future and congratulate you and your associates."—**Edward J. Nally**, Radio Corp. of America, New York City.

## IMPARTIAL

"You are to be congratulated on this issue of 'Radio Today,' not only on the editorial style but on the fact that your presentation has been so impartial and newsy."—**C. E. Stahl**, Arcturus Radio Tube Co., Newark, N. J.

## FINE JOB

"I have just read through the first issue of 'Radio Today' and wish to congratulate you on doing such a fine job."—**Robert Hertzberg**, Wholesale Radio Service Co., New York City.

## NOTABLE

"I want to congratulate you and wish you the best of good fortune in your new venture. Being one who is familiar with your background, I have no doubt whatever that yours will be a notable contribution to the field."—**S. H. Hartley**, General Television & Radio Corp., New York City.

## EVERY SUCCESS

"May I congratulate you upon your new venture. I wish every success for 'Radio Today.'"—**Roy Burlew**, Ken-Rad Corp., Owensboro, Ken.

## GOOD LUCK

"Just a line to wish you and your associates all success and much good luck in your new undertaking."—**Oliver C. Hartmann**, 515 Madison Ave., New York City.

## WELL-RECEIVED

"I have read the first copy of 'Radio Today' and find it very interesting and might add that it has received much favorable comment around the station."—**Harry T. Catterall**, Station WJAY, Cleveland, Ohio.

## PLEASANT SURPRISE

"When I saw the first copy of 'Radio Today' I was pleasantly surprised, for it gave a good coverage of the high lights in radio from every angle, bringing to the busy serviceman a synopsis of the progress of radio from a scientific point and also from the service point of view."—**J. P. McGirt**, McGirt Radio Service, Waycross, Ga.

## PERTINENT

"The first issue of 'Radio Today' was received and everyone here appreciated it, thought it was pertinent, to the point, condensed, complete and thorough."—**Laurence H. Lucker**, Lucker Sales Co., Minneapolis, Minn.

## ALL SUCCESS

"I congratulate both you and Mr. Clements on entering your new publishing service. I wish you all the success in the world."—**Fred D. Williams**, International Resistance Co., Philadelphia, Pa.

## HIGH-STANDARD

"I knew that 'Radio Today' would be a worth while job. I am afraid that the very high standard which the first issue of 'Radio Today' has set will cause you a certain amount of very serious scratching if it is to be kept up."—**Arthur H. Lynch**, New York City.

## RIDER

"I have read your article on shoestring investment and haywire methods in the radio service industry. You have hit the nail right on the head and if that article could be put in front of everyone interested in the service business it would do much good."—**H. A. Shannon**, Shannon Radio Service, Mt. Vernon, N. Y.

## CONGRATULATIONS

"I am very much pleased with the first copy of 'Radio Today.' I believe yourself and associates are to be congratulated on the first issue and I am convinced that subsequent issues will be even more interesting."—**John W. Hubbell**, Russell C. Comer Advertising Co., Kansas City, Mo.

## INTERESTING

"I have just received the first copy of 'Radio Today.' It is with sincere appreciation that I tell you how interesting I have found it."—**Herbert Hollister**, Station WLBK, Kansas City, Kan.



Guided only by a radio direction compass, tuned on broadcasting stations, this Lockheed Vega plane flew in one day around a 1,300-mile circle from New York to Cleveland and back to Washington.

Henry Ford, riding around Schenectady, N. Y., in this two-way police radio car, had a talk via short-waves with his manager in Buenos Aires, Argentina.

## RADIO EVENTS IN THE DAY'S NEWS



A shaft of light, streaming 7 miles down the side of Whiteface Mountain, in the Adirondacks, carried the voice of Governor Herbert H. Lehman of New York state. President Roosevelt used the device next day to dedicate the Whiteface Memorial Highway.



Paris fashions in radio—a combined receiver, phonograph, and bar—among the 10,000 sets displayed last month at the annual Radio Show in Paris, France.

## Staff—

DARRELL BARTEE  
FRANKLIN S. IRBY  
RANDALL R. IRWIN  
G. H. MAYORGA  
M. H. NEWTON  
J. E. OSMUN  
JOHN F. RIDER  
B. V. SPINETTA  
V. K. ULRICH

LEE ROBINSON  
Sales Manager

# RADIO TODAY

ORESTES H. CALDWELL  
Editor

M. CLEMENTS  
Publisher

480 Lexington Ave.  
New York City  
Tel. PLaza 3-1340

Vol. I, No. 2

## General levels above '34

★ General business index levelled off in September after a two-month increase in July and August. September, '35, business, however, is still safely up from corresponding '34 period. Basic index stands now at about 86, after reaching 88 in August and early September; upward swing is expected to resume again well before the middle of November. Index this time last year stood at 75, 11 or 12 points lower than current year.

## Earnings, employment up

★ Uptrend in earnings and employment is reported by National Industrial Conference Board. Average hourly earnings in 25 key industries reporting to the Board now stand at highest point since uptrend in hourly wages began during Summer of 1933. Figures for latest 30-day period show payrolls 3.4% larger than previous month, and 20.2% higher than corresponding month last year.

Employment, too, is up. Though the increase is not large, it is indication that unemployment is definitely headed downward. Latest NICB figures available show unemployed to stand at 9,901,000, as against 10,223,000 this time last year.

## Bright spots

★ Decline in freight car loadings due to coal strike, and slight decrease in steel-mill activity affected index adversely in September. Bright spots, however, offset these declines, causing index to level off rather than decline as a whole. Electric power production, lumber production and cotton cloth production remain about the same compared with last month, although still far ahead of this time last year.

Automobile sales and production still stand at tops of bright spots.

Switching of N. Y. auto show from January to November said to have done much toward making the Fall a banner auto season. Passenger car and truck sales and production, while down somewhat in October, are expected to reach new peaks in November as new new models shown at show get under way. Automobile Manufacturers' Association reports 1935 sales of passenger cars, U. S. and Canada, expected to total 2,960,000, with trucks at 740,000, a 29% increase over 1934.

## Radio's big season

★ Biggest selling season of year in radio sees practically entire industry in furor of sales and production. Set-makers report production far behind orders, with more orders on hand than they can fill in near future.

Philco reports factory employees increased from 8,700 to 10,340, with production set at 9,000 sets daily; General Electric added 1,100 to pay-

roll last month and reports third-quarter orders up 34% over similar period last year; Emerson Radio expects October to top September by 20% and looks forward to 100% increase over October, '34.

RMA figures 50,000 factory employees compared with normal of 40,000 at this time; sales of RMA members said to be 20% ahead of last year, and number of sets sold in 1935 may cross 5,000,000 mark for first time in history.

Prospect of 1935-36 season exceeding peak of '29 both in dollar volume and number of sets sold is considered highly probable.

## Trade factors better

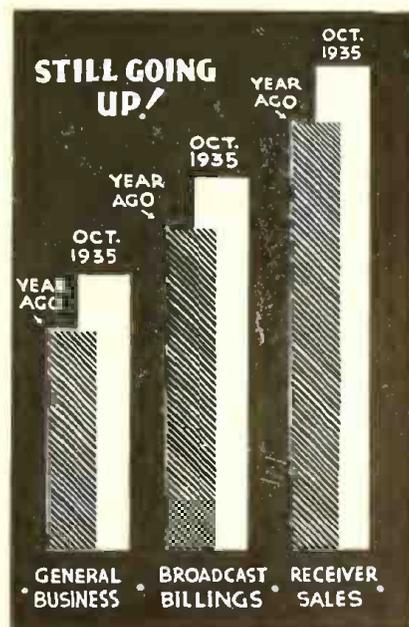
★ Part of credit for improved conditions in U. S. believed due to favorable trade and monetary factors. Flow of gold from Europe to U. S. began September 9th and is thought to total almost \$300,000,000 since early September.

Another favorable factor is upping price of copper. Sudden wave of buying sent price of this basic metal in European centers to 9.05 cents a pound, highest since July, 1933. Fear of general European war is increasing demand for copper, and large increases in purchases will result in greater activity here; as copper is one of U. S. basic industries, favorable copper conditions will have good effect all around.

## Broadcast revenue up

★ Revenue from sale of local and network time continues to show satisfying increases. CBS reports advance bookings for October indicate month's billings will total \$1,870,000, compared with \$1,752,601 for October, 1934. October figure for NBC's two webs is estimated at \$3,247,254 as against \$2,775,431 same month last year.

Total broadcast billings, all sta-



tions, local and network, for October is expected to top the \$10,230,000 mark; this compares with \$9,056,064 for corresponding month last year, an increase of some 13%.

Broadcast billings for last quarter, as indicated by October figures, will undoubtedly continue same upswing of 10 to 25% over 1934 as was enjoyed during first nine months. If so, 1935 will go down in history as the peak to date for broadcast advertising.

### Television cable in doubt

★ Considerable dissatisfaction has been expressed with the ruling by the FCC that the 90-mile co-axial cable proposed by the A. T. & T. Co., between New York and Philadelphia, be thrown open to the use of the telephone company's competitors, and some question has been raised whether the 'phone company would go ahead with its million-dollar project. The cable is planned to carry 200 phone conversations simultaneously over a single conductor, but would convey a million-cycle television picture in both directions.

So far no definite announcement has been made from AT&T offices that cable would be dropped, but an alternative statement from Bell Labs indicates that a co-axial experimental loop may be laid at Morristown, Pa., for test purposes. Meanwhile production of the cable is being held up, partially because terminal equipment is still in the development stage.



Sponsor-of-stars A. Atwater Kent chats with James Melton, singer on a recent program of the AK series.

### America leads—Sarnoff

★ Research in radio and television in Europe is not as far advanced as in America, David Sarnoff, chairman of the board of National Broadcasting Company and president of the Radio Corporation of America, said on his return from a two-month visit abroad.

"I studied the technical developments in the important radio laboratories in Europe and saw their latest television experiments," he said. "While interesting research work is being done along these lines in several European countries, the progress being made in our own country is in advance of anything I saw abroad. America continues to lead the world in radio."

#### PRICES HIGHER ABROAD

Radio is gaining rapidly in popularity abroad, he said, in spite of the fact that European listeners are required to have government licenses and pay an annual fee for the privilege of listening.

"Prices of tubes and sets in Europe are much higher than in America," Mr. Sarnoff also pointed out.

"In England the B.B.C., while government owned, is, nevertheless, permitted to exercise a measure of freedom; but in other European countries, especially where dictatorship is the order of the day, radio is primarily used for propaganda purposes. In such countries no word of opposition to those in control may be uttered, nor may any difference with their opinions be expressed.

"But despite these restrictions and repressions, radio programs continue to cross the borders and are increasingly welcome visitors in European homes. The increase in short wave transmission has brought to the people on the European continent the realization that through their radio receiving sets they can come to know more about themselves, their neighbors and those far away.

"They realize today that, like the automobile, the radio set is no longer an experiment. It has become a necessity of modern life—the window at which the family sits and views the world.

"In England business is good and employment is increasing. In the other countries I visited business conditions vary, but, on the whole, the direction is upward. On the other hand, the political uncertainties now overhanging Europe are retarding progress and stand in the way of a more basic economic recovery."



Returning from Carlsbad, David Sarnoff opened RCA's "Magic Key" program from mid-ocean.

### 173,000 at N. Y. radio show

★ Public attendance at the National Electrical and Radio Exposition, Grand Central Palace, New York City, Sept. 18-28, exceeded by 35 per cent previous records, according to Ralph Neumuller, managing director. Total for the eleven days was put at 173,000.

"The greatest interest displayed was in console radios, running from \$60 to \$130," said Mr. Neumuller. "Interest in the lower-priced midget sets was so slight that the exhibitors moved them further back during each day of the Exposition until Wednesday, when they were put in the most inconspicuous spot in the booths.

"When can you ship us more goods? was the first question from over 85% of the visitors daily. Despite the fact that all of the radio manufacturers have increased production, the sales managers' chief worry at present appears to be—how soon can they make deliveries. This was true, we found, in over 95% of the cases."

### Fight helps kilowatts

★ The Baer-Louis brawl September 24th set a 3-year record for electricity consumption in New York, the N. Y. Edison Co. reports; 341,000 more kilowatt hours were used that night than on previous night.

Upping of kilowatt consumption

for special broadcasts indicates public listens when there is something it wants to hear, and it definitely seems to want to hear fights, in spite of highbrow reports to the contrary. Fact also throws a challenge to broadcasters; upward surge in kilowatts used when a fight is on the air indicates a good many more sets turned on than is usual. We can't have a heavyweight fight every night, but ingenious program-preparers might find some significance in this obvious opportunity for more programs that will make them listen, drag 'em to the loud speaker every night!

### **\$1,100,000,000 advertising**

★ That broadcasting is still a very small part of the U. S. advertising bill is revealed by totals for other media.

Newspapers are now running \$485,000,000 annually; periodicals and magazines \$125,000,000; outdoor \$25,000,000. Direct mail, the largest "unknown quantity," is estimated at \$365,000,000. Putting broadcasting at \$100,000,000 for the current season, this brings the total U. S. advertising bill up to \$1,100,000,000 annually.

### **Farmers want better sets**

★ Trend toward higher-priced sets does not seem to be confined to Metropolitan areas. Wholesalers serving rural territories say it is most surprising this Fall to see orders for 11, 13 and 15-tube sets come in from dealers in towns of 1,000 and less population.

Fundamental increases in farm incomes continue into Fall—it is no longer true that main crops are harvested and marketed at the end of the summer season. Wheat prices are up and may climb further; livestock activity continues.

Development of windchargers has linked farmers closer to better radio programs. Efforts of the manufacturers to give rural owners better battery facilities may also be a factor in the farmer's renewed interest in a finer set.

### **Short-wave promotion**

★ In wide-awake communities where newspapers are publishing weekly foreign short-wave programs, dealers have noted a new strength in sales of short-wave sets. It appears that in many cases dealers have suggested to the publishers that the service is valuable and timely.

Complimentary short-wave program service offered by the Service Bureau of the RMA (1317 F St., N. W., Washington, D. C.) has already been



*Powell Crosley, Jr., chairman RMA's committee on sales promotion, sees new radio horizons.*

welcomed by hundreds of newspapers throughout the country who have made it a permanent feature, often without re-writing. The service is detailed and complete and has been found by many editors to have a sure-fire reader interest.

### **News dramas to front**

★ Matter of the dramatization of news as a broadcast feature has landed in the headlines this month. The mag *News-Week* has announced a new treatment of news episodes in the form of a 15-minute electrical transcription, edited weekly by its staff. Since this "Radio News-

Week" is a wax affair, it will get a localized promotion not available to the live features. World Broadcasting makes the records.

Claimed the oldest every-day news drama on the air is WMCA's "Five Star Final." Philip Barrison directs this well established series, which is heard nightly on an inter-city group of stations, and he has dedicated his work to the belief that "the radio audience is more interested in human interest news than in the doings of Kings and Queens."

Such arguments to the contrary, "The March of Time," the big Columbia Broadcasting feature, likes its international news, and has been very busy and successful with dramatizing the Ethiopian mess. Able Arthur Pryor keeps the thing in shape.

Railway Express Co. to add life to the news racket has hit a snag with its "News Parade." Both NBC and CBS ruled it off their nets because it seemed to them an obvious take-off on "The March of Time." Railway episodes used the transition phrase, "time moves on" and its similarity to *Time's* words, "time marches on" was uncomfortable to some.

### **Metal-shield, not metal-tube**

★ Complaint against tube sellers who offer glass tubes in special metal shields and call them "metal tubes" is made by Paul Ellison of Hygrade Sylvania, who points out that if the public believes it is getting metal tubes and then finds it has been bilked, the reaction felt is directed against both the dealer who sold the set and the radio industry as a whole.



*Every night's a first night in Studio 3 at CBS. Arthur Pryor (left) and his cast of news dramatizers in the powerful "March of Time," storming the air waves 5 nights a week.*

## Paley's glad hand

★ WJR of Detroit got a gala welcome to the Columbia network on Sept. 29 with an international broadcast and a feature dedication program. William S. Paley, Columbia president, was in London at the time; he had a place in the program, however, so he went to the studios of the British Broadcasting System and said things which need quoting.

"The advertiser and the artist, the sportsman and scholar, engineers, statesmen and authors, the church and the government have all formed this living, dramatic pattern that is American broadcasting," came the voice of Mr. Paley.

He went on to remark that the tastes and preferences of listeners were the basic part of the pattern, that it was the job of the broadcasters to deal fairly and promptly with the issues of the day. "In this spirit and with these goals," the CBS prexy welcomed WJR to the web.

Also heard during the hour were Colonel Stoopnagle and Budd, George Burns and Gracie Allen, Mark Warnow's orchestra, Eddie Dunstedter, Loretta Lee, Jerry Cooper, Virginia Verrill, the Malo quartet, Mary Eastman and Jimmy Farrell.

WJR's new 50,000-watt transmitter was dedicated, and a convincing résumé of the station's growth came out in a two-way radio conversation between Ted Husing, CBS sports announcer, and Leo Fitzpatrick, general manager of WJR.

## "All-wave" questioned

★ The Federal Trade Commission has raised questions concerning the use of the terms "all-wave," "world-wave" and similar expressions regarding radio sets, but after discussion with RMA executives has temporarily suspended individual cases pending against set-manufacturers for use of these terms in merchandising and advertising short-wave receivers.

Two years ago the RMA board of directors, following recommendations of its engineering division, formally adopted a definition for "All-Wave" sets in the American market to include sets with a reception range from 540 to 18,000 kilocycles. This definition was questioned by the Federal Trade Commission, but continuation of the "All-Wave" term is proposed by RMA in its conferences with the Commission. The "All-Wave" term has received the official endorsement



William S. Paley, CBS president, speaking from BBC in London. "I welcome WJR to Columbia."

of the Federal Communications Commission. A letter from Andrew Ring, acting chief engineer of the Communications Commission, supports the term as correct and not misleading. Individual cases involving use of the "All-Wave" and similar terms have been suspended by the Trade Commission pending consideration of the proposed RMA trade practice agreement for set manufacturers. The latter covers many merchandising practices and was considered by the RMA board of directors at New York on September 25.

## Season of symphonies

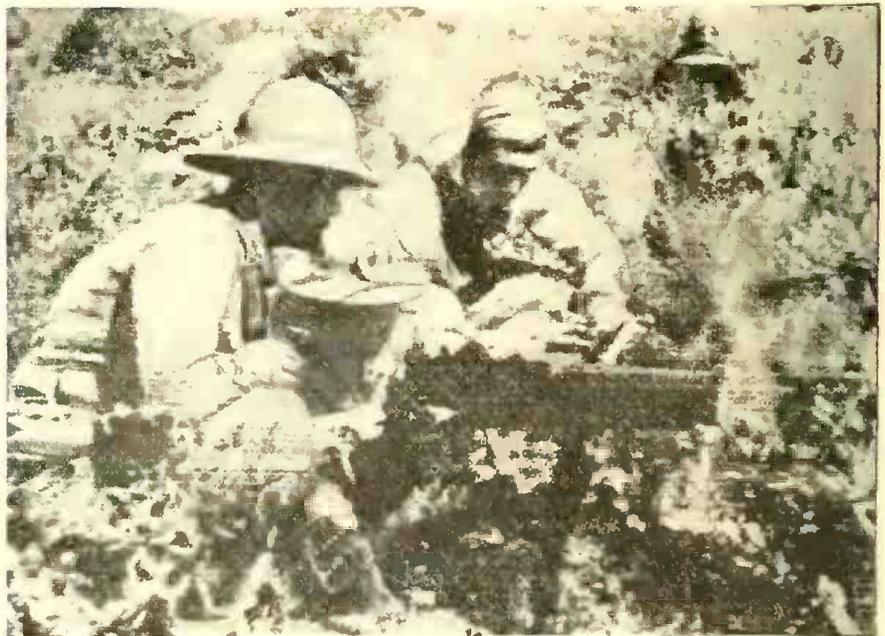
★ Serious listeners have recently noted a rush of symphonic grandeur on the air. Nearly 20 symphonies of accepted national repute are in the program news, offering one of the most important seasons of broadcast history.

Aside from the New York orchestras, which include the Philharmonic of Carnegie Hall, the Radio City Symphony, WOR's Little Symphony, and the NBC organization, the well known symphonies in the news are of Detroit, Dallas, Kansas City, Rochester, Chicago, Portland, Seattle, Los Angeles, San Francisco, Cleveland, Boston, and Philadelphia. The Chicago group includes the Civic Opera organization and the Women's Symphony. On the list also are the magnificent Vienna players, and General Motors' Orchestra.

## 1935 tube sales

★ Tube production and sales showed an increase of about 18% in number of units and 6% in dollar value for the first six months of 1935, as compared with the same period for 1934. Figures for the third quarter of 1935 are not yet available. First and second quarter totals follow:

1935 TUBE SALES (UNITS AND VALUE)		
1st quarter...	15,247,456	\$5,266,500
2nd quarter...	14,454,219	4,563,800
1st half	29,701,675	\$9,830,300



Facsimile picture of Italian machine-gunners, Aduwa, Ethiopia, flown from the battlefield to Rome, telephotoed to London, then transmitted to U. S. via radio facsimile.

## Radio laughs last

★ While John J. Karol, market research director for CBS, was hotly refuting the broadcast mortality claims of Allen Sykes, eastern manager of the American Newspapers Publishers Association, a continuity writer at Columbia was writing a 5-minute script on the subject which was more mischievous than malicious but nevertheless had many a spot of truth.

The sketch was pleasantly presented as an item which will "never never be broadcast", and so will continue to brighten the files of RADIO TODAY, where the daily barrages of the radio-press war are forming a dismal heap.

The CBS script has three characters: "Pa", representing the ANPA, "Ma", the magazines, and "Mike", the networks. Through 15 pages these three conduct a mild brawl in Ad-town, corner Main and Media streets. The pure logic of the situation marks Mike as the winner, since his arguments are obviously more than a match for the hillbilly philosophy of the opposition.

Author of this tiny drama has ably mixed his Truth and Comedy; given a chance, the sketch would represent quite a burn for the befogged statisticians of the ANPA.

## FHA helps public-address

★ FHA has issued another special ruling which makes a lively business note for radio men who manufacture, install, or service



With rumbles of war abroad, manufacturers see a new radio market developing. Picture shows radio-equipped tanks in New York maneuvers.

public-address systems. Federal financing, under FHA's modernization credit plan, is now available for public address equipment in apartment houses, hotels, offices, hospitals, orphanages, colleges, factories, schools, and sundry commercial buildings. Schools are important because PWA is going heavy on them now.

The ruling, secured by RMA, asks that the "permanently built-in regulations and stipulations" for modernization financing of Class A structures be followed regularly. Class A structures include almost everything but private dwellings.

## Transradio debunks "exclusiveness"

★ Promoters of sport events will now think twice before they guarantee "exclusive broadcast rights" to an ambitious sponsor, now that Transradio Press Service, with the aid of short-wave, has succeeded in using such affairs as the Baer-Louis fight for its own purposes.

Transradio uses a portable short-wave transmitter, specially designed to be inconspicuous and small enough to be operated in a single spectator's seat. The operator reports the moment-by-moment progress of the event, and his voice is transmitted to a receiver within a few blocks of the spot. From there the copy is supplied to Transradio clients, whether transmitted from the Service's station WCX or teletyped.

## Facsimile at Waldorf?

★ Rumor has it that the management of the Waldorf-Astoria Hotel, New York, has interested itself in facsimile to the extent that some 500 sets will be installed in rooms there. Story goes that the hotel has plans for using a facsimile printer for getting programs and announcements into its rooms, particularly when important conventions are under way.

One report is that Waldorf will use the facsimile set developed by Capt. Otto Fulton, of Fultograph, Inc., 342 Madison Ave., but Fulton hotly denies the tale.



Fred Allen and Portland Hoffa shown with the Johns-Manville "applause machine" used in NBC's "Town Hall" amateur broadcasts to measure the handclapping.

# "PUBLIC ENEMIES" OF RADIO

*Whole industry suffers from unwarranted attacks on programs*

★ AL CAPONE is in Alcatraz; Dillinger is pushing up the daisies in a guoman's grave; and Baby-Face Nelson is, one hopes, doing the same. The Department of Justice has done a swell job of cleaning up America's public enemies. But now we respectfully call the Department's attention (in case they have some machine guns getting rusty from under-use) to a few of the Public Enemies of Radio, which may be listed as follows:

#### RADIO ENEMY No. 1—

The publicity-seeking politician who knows that attacks on radio will get his name into newspaper headlines.

#### RADIO ENEMY No. 2—

The disgruntled reformer (getting nowhere fast with Prohibition) who condemns radio programs in an attempt to get more free time for himself.

#### RADIO ENEMY No. 3—

The newspaper publisher who presents false and distorted "facts" on radio advertising.

#### RADIO ENEMY No. 4—

The radio dealer, salesman or service man who thoughtlessly knocks radio programs, or permits public knocks to go unchallenged.

#### RADIO ENEMY No. 5—

The high-hat private citizen—a branch of the so-called intelligentsia—who once listened to one or two programs he didn't happen to like, and therefore condemns all radio programs.

#### RADIO ENEMY No. 6—

The artistically arrogant who thinks no program is any good unless it is composed entirely of Brahms and Bach.

#### RADIO ENEMY No. 7—

The tory of the pre-1776 era who wants Government ownership of all stations "because England has it."

#### RADIO ENEMY No. 8—

The advertiser of medical products who has been refused time on the air and takes it out in blasts against broadcasting.

### *Odorous company*

What burus us up, however, is Enemy No. 4 up there in that list—those unthinking members of the radio trade itself who knock radio programs and the present broadcast set-up. Or, equally as harmful, permit public statements along the same lines to go unanswered.



*Ewing Galloway Photo*

There is plenty of proof in the daily and weekly radio programs that broadcasting always had something to interest everybody. Any one who believes that "radio programs are getting lousy" can be controverted with an array of varied entertainment unequalled since Antony and Cleopatra agitated the teacups of Rome as the topic of spicy dispatches from far-off Egypt.

And those who "don't like radio because it is so commercialized, my dear," and "you never hear anything like it in England" would look the proverbial gift horse so far into the mouth that they could see a hundred yards out the other end. They forget that English listeners pay a yearly *tax* for what competent observers have declared is some of the worst drivel that ever came out of a loud-speaker. And usually, our British cousins get only one or two programs that you take whether you like it or not. One high British broadcasting

official is reported to have declared: "We in England look upon our jobs primarily as educating and uplifting our radio listeners."

Great stuff. How many radio sets would be sold if broadcasters in America pointed their efforts along the same lines?

After all, programs are the things that sell radio sets. So the radio man who doesn't wave the flag for present programs is the worst Radio Enemy of the lot. For he is biting the hand that feeds him and that's the worst of the seven deadly sins.

The question we want answered is this: "What in heck does any man in radio gain by knocking instead of boosting American radio programs?" By so doing he puts himself immediately in the same odoriferous class as the other Public Enemies of Radio and is helping to tear down something which every right-thinking radio man wants to protect and build

up. He is playing right into the hands of the newspapers, reformers, politicians, and similar specimens who knife radio at every opportunity to advance their own selfish interests. For the love of Pete, let's quit shooting our own lieutenants and start popping at the common enemies!

### *Misguided, deliberate*

These assorted enemies of radio, lacking a happier sport, are going out of their way to discredit current radio programs; a part of the attack is superficial and thoughtless, and the rest is misguided but quite deliberate. All have been darkly plotting to the effect that radio talent is second-rate and that our radio program policies are unprincipled and messy.

Some are very casual and highly artificial in their attacks, but the dyed-in-the-wool trouble raisers seriously and energetically try for legislation on the subject and issue violent mouthings to the press. Some of them had sampled a few programs and were not impressed; therefore all radio programs are worse than worthless. To the rest of us, it is obvious that only the most flagrantly unthinking souls would decide that all broadcasters are missing fire because a few spotted programs seemed unspectacular at first.

Curiously blind and unsuspecting, they try to make out that what few civilized programs there are to be heard, are uniformly cluttered with tiresome and confusing advertising, and that the loudspeaker today has little to offer except mediocre and off-color entertainment mixed with prolonged descriptions of commercial items. Theirs is a weary and desperate attempt to find something—anything—to complain about.

### *Real significance*

Radio critics deliberately discolor the real significance of program appeal, with the result that many dealers have missed its full value as a selling point on retail floors.

Dramatic possibilities of program quality as a set-selling talking point have never been realized. Broadcasters, fast becoming expert entertainment stylists, have long realized that no one wants a radio receiver unless it will produce a genuine thrill, of one sort or another. Consequent improvement in artistic level and running quality has been phenomenal. Courtesy, dignity and good taste govern the announcements, and messages are delivered with neatness and skill, avoiding repetition and dull details.

*Today's Programs Bring Happiness and Inspiration to 80,000,000 Listeners and 20,000,000 Homes.*



# RECEIVERS TODAY

★ NEVER before has the passing of a New York Radio Show left the trade with such a wealth of sales-producing features. Every manufacturer has introduced numerous novelties and improvements, and in presenting them has coined catch-phrases to engage the public's attention. Looking back on the Show, one remembers such terms as—Tone-tested resonator (Grunow), Sentry box and permaliner (General Electric), Acoustic clarifiers (Philco), and Overtone amplifier (Zenith).

A few more might be listed—Ferrodyne chassis (Stewart-Warner), CentrOmatic radio (Bosch), Harmonized unit (Emerson). And there are many more.

## Cabinets

The most apparent improvement in the new receivers is in cabinet treatment. The cabinets are more elaborate, yet leaning to modernistic style. The consoles are legless, sitting close to the floor. The finish on even the lowest-priced sets is excellent. Emerson has introduced a line of table receivers which are enclosed and finished on both the front and rear, suitable for use on a table in the center of the room.

An ebony black console with satin finish is being featured by Zenith. Walter Teague has designed two unique models for Sparton; one is the Triolian Deluxe, a magnificent mahogany console trimmed with satin gold; the other, the Nocturne, was illustrated in RADIO TODAY for September, page 12.

## Individual scales

Tuning the new receivers has been greatly simplified. Dials have individually-lighted scales or pointers, or one-scale at a time arrangements. Zenith employs a black full-vision dial nine inches in diameter on the highest-priced models and a six-inch one with the others. Dual tuning ratio and split-second indicator give ease of tuning. The various bands are illuminated in colors and controlled by the wave changing switch.

"Slide rule tuning" featured by G-E, utilizes several scales printed on a cylindrical form. The form revolves to a different position for each band, showing but one scale. The dual ratio vernier is unique—slow speed is obtained over any narrow

region by reversing the rotation of the tuning knob, a full turn again engages the high-speed tuning.

Atwater Kent and RCA have dials which show but one scale at a time, the movement of the scale being controlled by the wave-band switch. A-K uses a rubber drive; dual speed is obtained by a vertical displacement of the tuning knob. RCA has a planetary slow-speed drive which is engaged by pulling out the tuning knob a short distance.

## Separate pointers

A separate pointer for each range is the arrangement devised by Bosch. An airplane type dial is used. For each band a different indicator is illuminated which points only to the band in use. The result is achieved by having colored bulbs behind arrow-shaped openings. A split-second arrangement is also provided. Philco employs a glowing arrow which points to the band in use; but the scale, not the arrow, moves.

## Cathode-ray tuning

The development of the cathode-ray tube has given the manufacturers a revolutionary means of indicating proper tuning. Three of the exhibitors at the show equipped their more expensive models with these indicators. RCA calls it the Magic eye; Sparton has labelled it Viso-glo tuning, while Pilot merely uses the descriptive term cathode-ray tuning.

Many other manufacturers are utilizing meters or shadowgraphs to in-

dicating precise tuning. In fact practically all of the higher-priced models have visual tuning. Grunow employs the Signal beacon, which is nothing more than a beat oscillator. By tuning for a low pitch and then turning off the oscillator, the station is properly tuned in. Claim is made that it is especially effective when tuning for weak short-wave stations.

## Unit construction

Keeping pace with the appeals to the public, the engineers have made a major step forward in the principle of "unit type" of construction. Elimination of long leads and numerous solderings has increased the efficiency of the all-wave receivers. In the G-E sentry box and Bosch's "Centromatic" unit, the tuning condenser, coils, and coil switches are grouped into a single unit. There are no leads to the coils for they are mounted directly on the switch terminals. A similar arrangement is used in the 8- and 12-tube Emerson receivers.

## Better condensers

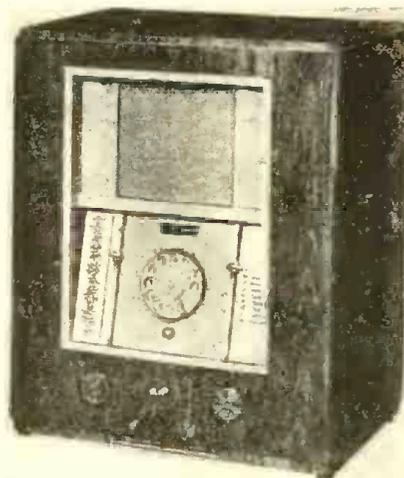
Tuning condensers have been improved. The oscillator section is made with greater spacing than the others, extra plates being added to maintain equal capacities. The wider spacing tends to eliminate effects of vibration and results in a greater permanence of dial settings.

Some of the manufacturers adopting this condenser are: Stromberg Carlson, G-E, A-K, and Bosch. Atwater Kent has an unusual condenser made in two sections; two of the sections are used in parallel for low frequency ranges, the large section alone for medium, and the small section for the highest range. This arrangement limits the frequency coverage per coil and makes for easier tuning at high frequencies. G-E has introduced an air dielectric padding condenser for use both in the high-frequency and intermediate stages; its outstanding feature is permanence of setting irrespective of age and humidity.

## "Hi fi"

Anticipating the public's demand for something new, a number of the manufacturers are featuring high-fidelity reception in the more expensive models.

The usual method of changing from normal to high fidelity is accomplished by varying the coupling of the i.f. stages. A system has been devised by Bosch, whereby the tuning shadowgraph is turned off in the high



Receiver with telephone-dial tuning  
• developed in Germany.

# TUBES TODAY

fidelity position. This feature requires that the tuning be done in the normal position, insuring true reproduction.

In their Model 1241 Grunow utilize a specially-designed resonating baffle with three speakers. Two high frequency speakers are fed from a channel supplying 3 watts, while 12 watts is supplied to a low frequency speaker. A response from 40 to 10,000 cycles is obtained. Sparton also utilizes a similar arrangement of three speakers but driven from a single amplifier with a cross-over network.

## Absorbers

In an effort to overcome the effect of baffle resonance Philco engineers have designed what they term "acoustic clarifiers." These are cones which look like dummy speakers; their purpose is to absorb energy and damp the baffle and cabinet at resonance, thereby eliminating all traces of barrel-like boom. A single speaker is employed which has a specially processed center which handles the highs while the outer section reproduces the low notes.

Two low frequency reproducers are incorporated in the Zenith Stratosphere in addition to the high-register speaker to give a "dimensional tone." Fidelity of response is varied by changing the coupling in the i.f. stages.

## Artificial baffle

The engineering staff of Stromberg Carlson has gone after the problem of wide-range sound, "hammer and tongs," and designed the acoustical labyrinth. This is an artificial method of obtaining an extremely large baffle for bass notes.

Stewart-Warner's high fidelity receiver features a curvilinear speaker — oval shaped instead of round. The reproducer together with an acoustically designed cabinet is said to add an additional octave of response. The band width is not adjustable.

An electronic tone control is employed by Fada. The control is automatic in operation, and when the receiver is working with a high gain, the high response of the receiver is decreased. In this manner the noise usually present on distance reception is greatly decreased.

Practically all of the better receivers have built-in line filters to minimize noise and to eliminate station pick-up via the power lines. Better shielding, both of parts and tubes, is the general practice. And a number of the sets have separate tone controls.



Welding metal-tube shells in the Raytheon factory. The complete assemblies are placed upside down in the rotating welder table.

## 150,000 metal tubes daily

★ SHORTAGES in metal-tube production have been holding up receiver-factory early-Fall schedules, but during October apparently real progress is being made in catching up with metal-tube orders. Prospects now are that within a month or more the industry will be getting most of its metal-tube requirements.

Metal-tube production by all makers is now estimated to be at the rate of 150,000 tubes daily, for the month of October. Not only has manufacture been speeded, but the ratio of rejects has been reduced so that more usable units are coming through.

In some plants, even today, spoiled tubes run as high as 35 to 40 per cent, while in factories with longer metal experience, this figure has been considerably cut down. Metal rejects are approaching the usual figure for glass rejects.

## Better showings on re-test

Complaints of leaks and gas developing after tubes have received their initial factory tests are regarded by the metal-tube production men to be like the reports of Mark Twain's death—"greatly exaggerated." Nevertheless, the factories are taking precautions to re-test their metal tubes before shipping. This means that the units receive a second check within 24 hours to one week after the first test—one week being the maximum

time that a desperate shipping department will permit the tubes to lie in the stockroom. Indeed, most of the tubes "start travelling" in 24 to 48 hours.

The metal-tube people declare that the whole production problem is now well in hand, and that by November, metal tubes will be available to meet every practical requirement of the set makers. They report also that the set manufacturers are getting no more service calls on metal-tube sets in use, than on corresponding glass-tube sets.

## Glass-tube guarantees

★ Vigorously presenting its opposition to the metal tube at this time, the Philco organization threw down a definite challenge in the form of a guarantee which, during the New York radio show, it advertised locally in newspapers and by circulars, as follows:

"Philco guarantees greater performance. (Tube for tube . . . And even more.)"

"Philco radios with glass tubes are guaranteed to—

1. Outperform radios with the same number of metal tubes.
2. Outperform radios with one to three additional metal tubes.
3. Outperform radios with metal tubes which cost much more money.

# "ON THE AIR"—

*Coming features stir interest in receivers*

## *NBC toasts listeners*

★ The time of stars continues at NBC; many of the ablest artists of the nation are in the program flashes from the web which likes its features. New schedules contain scores of names which have earned international applause in one way or another.

Elegant General Motors concerts, which returned to the air October 6, will come through with additional not-to-be-missed features for Sunday nights. GM entertainment airs on a WEAf web of 64 stations, including Canada, and uses the extraordinary show-building technique which made the program one of the leaders last season. Schedule for the first part of the series: Mischa Elman, violinist, October 13; Paul Robeson, baritone, October 20; Rosa Ponselle, soprano, October 27; Jascha Heifetz, violinist, November 3; Jose Iturbi, pianist, November 10; and Rose Bampton, contralto, November 17. Guest-conducting the GM symphony orchestra through the series will be such eminents as Toscanini, Sir Henry Beecham, Stokowski, Stravinsky, and Bruno Walter.

Next stratosphere ascent to be made from a spot near Rapid City, S. D., is expected within a fortnight



*Symphonic stylist, Stokowski.*



*Jepson of the Golden Horseshoe*

and will be described over NBC nets exclusively. Commander Stevens and Pilot Anderson, gentlemen in the gondola, will make their observations in a RCA-Victor transmitter in the balloon itself, and remarks will be relayed from local short-waves to the NBC networks.

President and Mrs. Franklin D. Roosevelt and nearly 50 other important figures will be heard on NBC nets October 15, 16 and 17, speaking from the sessions of the New York *Herald Tribune* Forum on Current Problems at the Waldorf Astoria, N. Y. C. Remarks will be broadcast from Washington, Paris, London, Brussels, Chicago, Panama, and Madison. Names include Cordell Hull, LaGuardia, John G. Winant, Ogden Mills, John Erskine, Irita Van Doran, Col. Frank Knox, David Sarnoff, Dorothy Thompson, and others.

## *For the chillun'*

Dr. Walter Damrosch's coast-to-coast feature titled the "NBC Music Appreciation Hour," is back on Friday air waves and will continue on combined WEAf-WJZ nets until March 27. Series is a part of the school-season set-up, being a string of lecture concerts graded to suit listeners from the third year of elementary school, through high school and college. Audience for the feature is estimated at 7,000,000 school children.

Enormous interest has been worked up in the new Sunday afternoon WJZ series of RCA-sponsored "Magic Key" programs, in which artists are "co-featured" with technical developments in the radio world. Notable aspect is that many of the big-time performances will be broadcast from Berlin, Paris, Hawaii, Vienna, and South America, as well as all key cities of U. S. Starred in the series are such artists as Kirsten Flagstad, Lauritz Melchior, Lotte Lehman, Rose Bampton, Helen Jepson and Martinelli of the "Met"; Sergei Koussevitzky and the Boston Symphony; Stokowski and the Philadelphia Symphony; Paul Whiteman, Rudy Vallee, Albert Spalding, Walter Damrosch, Conrad Thibault, and Fats Waller. Other luminaries will be listed also, and the favorite dance bands will be in. NB commentator John B. Kennedy will cover the world by plane to add news flashes to the matinees.

## *Jumbo airs*

"Jumbo" the much-discussed spectacle to be produced by Billy Rose at the N. Y. Hippodrome, will be aired via WEAf net Tuesday nights, opening October 29. Doors will be closed while the cast broadcasts. Extravaganza was written by the Hecht-McArthur team, using a circus treatment.

Ruth Etting and Red Nichols orchestra will open a new Kellogg College Prom, WJZ, October 25.

NBC's notable educational feature with the gingerbread tag, "America's Town Meetings" will start October 31 on the WJZ net. Thursday evenings, the head-line statesmen, editors, educators, and politicians will air their views on the constitution, world peace, inflation, and associated matters.

Further cooperation with the British Broadcasting Corp. will allow a feature broadcast Nov. 6 of the wedding of Lady Alice Montagu-Douglas-Scott to the Duke of Gloucester, 3rd son of George V. Broadcast starts at 6:15 p.m. on WJZ.

## *Extra!*

★ Largest network broadcast in radio history is set for Oct. 27, when the No. 1 transmitters in 31 countries air an international feature, "Youth Sings Across Borders." Youths of each country will contribute a sample of folk music. Festival is arranged by International Broadcasting Union and both NBC and CBS nets will pick up big sections of it.



Sunday-night partners-in-farce

### CBS serenades fans

★ Columbia's plans for forthcoming programs continue to follow the fancy sun-burst pattern; the new announcements keep the excitement of big names and accent the work of the most-beloved entertainers. Program summary this month should be headed "Art on the Air Waves."

Thursday night's WABC "To Arms for Peace" series sponsored by Squibb's and World Peaceways is the program which the Women's National Radio Committee hastened to rate "the best radio program which has ever been staged." Each program starts out to feature a musical star, a well-known speaker, and the work of a famed writer. Remainder of the schedule is: Richard Bonelli, General Johnson, and (probably) Fannie Hurst for October 17; (no program on October 24), George Gershwin, William Green, and "Strike Up the Band" on October 31; Lotte Lehman, Prof. Robert Milliken, and John Erskine for November 7; Albert Spaulding and S. S. Van Dine for November 14; Rosa Ponselle and Zora Gale for November 21; Nelson Eddy and Heywood Brown for November 28; Elizabeth Rethberg and Clare Kummer for December 5; Grete Stueckgold and Sherwood Anderson for December 12; Jose Iturbi and Behrman, Barry or Clifford Oddets for December 19. Deems Taylor as master of ceremonies and Howard Barlow's symphony are regular features.

American School of the Air, into which CBS has paraded several pleasant features, opens its coast-to-coast airings on October 21, for 5 broadcasts weekly. Instruction this time will include geography, history, literature, elementary science, music,

vocational guidance, and current events. Sections on art and poetry will receive a heavy accent this year.

### Heavy concerts

Columbia has begun its happy hook-up with the Philharmonic Symphony Society, broadcasts coming from Carnegie Hall as usual on Sunday afternoons. This, the Society's 6th season, runs to April 12, and the 29 concerts will be divided among the ace composers, Otto Klemperer, Sir Thomas Beecham, Arturo Toscanini, and Hans Lango. Ernest Schelling will direct the Saturday morning children's concerts at the Hall beginning January 11 and also booked for CBS in a 115-station net.

The thundering "March of Time" scores heavily in listener interest with its pointed reports on the Italo-Ethiopian affair. Mondays through Fridays with only 15 minutes per broadcast (10:30 to 10:45 p.m.), the program directors accomplish a keen and powerful summary effect which appears to be level in quality and which really drags in the fans.

"The Cavalcade of America," which had its premiere October 9 on the WABC net, will feature a group of celebrities from Hollywood and Broadway in its Wednesday night dramatizations of major moments in American history.

Eddie Cantor's rapid Sunday evening series will introduce several brisk entertainment devices besides the flamboyant comics with which his programs are already identified. Early innovation will be a contest

among guest orchestras, winners of which will be decided by listener response. Conductors will include such Hollywood favorites as Gus Arnheim, Anson Weeks, Jimmy Grier, Phil Ohman, and Georgie Stoll. Cantor will have a trophy for the winning orchestra.

### MBS adds features

★ The studied excellence of WOR's big feature, "Master Musicians" is under way as a Sunday evening favorite. Coming pianists on the series will include Mischa Levitzky, Poldi Minkner, John Powell, Adele Marcus, Jan Smeterling, Frank Sheridan, and Henri Deering. Selected violinists are Sascha Jacobsen, Eddy Brown, and Max Rabinoff. Program's big-time cellists are Maria Rosanoff and Joseph Schuster, and the famed harpist, Carlos Salzedo, will play.

The stunning Spanish soprano, Corinna Mura, is back to WOR programs. Senorita had a trip to Venezuela, where she did special short and long wave broadcasts from Caracas. American Minister Nicholson, by the way, threw a dazzling reception for La Mura while she was in Caracas. Beatrice De Sylvara will start telling "How to Be Charming" over WOR on October 21, on a new series for Phillips Chemical set for Monday, Wednesday and Friday mornings. Ted Fio Rito and his orchestra, playing at the Netherlands Plaza Hotel in Cincinnati, have begun Thursday night broadcasts with MBS.



No bumping of heads among WOR musicians; the new streamline "eight-ball" mike picks up sound from any direction.

# THIS FALL—TRADE UP!

## Merchandiser talks about selling higher-priced sets

By WILLIAM ALLEY

Contributing Editor, RADIO TODAY

★ PRE-SEASON talk about better business this Fall and Winter is proving to have a sound foundation. The season so far is seeing more people coming into radio stores to "look around" than has been the case since '28 and '29.

As radio's strong selling months swing into action, several definite merchandising facts are becoming apparent.

First—"Store traffic" is up at least 30 per cent as revealed by a check-up of dealers in many sections. That means more shoppers, more potential buyers, are coming in for a "look-see" at the new receivers.

Second—General business is on the

up-grade; more people are working; money is beginning to loosen up. That means the shoppers coming in are in a better buying mood.

Third—There is a definite trend toward the higher-priced sets, brought about by the generally improved business situation. Last Fall the \$10-20 midgets and the \$75 consoles were the big sellers. This year dealers report the \$25-35 price range for small sets and the \$100 average price for consoles are getting the largest share of public interest.

### "Metal" curiosity

Curiosity about metal tubes and advertising of new tuning devices and unique cabinet designs are largely responsible for the increased number of radio shoppers this Fall. Dealers are making definite plans to take advantage of these favorable factors. Two steps are important: (1) arrangement of stock and displays to catch the utmost interest and attention; and (2) pointing sales efforts toward selling the higher-priced models.

With public interest this year appearing to center on the medium-priced consoles, most dealers are giving these sets the featured "leader" location. Usually this is immediately to the right of the entrance, following the old merchandising belief that most people instinctively glance to the right rather than to the left when they enter a store or department.

Placing your featured leader up front and to the right is simply insurance that you will have something there that stands the best chance of catching the interest of the majority of people who come in.

### \$100 consoles

Bearing in mind, also, that the smart merchandising move this Fall is to place the most sales effort behind the \$100 consoles, dealers are arranging their set displays to make it easy for salesmen to "trade up."

This is best accomplished by a more or less systematic grouping of sets according to price range. Few customers can make head or tail out of a conglomeration of all kinds of sets mixed together, nor can a salesman

do an intelligent job of selling under those circumstances.

To make it easy, therefore, for the customer to come to a decision, and to assist salesmen in trading up, sets this season should probably be grouped somewhat as follows:

### First, right

First as you enter, and to the right, one or two models of your featured leader; next, lowest price group; next, medium price group, and finally your higher price groups. In demonstrating, therefore, salesmen can show the lowest price group (when necessary) and progress to the higher priced sets without delay or confusion. Many dealers using this type of store arrangement state that one of its big advantages is that the salesman can dispose of the cheaper sets easily and quickly and concentrate on the higher priced sets without having the customer's attention distracted by a cheaper set close by.

### Interior displays

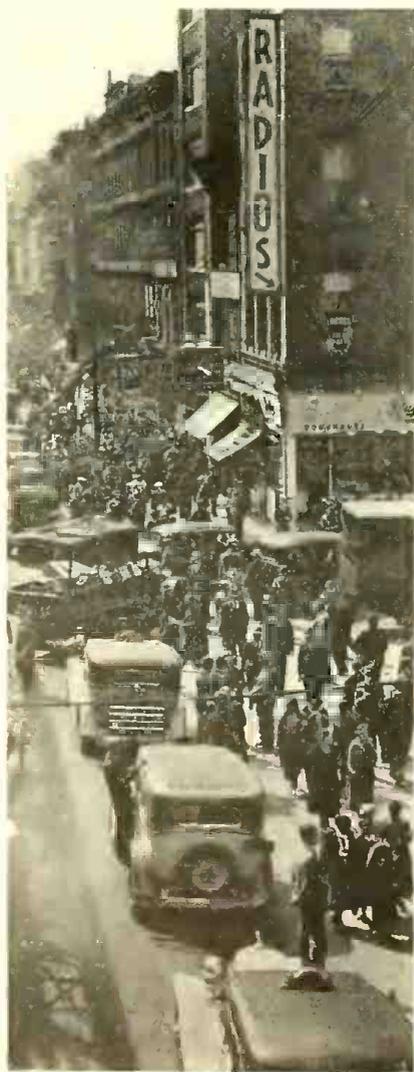
In arranging your store interior this Fall, more than usual attention should be paid to display material. Manufacturers have some of the most attractive and attention-compelling display material this season than they've ever had before.

Wise dealers won't let this opportunity slip by. A few dollars invested in display material this season will prove well worth while because of the increased public interest in radio which is already evident.

Use such material to the best advantage, however. Don't, for example, put a receiver piece display up on the counter with little or no relationship to the set it advertises. Place it close to the set so that there can be no question as to the definite tie-up between the two. Your featured leaders, particularly, should have descriptive displays immediately alongside them. Experience has shown time and again that display pieces catch and concentrate attention on the models you want to push.

### Point sales effort

Too much emphasis cannot be laid this season on pointing the efforts of your salesmen toward "trading up."



While store arrangement and displays are important in accomplishing this purpose, the real test comes of course in the actual face-to-face interviews with prospects.

Nobody, naturally, can tell a salesman exactly what to say and how to say it once a sales interview gets under way. But there are many things a salesman can *do* to trade a customer up from a low price set to a better one.

### Don't knock

For instance, if the salesman has determined that the customer is primarily interested in a low-price set, there is no point in not demonstrating it. But it is not necessary to make any attempt to sell it if the salesman believes there is a chance of switching to a better set.

There is no point, either, in knocking the smaller set because, after demonstrating the higher-priced set, the salesman may find it necessary to come back to the smaller set. Consequently, the demonstration of the smaller set should be indifferent enough not to sell it, but sufficient to come back to it and make the sale if the better set can not be sold.

Dealers this Fall, therefore, are instructing their salesmen to demonstrate the smaller set if that's what the customer wants, but to switch immediately afterwards to a better model.

### Mention "new"

To take the customer's attention away from the small set and concentrate it on the higher priced model is merely a question of mentioning some new feature of the larger set in which the customer will be interested and which the smaller model does not in-

clude. There are plenty of such features this season—metal tubes, "magic eye" tuning, short-wave reception, unusual cabinet designs, other special features—any one of which may be called upon to provide the excuse for switching the demonstration to the larger unit of sale.

As soon as the salesman has mentioned this new feature, he should lead the customer entirely away from the smaller set and concentrate upon the higher-priced model, which, as previously pointed out, should be located at a distance from the small set so as to provide no opportunity for the customer to see or to be reminded about the cheaper model.

Then, in demonstrating the larger unit, the salesman should bring to bear all of the sales guns which he has not used in showing the smaller set. Of course, comparisons between the two sets are to be avoided because the salesman cannot afford to kill the sale of the small set. He may have to come back to it, but should come back to it *only* if he *must* in order to avoid losing the customer entirely.

### Much better

The salesman's demonstration of the larger set should indicate its superiority without a direct comparison. None is needed if the salesman does a good job of selling the better set.

Naturally, its better appearance is self-evident, so no direct comparison needs to be made there. Simply calling attention to the cabinet and stressing its beautiful lines and design will cause the customer to make his own mental comparison without any help from the salesman.

In almost every case, it is likely that the larger unit will have one or two, perhaps more, points of obvious superiority over the cheaper model.

This may be in the cabinet, in tone quality, in selectivity, in special "gadgets," in wider frequency range, or similar features. Whatever points the larger set has which the smaller set lacks, are the points that should be emphasized.

The more points which the salesman can build up to a "No" answer when the customer asks, "Does the other set have that?" the more likely is the customer to swing over definitely to the higher-priced model.

And such points must, of course, be co-related with the customer's desires and preferences.

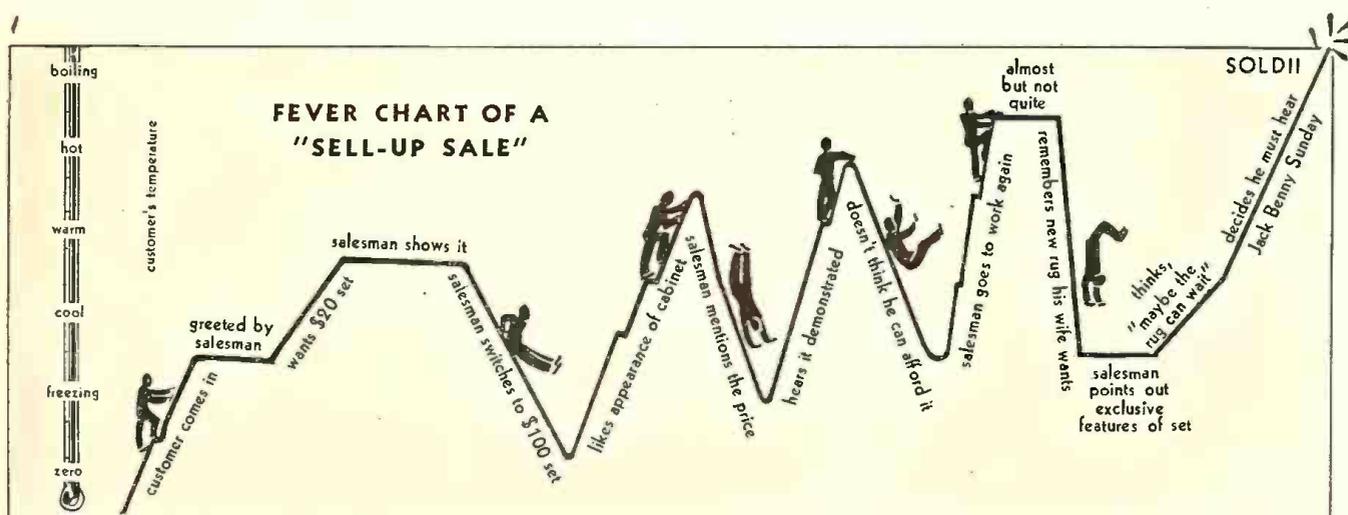
### Ear for music

If the customer has an ear for music and is able to appreciate good tone quality, then the better tone of the larger set is the main point to bring out. But if the customer can make little differentiation in the tone quality of different sets, certainly better tone quality is obviously a dangerous point to concentrate upon, and a direct tonal comparison avoided.

Or, the customer or his wife may exclaim at once about the beauty of the cabinet. This should be the salesman's cue for a strong selling talk on the appearance of the set and the design of the cabinet, bringing out the obvious superiority over the smaller set without saying so in actual words.

Every higher-priced set is bound to have some selling points over lower-priced models in which the smaller set either is clearly weaker or does not include at all. Depending, of course, on the individual sets which are being demonstrated, these are the points which the salesman should look for and on which he should concentrate

(To page 35)



# WITH THE BROADCASTERS

## *WMAQ's anti-fading antenna*

★ With an increase from 5,000 to 50,000 watts and a new anti-fading antenna designed by the engineering department of the National Broadcasting Company, WMAQ, the Chicago Daily News station, presents interesting novel features in broadcasting practice.

The station's new transmitter, located at Bloomingdale, Ill., is a 50,000-watt unit embodying improvements which assure a wide response, faithful transmission of all musical tones, and the reduction of distortion to a new low level.

The most interesting innovation, however, is the new antenna with its "umbrella top" designed to give high efficiency and reduce fading. One of the novel features of this antenna is the method of adjusting and controlling its performance by the special device near the top. In conjunction with the usual tests made at the antenna itself, the engineers have made field-intensity measurements in dis-



Eighty feet below the top of WMAQ's tower is located the compartment containing the anti-fading control mechanism.

tant areas where the fading would take place, and find great improvement resulting. Towering 490 feet into the air, the antenna itself is of uniform cross section throughout, triangular in shape. One side of this triangle is eight feet, making the tower equivalent to a square structure less than six feet on one side. It is supported by two sets of guy wires which include at intervals 39 massive insulators.

Research into fading and its relationship to antenna design by NBC engineers under the supervision of O. B. Hanson, chief engineer, has disclosed the importance of keeping the cross-sections of these steel aerials uniform throughout their length.

In addition to the uniform cross sections, a current-control device is located 80 feet below the top of the antenna which has the effect of raising the electrical height at will. It is believed that WMAQ is the first station to have an antenna employing uniform cross sections throughout, without the use of external wires to simulate this condition and possessing the current-controlling means to operate in conjunction with each other.

A comprehensive system of ground wires leading from the base of the antenna, is plowed into the earth at a definite depth. In this network of wires more than 60,000 feet of copper ribbon is used and to minimize further the losses, a network of expanded copper screen was installed under the antenna.

## *Sub-committee to give RRB its start*

★ Radio Research Bureau, to be set up by the National Association of Broadcasters, the American Association of Advertising Agencies, and the Association of National Advertisers, will trust its early destinies to a sub-committee appointed September 19 at a meeting of the three-way leaders. Committee is to locate \$250,000 somewhere and get the project on its way toward auditing radio circulation. Next we hear will be the grand low-down on listener counts, it appears, regardless of how many years it requires to assemble it, since the Bureau leaders decided to withhold news of its organization steps until the affair was definitely in operation.

## *Milkman's matinee*

★ Sleepless listeners numbering a million or more make up the audience of the novel WNEW (Newark, N. J.) "Milkman's Matinee." Starting on August 2, this all-night program of recorded music has won a following which wires from three to four hundred requests nightly over the studio's Postal Telegraph machine and sends letters from New Zealand, Alaska, and Hudson Bay.

The broadcast from 2 to 7 A.M. reaches not only DX fans but a large working audience. Drivers of radio-equipped taxicabs have written to thank the station for keeping them awake all night, increasing the number of fares. Taverns tune in the musical entertainment and wire frequent requests, glad to get their names on the air. Workmen in one New Jersey factory shut down their machines for three minutes one night to hear Announcer Stanley Shaw play their request number.

Hospitals have reason to thank the station. The Seaside Hospital in Waterford, Conn., found a saving in narcotics because the music, relayed from a central receiver through individual earphones, soothed sleepless patients. This radio service during the hardest hours for sufferers may increase hospital installations.

## *WBS looks up*

★ Last news from the sumptuous new quarters of the World Broadcasting System, at 711 Fifth Avenue (former NBC layout), has the sun-up note of improving business, as the able WBS execs continue to spot new quality programs on new stations. Having cornered a transcription process which is obviously tops in the racket, WBS deserves credit for bringing quality artists to outlying areas.

## *Some smash-up!*

★ John Lewandowski, one of WJAY's foreign program announcers claims some kind of a strong man record but is short of purse as a result. He wrecked six trains, three autos, a buzz saw, and numerous other large pieces of machinery. Yes, he tipped over the station's cabinet in which sound effect records are kept, and broke eight out of twenty. His pay check will be severely nicked.

# SALES IDEAS THAT WORKED

## *Servicing sports broadcasts*

★ Interdependence among dealers, broadcasters, and service men is recognized in St. Louis, Mo., when the big ball games are on. Stix, Baer & Fuller featured an ad with the line, "Have your radio renewed for the ball games and other sports features?" Shrewdly timed, the ad suggested phoning for Stix complete service, including "Check tubes, check and clean volume control, balance set, check pilot light, check antenna and ground connections, clean tuning condensers, and check loose connections."

## *Metal tube blessed event*

★ The appearance of the new metal tubes was used by the Bing Company, Cleveland, Ohio, as sufficient inspiration for a special store event. The advantages of the new tubes were pointed out and shoppers were invited to special store demonstrations which demonstrated, according to Bing promoters, a transition in radio reception.

## *Dealer sponsors club*

★ Powers, radio retailer, of Portland, Oregon, adroitly picked a single day to run the only ad on the radio page of *The Oregonian*. The ad showed a new world-wave, floor-type console, and announced that "a free six-months' membership in the Western World Wave Club will be awarded with each purchase." Knowing where to stop, the ad copy carried no explanation of what a membership in a World Wave Club meant, exactly.

## *Salesmen eat*

★ Climaxing a sales contest, the New York Wurlitzer organization staged a successful banquet. Purpose of the contest was to stimulate a competitive spirit between members of the sales organization. Those who failed to make their quota, in addition to having to pay their way to the banquet, took a good-natured riding from the rest of the staff. Food was served on paper plates by a waiter who practically dropped the food on the plates—service for them, was almost nil.

Knife and spoon were the only tools.

To make the humiliation more complete, and it was taken in great spirit of fun, small pots were awarded to the losers.

Success of the plan is witnessed by the fact that the store's business topped the month of September for a year ago by more than one-half.

## *Radio and tire special*

★ Transit Radio Co., St. Louis, Mo., gave considerable ad emphasis to special combination of four tires and auto radio, sold together for a limited period. As a summer promotion, offer was made at a feature figure, and the shop offered installation "while you wait." The stunt was conspicuous for its use of the complete set of tires.

## *Seasonal windows*

★ With public interest in radio on the upbeat, your windows assume greater importance in attracting attention to *your* store in particular.

There are many types of interest-compelling displays, all of which serve their purpose when they stop people, make them look, and cause them to talk.

Try these SEASONAL displays:

## *"A new harvest"*

A shock of corn, a sheaf of wheat, a few large pumpkins.

A 1936 radio, a map of the world, and ribbons leading from the dial to shortwave stations in the remote corners of the map.

## *College football*

A miniature stadium, and all that goes with it, the color, the parked cars, etc., and a boy and his father listening to a new radio.

A large scoreboard on which the results of the important national and local games are posted.

## *Thanksgiving*

A live turkey, a new radio, an enlarged photograph of smoke pouring from factory smokestacks. "Something to be thankful for."

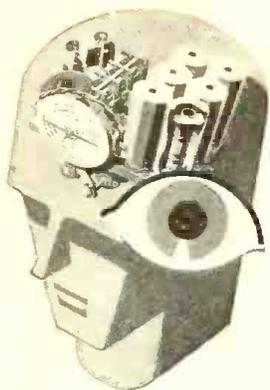
## *"Short wave" window*

Use a large large flat map of the world for the background. Frame the map with a dozen or so pictures, each one characteristic of the country, or the people, in which a short wave station that can be received is located. Fit these photos so they can be seen one at a time only, when illuminated, and control the lighting with a rotary flasher. Connect each photo by a small ribbon to its country on the map and to dial of set in foreground.



"Short-wave reception" features this attractive window display of the Coast Music Company, Los Angeles.

# RCA Victor beating

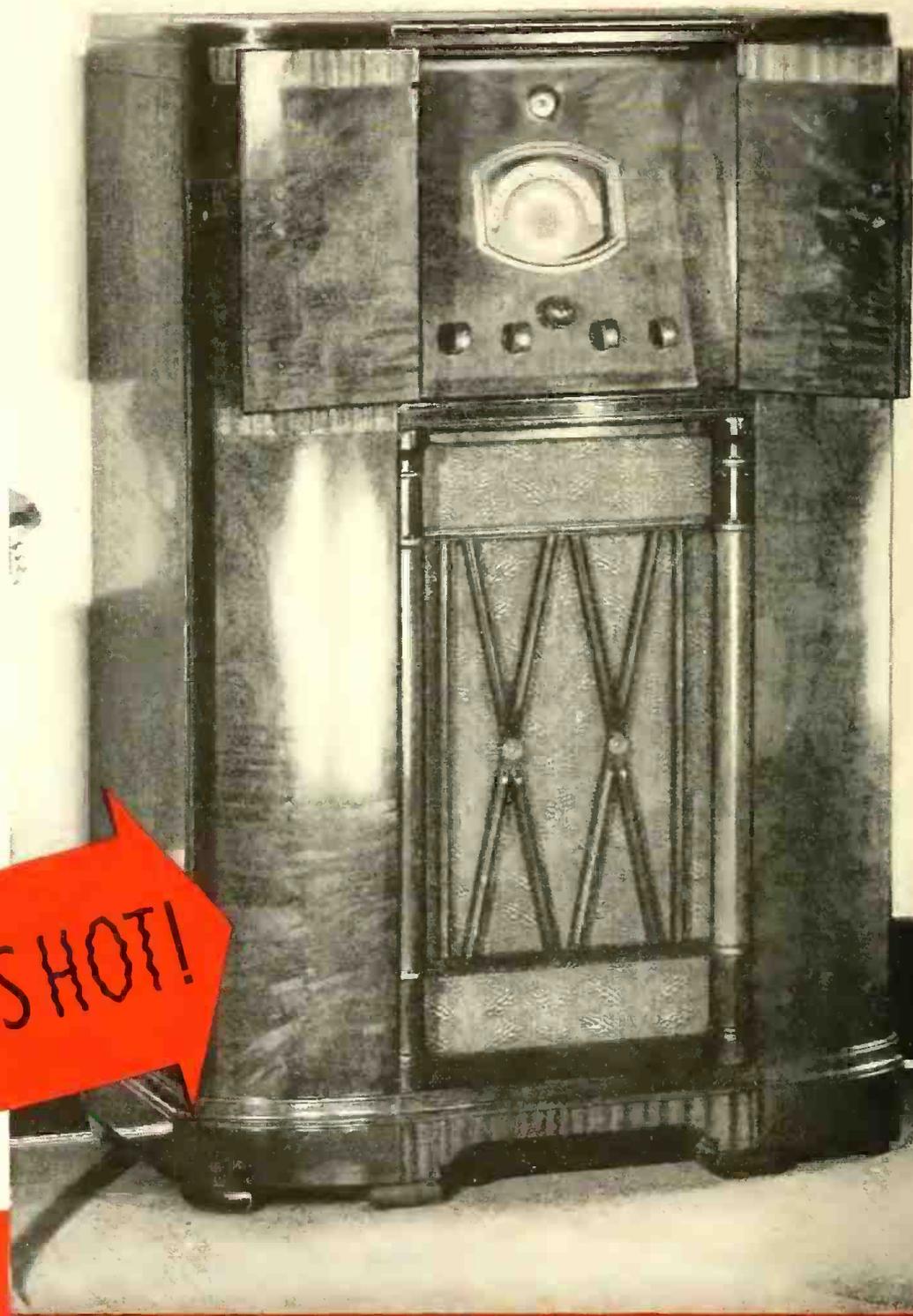


## PIONEERING PAYS EVERYBODY!

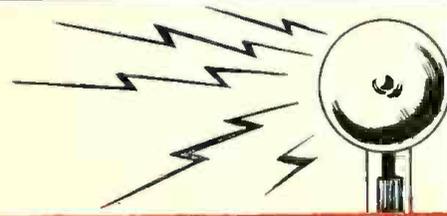
Don't let anyone tell you that pioneering isn't rewarded! Look at the great industries of today, and you will find in each one of them just a few names of men and companies who had the vision and strength to pioneer and to win tremendous rewards for doing so. In radio, the great pioneer is RCA, which more than any other has been the creator of the radio of yesterday and of today, and is now developing in its laboratories the radio of tomorrow. This pioneering genius not only has made the Radio Corporation of America great, but it has made it possible for many other men and firms to make vast sums, and has brought new delight in radio to all the public.

This is a **HOT NUMBER!** It is spread in Saturday Evening Post, Oct. 12. A tremendous value at \$189.50! Has 13 tubes, 5 hands, 540 to 60,000 kilocycles, 15 watts output, 12-inch super-fidelity speaker, a graceful, handsome cabinet. With the C.I.T. Corp. partial payment plan, no wonder it's going to market in a big way. Price F.O.B., Camden, subject to change without notice.

**IT'S HOT!**



# own Sales Records!



**RIISING FAST!**

See the figures that show what RCA Victor is doing for its dealers:

Average RCA Victor console sale this season to date

**\$148<sup>50</sup>**

Average RCA Victor console sale last year

**\$102**

Average console sale for industry last year

**\$67**  
(McGraw-Hill figures)



ALREADY the signs are pointing the way ahead, up to still greater heights for all those who do business with RCA Victor! Already shipments of consoles to the trade show that last year's average console sale of \$102 is being far outstripped. That means a still larger unit sale for the RCA Victor dealer, and much more money for him.

Here again you see convincing proof of the commanding position that RCA Victor occupies in the fine set field.

It won and is keeping that position by sheer merit of the product and of the sales, advertising, and promotional plans put behind this supremely superior merchandise.

Nowhere else in the world can you get a line that to the tremendous prestige of the great pioneer in radio, RCA, adds such colossal features as the "Magic Brain", the "Magic Eye", and RCA Metal Tubes. To make your sales efforts most quickly effective, to make the most money from radio, feature RCA Victor merchandise!

RCA MFG. CO., INC., CAMDEN, N. J. . . . A SUBSIDIARY OF THE  
**RADIO CORPORATION OF AMERICA**



# RCA Victor

# RADIO FACSIMILE PUSHES AHEAD

Negotiations under way with leading newspaper publishers

Short-wave 24-hour service urged, rather than early-morning hours on broadcast channels

Paper trade asked for quotations on paper rolls in carload lots

Pannill announces facsimile news tabloids for ships at sea

N. Y. Times and Hearst groups telephone pictures during ordinary long-distance calls

Photographs from Ethiopia go wire-facsimile Rome to London, thence by radio-facsimile to New York

★ HOW far plans have already progressed to put radio facsimile actually into the hands of the American public, was revealed accidentally by one of the paper salesmen calling to supply magazine print-paper for RADIO TODAY.

He "spilled the beans" by inquiring innocently:

"What can the radio people be wanting with rolls of paper 8 inches wide in carload lots? We have had inquiries about prices on quantity orders of these rolls containing thousands of sheets."

Of course, *radio facsimile* is the answer.

These rolls of paper would be supplied to broadcast listeners to put into their facsimile attachments, so that ordinary home receiving sets can

be employed to print a tabloid newspaper during the early morning hours, when the radio set is ordinarily shut off. The facsimile attachment itself would cost somewhere between \$100 and \$25—the latter price if produced in mass quantities.

## Home printing press

As outlined in these columns last month, such a facsimile newspaper would be printed in the home complete with headlines, cartoons, display ads, fashion sketches, and every other feature of modern typographical production. It would be a complete newspaper, printed "at destination" on the home "radio printing press," and delivering reports of news

events within a few minutes of their actual occurrence.

Already it is known that conversations have been going on with some of the leading newspaper publishers of New York City, outlining plans under which facsimile might be introduced in cooperation with the newspaper people, rather than engendering their competition and opposition. Some of the papers reported taking an active interest in this new development are the *New York Times*, the *Herald Tribune*, the *World-Telegram*, and the *American*. Working models of home facsimile receivers have been exhibited to the publishers, and methods have been discussed by which the paper rolls for the tabloids, backed by advertising, might be furnished to households equipped with facsimile home printers.

The newspaper fraternity recently had a convincing demonstration of the possibilities of facsimile reproduction, when it woke up with a start to find what the *Times* and the Hearst interests have been doing in telephoning news pictures over ordinary telephone lines and instruments.

Of course, the Associated Press's telephoto service has been in operation for a year or more, transmitting photographs over specially-prepared lines at an operating cost of half-a-million dollars a year. This expense, divided among the cooperating papers, means a cost of many thousands of dollars per year to each paper for this service.

## Picture-whistle

But the *Times* and the *Mirror*—not in the AP hook-up—have been experimenting with their own portable apparatus for sending photos over ordinary telephone circuits. Here is the way it works:

A staff news photographer takes a picture in say Albany, Chicago, or San Francisco. In a few minutes it is developed, and then with his portable facsimile transmitter, he goes to the nearest telephone booth. Revolving the picture under the scrutinizing "electric eye" of the facsimile machine, the picture elements are resolved into equivalent whistling sounds. So in the booth, calling up his home office in New York and speaking from an ordinary telephone instrument, the photographer asks to be connected with the photograph-receiving room.



Radio facsimile reproducer of carbon-paper type to be used for printing newspapers on ships and, eventually, in homes.

When the New York end is ready, the photographer starts "playing" the picture into his telephone mouthpiece. The whistling sounds go over the line to New York and at the home office are recorded on a synchronously rotating sheet of photographic paper, which thus reproduces the picture. In this way, within ten to twenty minutes, the picture is in the publication office ready to have cuts made for printing.

Advantage of the individual-picture transmission is that the publisher pays only for the time consumed in making a regular telephone call while sending the picture, instead of being required to lease lines 24 hours a day whether pictures are wanted or not. For a time the telephone company vigorously opposed the use of its lines for such sporadic picture transmissions, but within the last month has reversed its policy and now permits experimentally such picture transmissions at regular rates, providing no physical attachments are made to its standard lines and instruments.

The Cooley system, once tried out by WOR, is being experimented with by the *N. Y. Times*. Walter Hovey, veteran journalist, is the inventor of the apparatus used by the Hearst papers.

### War pictures by radio

The newspapers have also had another striking demonstration of the magic of facsimile in the war pictures coming across the Atlantic by radio. The recent war scares in Europe have resulted in the sending of an increased number of pictures from London covering current news events. With the beginning of actual hostilities in Ethiopia, photographs of troops in the field there are being flown by air-plane to Rome, where they are put onto the wire-facsimile line and telephoned to London. There they are put on the trans-Atlantic facsimile system and sent to New York by radio.

Further immediate activity in radio facsimile is presaged by the announcement just made by Charles J. Pannill, president of the Radiomarine Corporation, that within a month four trans-Atlantic passenger ships will be equipped with facsimile apparatus for receiving news and weather-maps. The *President Harding* has been operating as a test-ship for facsimile experiments during the past three months and has demonstrated the efficacy of the new ship-facsimile apparatus, and its freedom from interference caused by rolling of the vessel.

Mr. Pannill predicts that in the near future every first-class passenger liner will be equipped to produce complete newspapers for its passengers, as well as frequent weather-maps for the guidance of the navigating officer. A newspaper page or weather-map can be sent in about twenty minutes, Mr. Pannill explained.

### Dazzled consternation

With evidences of facsimile potentialities bearing down upon them from all sides, it is not surprising that the newspaper publishers are in a state of dazzled consternation as to what may happen next. Part of the publishers are evidently out to combat the new typographical medium which they see bearing down upon them;

the other half want to embrace and utilize it, and aid in its introduction.

The recent conversations between radio men and newspaper publishers have in mind the latter cooperation plan, making the facsimile service an auxiliary of news dissemination, with existing newspaper offices acting as "points of issue" for the new development of home tabloids printed on "home radio printing presses." Which plan will ultimately be adopted will depend on many factors in the complicated fabrics of radio and publishing.

But whatever the method employed for the introduction of facsimile, it is certain to exert the most profound and far-reaching effect on all publishing and advertising—probably no less revolutionary than the introduction of movable type and the printing press itself.

## TELEVISION TODAY

★ AMERICAN laboratories now lead in television research. Some of the European countries, however, are already making public use of television service.

Germany is offering probably the most to the public with its 180-line 25-frame per second transmissions from a 7-meter transmitter in Berlin. Several places are provided in the city where the people may view these programs, and they are proving most popular. Practically all the program material is provided by films. While the German engineers expect to carry on experiments with 180-line pictures, they plan eventually to go to 270-line pictures. This latter figure

has been arrived at by taking into consideration transmission cost and land line relays using coaxial cables. Plans are being made to lay a cable with band pass of 3 megacycles from Berlin to Frankfurt. It is estimated that 270-line receivers will cost from \$240 to \$500.

Experimental 60-line 25-frame transmissions on 175 meters have been started in France, but no regular schedule is maintained. The French hope to be able to go to 90 lines and then to 180 as quickly as practicable, but it is doubtful if much progress in this direction will be made before 1936.



Television and sound transmitting truck used by German Reichs Rundfunkgesellschaft for covering current events.

# EXTENDING FREQUENCY RANGE—JOHN F. RIDER

*Service editor tells how to alter frequency range of sets to receive high fidelity and police broadcasts*

★ A NUMBER of owners of receivers produced years ago have suddenly become conscious of the fact that the police are broadcasting signals around 1,600 kc. Consequently, they have voiced the desire to listen to such stations—despite the fact that the receivers they own do not cover the band. Furthermore, experimental transmission seems to be going on around 1,550 to 1,600 kc. and of high fidelity nature. . . . At least such is the report, although we have never heard any of these programs. Be that as it may, the subject of increasing the frequency spectrum of these broadcast receivers at the r-f. and the audio end has been suggested in correspondence.

Without any idea of discouraging servicemen who have entertained ideas concerning such changes and the possible income resulting therefrom, we feel that it is best to state the facts as they are. So here goes.

## New coils

There are several ways of extending the tuning band. The best is the use of new coils and new tuning condensers—perhaps only new coils, if these coils are secured from the manufacturer of the receiver and were specifically designed for that purpose. If this is done, the cost is not justified considering the final result. . . . If this is not in conformity with your ideas and you feel that you can make money by adding certain units—not necessarily changing the coils—all well and good.

You can increase the frequency limit at the higher frequency end, by tampering with the coils (reducing the inductance), but this will decrease the limit at the lower frequency end and will interfere with the dial calibrations. Another possible method is to reduce the minimum capacity in shunt with the tuning condensers in the various circuits that are tuned. This means reducing the capacity of shunt trimmers to minimum. That this system will work is not guaranteed, because even with this minimum reduced to the lowest figure, there may be more than the permissible capacity in shunt with the coils. . . . Such changes have been effected upon a few receivers, but are possible only with those which tune to the highest

wavelength within the broadcast band with appreciable capacity still left in the tuning condenser. As a rule realignment is necessary.

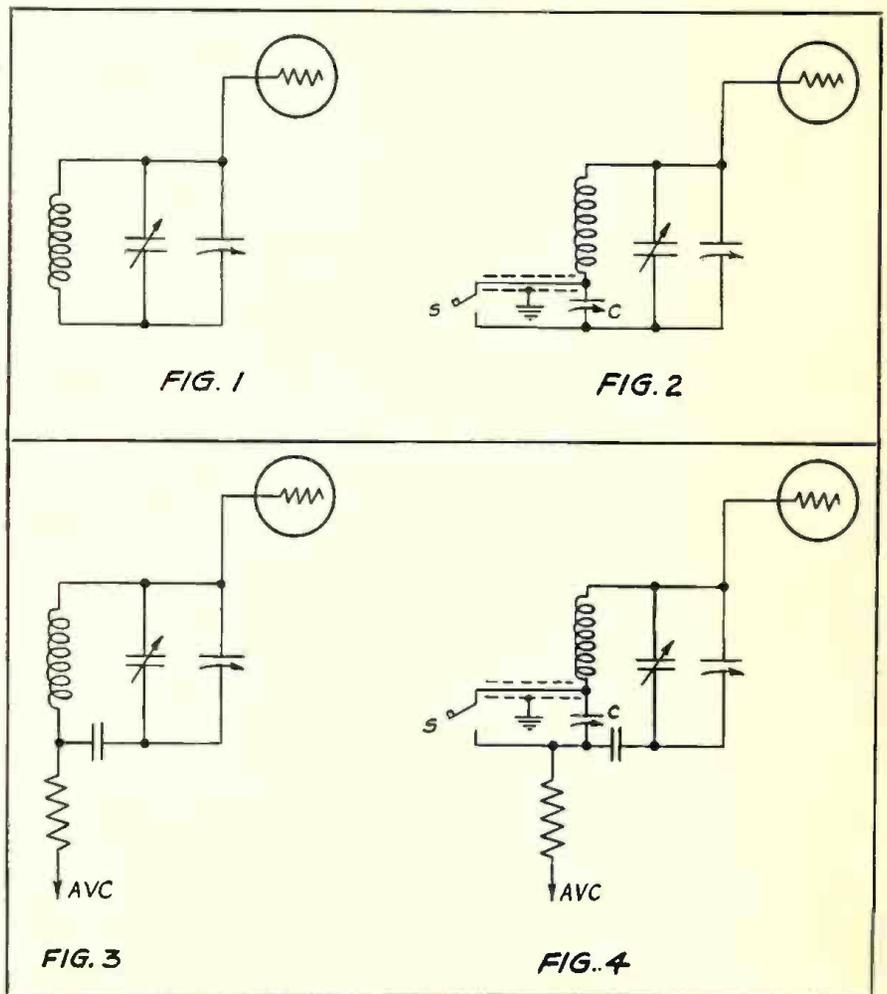
Another possible method, although subject to some difficulties is shown in Figs. 1 and 2. Fig. 1 is the basic circuit of a single-tuned stage, usually without AVC control. The refinement is the insertion of a series trimmer, switch controlled, as in Fig. 2. It is essential that the minimum capacity of this trimmer be very small, so that when set to its midpoint setting, the total capacity in the circuit will be less than the minimum capacity of the system as originally used. The cable connection to the high side of the circuit must be shielded. The switch is open when the trimmer is in the circuit and reception is desired on the high-frequency end of the band. Closing the switch, shorts the trimmer and normal operation is effected.

A similar change in a circuit using AVC is shown in Figs. 3 and 4. The basic circuit with AVC is shown in Fig. 3. The revision is shown in Fig. 4.

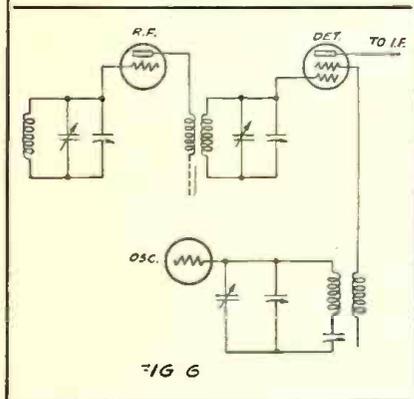
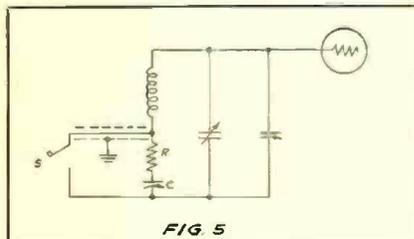
Receivers with several tuned circuits of the type illustrated in Figs. 1 and 3, require such a switch controlled series trimmer in each circuit and isolation of the "high" leads in each stage. This is not the simplest of wiring arrangements.

## Broaden response

In the event that the coils used in these tuned circuits have a very high "Q", it may be necessary to broaden the response by the insertion of a fixed resistor, as shown in Fig. 5. This resistor is also controlled by the switch, which determines the presence of the trimmer, C, in the circuit. The value of this resistor may vary from a few ohms to per-



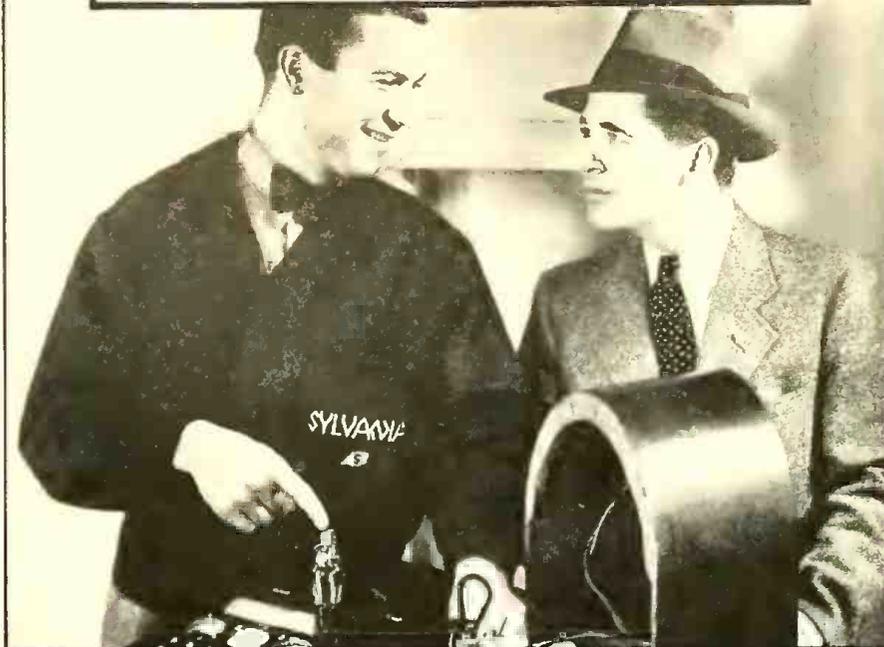
haps 10, 15 or even 20 ohms, and must be determined by practice. This is of particular importance if the high-fidelity transmission is to be received and the circuits are sharply resonant. When the switch *S* is closed, the fixed resistor, as well as the series trimmer, are removed from the circuit and normal operation obtains.



The revision of a superheterodyne receiver is carried out in the manner described. The basic circuit is shown in Fig. 6; and the revised circuit, that is, the presence of the series trimmer in the various parts of the system, is shown in Fig. 7 (page 26). In each instance, the trimmer inserted is designated as *C*. Alignment is carried out, by first correctly aligning the receiver, with the trimmers shorted. Then the switches are opened and the receiver is realigned at say 1,550 kc., by varying only the added trimmers. This alignment should be made with the added trimmers at about half the maximum capacity. It is, of course, understood that the position of the dial setting for the 1,550 to 1,600 kc. band with the switches open, will be the normal tuning limit of the receiver, when adjusted for normal reception. Furthermore, when aligning the added series trimmers, the regular trimmers in the receiver are not varied. The leads to the control switches should be as short as possible. Once more it may be necessary to insert the series resistors to broaden the band. Such a resistor would be used in the various stages, other than the oscillator stage. No change is required in the i-f. stage, unless increase in band response is required in the i-f. system as well.

(To page 26)

**"THEY'RE THE TOP-  
WHEN IT COMES TO QUALITY"**



**This man has a double-barrelled reason for pushing Sylvania Tubes**

● "They don't make any better tubes than Sylvania's . . . that's one reason I recommend them to my customers. I never get "kick-backs." Sylvania's satisfy my customers every time.

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THE SET-TESTED RADIO TUBE

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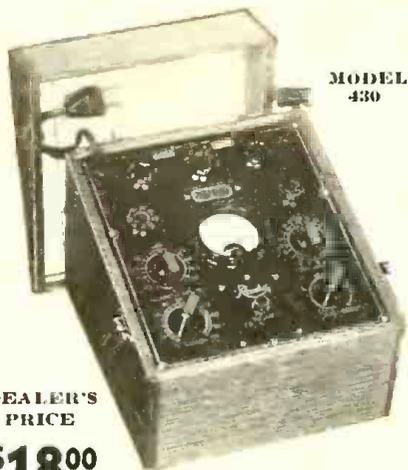
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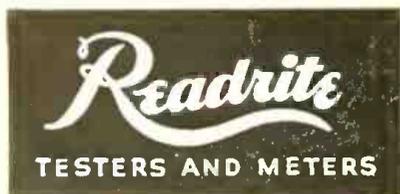
Double Grid Cap for Metal and glass-metal tubes. Shadow-type A.C. meter for adjusting line voltage. Leakage and short test. Tubes tested under load. But four simple operations required. Handsome portable quartered oak case with all-metal panel having silvered letters on black background. Especially constructed against obsolescence.

Model 430 complete with Triplett instrument having direct reading GOOD-BAD scale, protected against damage. **Net Dealer Price... \$18.00**

Model 431—same as Model 430, except has Readrite direct reading GOOD-BAD meter. Dealer's **\$14.40**  
Net Price .....

Readrite also manufacture all types of testers used for servicing radio sets, including: Set Testers, Tube Testers, Resistance, Continuity and Capacity Testers, Point-to-Point Testers and inexpensive Indicating Meters.

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Please send me more information—  
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# SERVICING—RIDER

Of course, such change is necessary in order to realize upon the high fidelity transmission, providing that proper sideband transfer is secured in the system ahead of the i-f. amplifier.

## Stagger i-f. stages

Speaking about the i-f. amplifier, the simplest method of adapting the system to increased sideband transfer, is by staggering the stages. A compromise adjustment can be reached which will provide sufficient band pass so as to enable realization of the increased sidebands in high fidelity transmission, yet not interfere with adjacent channel selectivity over the normal band. This is not guaranteed, but can be accomplished under favorable conditions. The insertion of additional switches to control series resistors in the secondary circuits to increase band width at a sacrifice in amplification greater than that caused by staggering, complicates matters too much.

Excessive staggering should not be used, as it is a fixed adjustment and cannot be changed at will or with great ease, to suit changing conditions. At best, staggering reduces the gain in the i-f. amplifier. Hence the degree of staggering used, must be a compromise between maximum gain consistent with the required band width. At no time should the staggering be increased beyond the capabilities of the audio system. As a rule, this means about 5,000 to 7,000 cycles, each side of the peak frequency.

To get true fidelity reception the audio system will have to be modified or replaced. Replacement of the audio channel with one of greater response requires that the speaker, too, be changed. Such changes cost money. . . . Too much money! As a matter of fact — now that the method of revision has been described — we do not think that many such jobs will pay. . . . Not unless the owner of his receiver is in love with the woodwork on his present cabinet.

# SERVICE NOTES

## Visual alignment

★ As each day passes there is more justification for reference to visual alignment with the cathode-ray oscillograph. . . . More and more of these oscillograph units are being sold, as is evidenced by communications received requesting certain kinds of special data.

One of the important items to remember when the cathode-ray oscillo-

graph is used to align the i-f. system, stage by stage, is the possibility of an assymetrical response curve, due to regeneration introduced when the signal generator is connected to some part of the i-f. system, other than the input circuit of the mixer tube. The leads between the generator and the i-f. transformers may feed some of the energy from the input to the output circuits and thus vary the amount of regeneration in the circuit. . . .

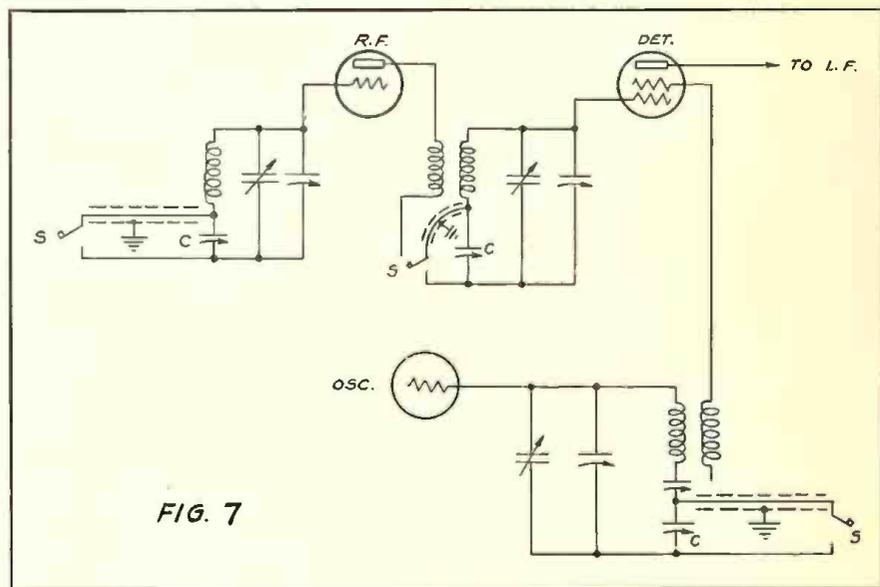


FIG. 7

This will interfere with the development of the true response curve. Isolating resistors should be used in the "high" leads to act as de-coupling resistors. . . . It would be a good thing to shield the "high" lead right up to its connection with the grid lead. The isolating resistor is connected into the circuit between the grid of the tube, through which the signal is being fed into the stage and the "high" lead of the preceding i-f. transformer (in series with grid lead). The "high" lead from the oscillator is connected to the control grid of the tube being used as the coupling tube. About 50,000 ohms will do.

### On 60 megacycles

★ Several of the commercial all-wave receivers extend the receiving range as low as 60 megacycles, or 5 meters. Servicing receivers of this type, particularly alignment at this frequency or even between 30 and 60 megacycles, is not the simplest in the world. Not that it cannot be done with existing equipment, but special care is required.

When alignment problems are encountered, we are accustomed to working with transformers, that is coils and condensers. Not so on this band in several receivers. As a general rule, the inductance in such tuned circuit is a length of wire, not coiled as the conventional r-f. transformer winding. The position of this wire, with respect to the other elements in the system, is very important. When working on any such receivers, do not move any wires from their normal position.

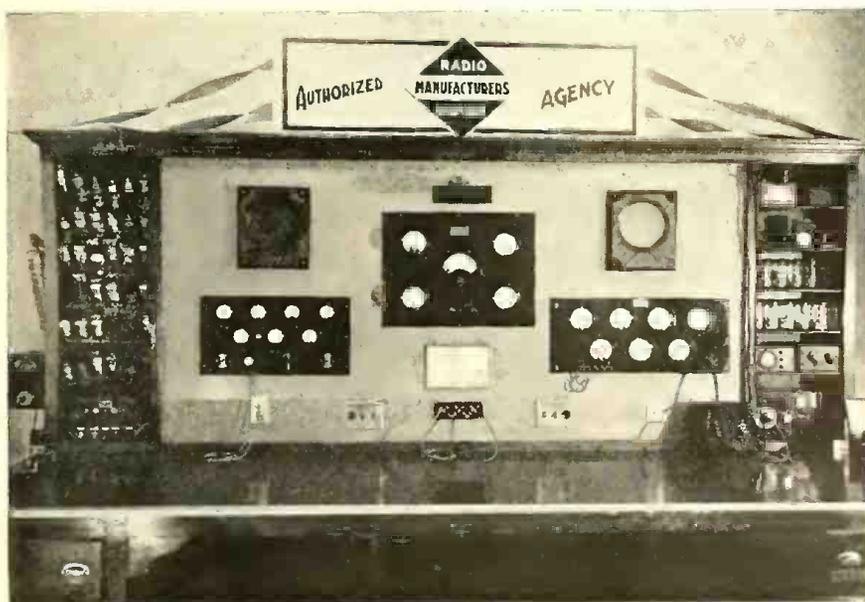
Not only are the wires important, but the related bypass condensers are likewise important. The bypass condensers influence the tuning and this means not only the value of these condensers, but also the leads between the condensers and the points where they are connected. In one particular receiver, the RCA C-15-3, the circuit components are so important on this band, that while one side of the heater circuit is grounded directly to the chassis, the other side of the heater circuit is grounded through a .0004-mfd. fixed condenser. It seems pretty certain that if replacement of units used in this band is required, the genuine replacement parts will be needed.

Furthermore, when checking bypass condensers used in this band, shunting of the suspected condenser with another from a capacity box, will not be satisfactory. It will be necessary to remove the suspected condenser and replace it with another of identical and correct capacity and identical length of leads.

Incidentally, when working with receivers which extend the tuning range to encompass the five-meter band, you will find that this high band is not fed through the r-f. amplifiers normally used for the other band. In general, the band, signal on the 5-meter range is fed from the antenna into the mixer tube.

### A double superheterodyne

★ Have you come across the Stewart-Warner 105 receiver? Maybe not—but if you do, bear one thing in mind. There are some differ-



Here is the test bench designed by the Shannan Radio Service shop in Mt. Vernon, N. Y. Service men working at this bench use the line method of repair; as the job moves along it passes systematically through the fixed stages of tests, repairs, inspection, appraisal.

## Research first . . . sales afterwards



# CLAROSTAT

CLAROSTAT has been accused on occasion of being too conservative. CLAROSTAT has often lagged in offering so-called new developments to resistance buyers. Many large assemblers under sales pressure, have adopted devices which had progressed little beyond the "sample" stage, much to their dismay when production quantities were "rushed through."

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- Wire Wound Rheostats
- Composition Element Potentiometers
- Constant Impedance Controls
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- Faders
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- Ballast Resistors
- Line Reducing Resistors
- Compression Rheostats
- Fixed Resistors
- Fixed Center Tapped Resistors
- Variable Center Tapped Resistors
- Flexible Resistors
- Metal Covered Heavy Duty Resistors
- Metal Covered Voltage Dividers
- L Pads and T Pads

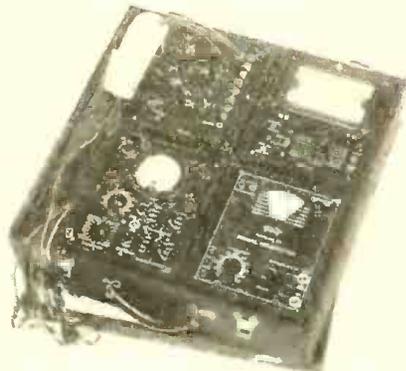
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Net to Dealer 26.67
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(with Removable Cover)  
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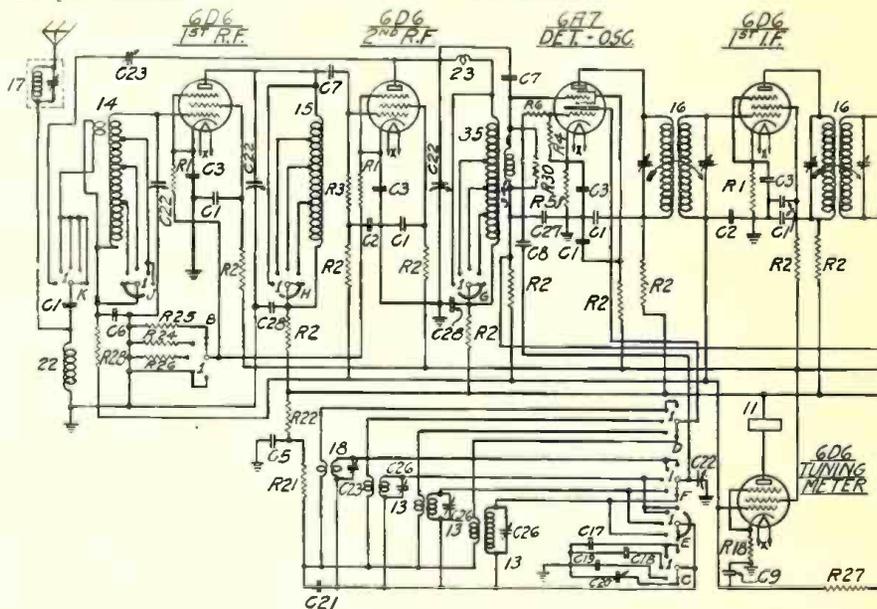
# SERVICE NOTES—RIDER

ences between this receiver and the usual multi-band superheterodyne. . . . The receiver employs two mixers and two oscillators. . . . If you did not look for it, you would never know it, because operation is as simple as with the conventional system, despite the greater complexity of the circuit.

The differences are found in the system ahead of the i-f. amplifier. One mixer and one oscillator are used solely for reception on short waves. The other mixer and oscillator are used for regular broadcast reception, but also come into play when short-wave signals are being received. . . . Do you follow?

## Zenith stratosphere

★ This 25-tube receiver is a custom-built job and was not produced in usual production manner, so that the likelihood of numerous service calls is not very great. . . . Although not certain of exact figures, we believe that the production of this particular model was definitely limited. However, it is still significant to note that the grid circuit of only the first r-f. stage is tuned. The remainder of the tuned circuits in the r-f. system are in the plate circuits of the first and second r-f. tubes.



Zenith Stratosphere

When tuning to short waves, the signal is fed into the short-wave mixer and the required heterodyning signal is fed into the broadcast mixer. The resultant signal is of a frequency of 1,525 kc. The broadcast mixer has a fixed tuned circuit responsive to 1,525 kc. The broadcast oscillator generates the heterodyning signal, which when beating against the 1,525 kc. signal fed into the broadcast mixer, provides the required 177.5 kc. intermediate signal.

When the receiver is used for broadcast reception, the short-wave detector and short-wave oscillator and the special 1,525 kc. tuned circuit are removed from the system (by means of a switch) and the remainder of the receiver operates in normal manner. When the receiver is adjusted to the short-wave band, the wave-range switch automatically inserts the 1,525 kc. tuned circuit into the broadcast band mixer input circuit.

The highest frequency band in this receiver is covered with a separate coil, which is not a part of the tapped detector coil in the receiver. The first r-f. stage is not used when covering the 4.7 to 15.3-meter band in the highest range. The input signal is fed from the antenna to the plate circuit of the 2nd r-f. tube. However, a portion of this band, as covered by the next range, namely, from 9.4 to 15.3 meters, is amplified by both r-f. amplifiers.

The circuit of the r-f. and mixer portion of the receiver is shown herewith. Note the use of impedance coupling, as previously mentioned. Variable-coupled i-f. transformers are used, thereby providing for variable band width in the i-f. amplifier, as the occasion requires.

## One more tube

★ There is a tendency, as evidenced by the new receivers, to separate the mixer and the oscillator

tubes. . . . This is so even if a 6A7 is used as the mixer. In the majority of last year's superheterodyne receivers, the 6A7 was used as a combination mixer and oscillator. In the modern receivers, the heterodyning signal from the oscillator tube is fed into the mixer tube via the screen grid of the mixer. The coupling between the oscillator and the mixer tube is a small fixed capacity. The grid, normally interpreted as the screen grid in the 6L7, is grid number 3.

### Signal beacon

★ The zero beat between the two frequencies. . . . That is the way the receiver is tuned. . . . Have you come across these Grunow receivers? . . . The signal beacon is a beat oscillator, fixed tuned, and resonated to zero beat with the intermediate frequency. If this oscillator is off calibration it will interfere with correct tuning, because it will zero beat with one of the frequencies, present in the sidebands of the carrier signal. Zero beat will then occur at some frequency other than the accurate carrier frequency. To align properly the signal beacon, tune the i-f. assembly accurately to the correct i-f. frequency. Then tune the signal beacon oscillator to zero beat with the test signal being fed through the i-f. oscillator. Make certain that you are at zero beat by slightly shifting the tuning of the signal beacon, above and below the zero beat point. Then reset to the zero beat point and check by slightly changing the frequency of the test signal generator. Any deviation of the test signal oscillator

frequency from the correct i-f. signal should produce an audio beat signal in the speaker. For this final checking, you should not use modulation of the test signal.

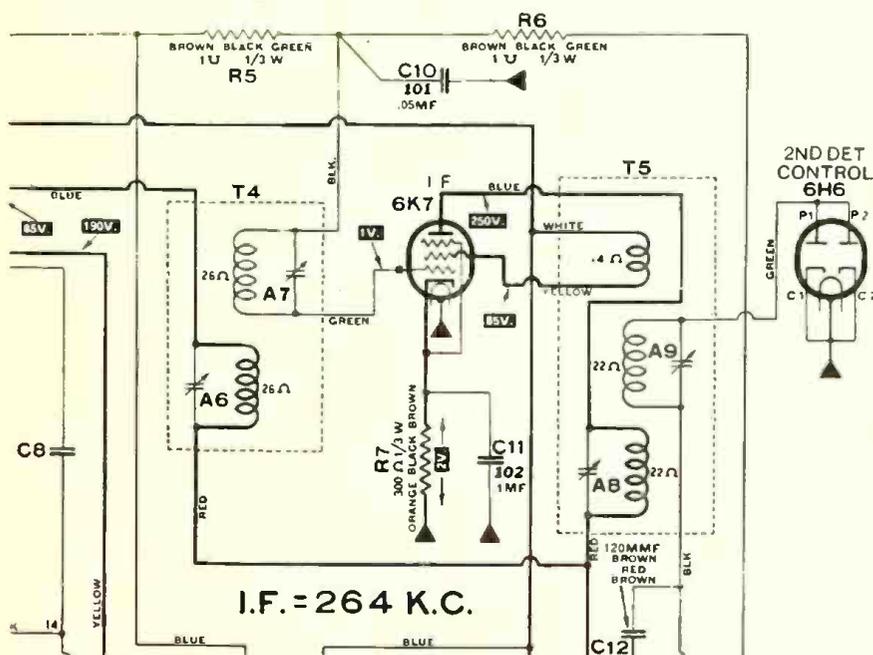
### I-F. regeneration

★ The new Atwater Kent models 856 and 976 receivers employ a third winding in the i-f. transformer connected between the i-f. amplifier tube and the demodulator. This winding is connected between the plate and the screen grid of the i-f. tube and is coupled to the other windings in the associated transformer. A portion of the signal in the plate circuit is therefore fed back into the screen grid and a certain amount of regeneration, with consequent gain in amplification, is introduced. Schematic diagram is shown below.

### White transmission cable

★ Our living room has antique finished walls. This is not an unusual color, hence what we will say is not an extraordinary situation. In fact, we feel that the majority of living rooms, for that matter other rooms, have light colored walls. . . . An antenna installation was made and the lead-in was carried around the room. Transmission cable was used for the lead-in and it was necessary to cross the window moulding and some of the wall space to finally reach the floor. . . .

The serviceman who made the installation unreeled the transmission lead-in. It was black. . . . Why black, when the walls are ivory or antique? . . . Was there no white covered



Atwater Kent Models 856 and 976

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cable? . . . Sure, but he had none. . . . The result is a continual clamor from the lady, who takes pride in her living room, to have the cable changed. . . . So we became interested in finding out what other servicemen do. . . . The majority have black cable. . . . Very few have paid any attention to the actual necessity of white transmission cable. . . . The manufacturers are supposed to be making such cable, but where is it? Most servicemen carry and sell black cable. . . . How come?

## Why business fails

★ The following data originally tabulated by Dun and Bradstreet, the credit agency, convey some very pertinent data. Although the facts shown here relate to business in general, there are certain items which can be very closely associated with the radio service business and which are of great importance to the men who are running service organizations. It is to be remembered that the servicing industry is just as much a part of commerce in the United States, as any other form or type of maintenance organization.

The enumerated reasons why businesses fail and the relative importance of the controlling factors are given herewith.

	<i>Per Cent</i>
Incompetence . . . . .	38.20
Lack of capital . . . . .	30.30
Fraud . . . . .	7.00
Inexperience . . . . .	5.60
Neglect . . . . .	1.70
Failure of others . . . . .	1.70
Unwise credits . . . . .	1.30
Extravagance . . . . .	1.10
Competition . . . . .	1.10
Speculation . . . . .	.70
Specific conditions . . . . .	11.30
	100.00

It is interesting to analyze the relative importance of some of these items. For example: incompetence. The ability to apply oneself properly to a business is being competent. The lack of this ability is the prime reason for failure in business. Lack of capital is not as important as incompetence, because if one is competent and realizes the limitations of the capital on hand, he can keep the operations of the business within the ability of the capital. Further-

more, the man, who can run a business properly, can make that capital most productive. . . . In fact, he can do more with less funds than the man who is not as competent, but has more funds. It is important to remember that the word incompetent, as used here, does not denote actual knowledge pertaining to the technical branch of the business activity—that is the technical features of the item or items being sold. . . . This is expressed as experience or inexperience in the listing.

## I.R.S.M. meets Oct. 25-27

★ The annual New York Convention and radio parts show of the Institute of Radio Service Men will be held October 25-27 at the Hotel Pennsylvania in New York City. A representative display of exhibits and a large attendance is promised. During the service men's convention, on October 26, there will be a meeting of the RMA Service Section of which F. B. Ostman of Camden, N. J., is chairman.

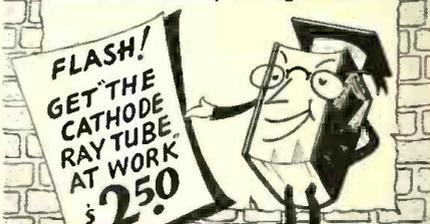
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# WITH THE WHOLESALERS

★ Against a backdrop of general optimism, jobber activities are branching in several special fields where Fall conditions make the opportunities particularly attractive.

Recent FHA rulings are being watched closely and are played for all they are worth. The Autumn series of manufacturer helps have a pick-up note which gets across only because of brighter prospects throughout the business world. Also, the time has come for methodic and substantial promotions in the farm districts. Merchandising of all-wave sets has some advertising possibilities which were not apparent a few months ago—the appeal of the Far-Off has a swell bang to it—all of which are in jobber plans for coming months.

★ True and Blanchard Co., jobbers, Newport, Vt., announce these newly appointed dealers for their Fairbanks-Morse sets and RCA tubes: K. M. Parker, Hardwick, Vt.; G. E. Blake, Lancaster, N. H.; George M. Goudie, Lisbon, N. H.; E. G. Shattuck, Canaan, Vt.; Theo. Lecours, Colebrook, N. H.; Hebert & Sons, Lyndonville, Vt.; South End Service Station, St. Johnsbury, Vt.; L. W. Chamberlain, East Ryegate, Vt.; Regan and Regan, Bakersfield, Vt.; B. C. Hawley, Jeffersonville, Vt.

★ H. G. Erstrom has taken his good rep and his popularity to the Leo J. Meyberg Co., San Francisco, RCA distributors for California and Western Nevada, where he is now the

new sales promotion manager. Erstrom began making friends in the radio business 8 years ago when he became executive secretary of the Federated Radio Trade Association. That organization became the National Federation of Radio Associations a year later, and when the Radio Wholesalers Association was started, Erstrom was secretary of both. Since that time, Erstrom has been busy organizing local radio associations, directing legislation for distributors, making surveys in the industry, etc. Recently he was manager of the National Code Authority for the radio wholesalers.

★ The Carolinas Auto Supply Co., distributor, Charlotte, N. C., has appointed W. L. Thomas, Winston Salem, N. C., a dealer for Crosley radios.

★ Orlen Radio & Electric, Inc., Holyoke, Mass., has been named dealer for Crosley radios by Tarbell Waters, distributor, Springfield, Mass.

★ At the Rice Hotel in Houston, Texas, 200 dealers were guests of Reader's Wholesale Distributors, September 15. Hosts were Neil Bauer and Harry Roper; from Reader's came Hymen Reader, Charles A. Green, Harold Kaltenheuser, and Paul LaBow.

★ F. E. Stern, president of Stern & Co., jobber of Hartford, Conn., has added Ward Shurtleff to his staff.

★ Western Washington radio dealers went to Seattle, Wash., to get the low-down on the new Crosley line at Marshall-Wells, Coast distributor. Roy Hallabaugh, Wells' electrical division manager, and M. C. Crosby, district representative, presented the new sets.

★ Chas. McCauley, widely known music and radio dealer of Vermont, has been added to the sales staff of True and Blanchard, jobbers of Newport, Vt.

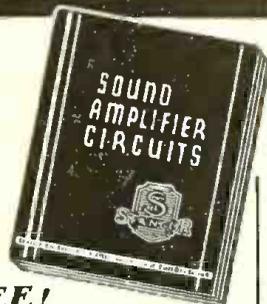
★ Pennsylvania radio dealers from 14 counties were guests of the Anthracite Radio Sales Co. of Scranton. The affair was held at Wilkes-Barre and Anthracite's president, William Sehlanger, was assisted by LeRoy Winters, sales manager in the showings.

★ Three hundred dealers in the Atlanta, Ga., district staged a huge Crosley pow-wow session with the Beck and Gregg Hardware Co., Atlanta, as host. Pres. W. A. Parker and Herndon Thomas, of Beck and Gregg, made appearances, as well as H. E. Richardson and Ralph Keating.

★ D. W. May, radio district sales manager for the General Electric Company, 570 Lexington Avenue, New York City, was married Sept. 5 to Margaret Le Maire. Mr. May formerly operated radio stations in New Jersey, and afterward was Philco distributor for New Jersey and New York City. Mr. and Mrs.

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In this "encyclopaedia of radio" you'll find every last minute development; newest sets from 2 to 24 tubes; a big Public Address section; a great department on Short Wave sets, kits and X'mitting equipment. There are parts, tools, tubes and accessories if it's radio—we have it for immediate delivery. Get your FREE copy of this Bargain Book today.

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Rush your new 196-page catalog No. 59 to

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Can't always believe what you see. Looks like Jim Quam, president of Quam-Nichols, and Jerry Kahn, president of Standard Transformer, caught a Muskie on their recent fishing trip; but the truth is that Mrs. Kahn did the catching.

## HELPS YOU SELL MORE TUBES

Tests all the new  
METAL TUBES



Tests all types of  
Glass Tubes without using adapters

### WEBBER NEON GLO Model 30 TUBE TESTER

Here's a new instrument that will SELL more tubes—help you to "up" your tube sales. Attractive—has a real attention-getting illuminated control panel. Very simple and easy to operate—your customers will go for it—they'll understand what you are doing—and you'll SELL MORE TUBES. This is the very latest development in TUBE TESTERS—operates on a recently developed new circuit closely relating to power output test. It has everything—does everything you'd expect of a fine instrument and will pay for itself from extra tube profits in a short time. Webber Model 30 TUBE TESTER is real professional equipment at low cost. Sold by all jobbers.

#### WRITE FOR FULL DETAILS

This tester is only one of many units manufactured by this company which specializes in high quality, efficient, tested and approved radio products. Descriptive literature free—no obligation. Write for Bulletin R. 1.

**\$34.95**  
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**EARL WEBBER CO.**  
1219 W. Washington Blvd., Chicago, Ill.



"The Standard of the Industry"

## THE Super-Sensitive ARMORED DYNAMIC IS THE 1936 SPEAKER

#### Representatives

Mr. C. A. Stone,  
c/o Carl A. Stone Co., Ltd.,  
209 West Seventeenth Street,  
Los Angeles, California

Mr. George D. Norris,  
303 East Pike Street,  
Seattle, Washington

Mr. O. A. Huber,  
30 Ninth Street,  
San Francisco, California

Mr. James C. Pope, Jr.,  
3037 Knox Avenue, South,  
Minneapolis, Minnesota

**QUAM-NICHOLS CO.**  
CHICAGO, ILLINOIS  
1674 Broadway, New York City

May will make their home at 148 Wellington Avenue, Wykagyl Park, New Rochelle, N. Y.

★ Raymond Rosen & Co., Philadelphia, have a new and enlarged home, formally opened during the last week in September. The Rosen Co. handle RCA-Victor radio products, Kelvinators, and Prima washers.

★ Fada has reported the appointment of the Tristate Electrical Supply Co., Hagerstown, Maryland, as exclusive distributor in Western Maryland and Shenandoah Valley in Virginia. R. A. Stott is secretary and sales manager of Tristate.

★ After chalking up the most successful September in its history, The Roycraft Company, Philco radio distributors, 1625 Hennepin Ave., Minneapolis, Minn., is laying extensive plans for making October another record-breaking month. Sales in September in this Northwest territory showed an increase of 112 per cent over September of 1934.

★ The Radio and Electrical Show at the Grand Central Palace may have ended September 28, but for Colen-Gruhn Company, metropolitan distributors for Grunow, it was just an opening night. Taking a tip from the Great American Tourist, the company mounted its exhibit on a trailer, and proceeded to offer its display all over Long Island, Westchester, and other points in the local district.

★ New Crosley models got a country club airing when Connecticut dealers were guests of Thomas J. O'Brien, pres. of the Hartford Electric Supply Co., Hartford, early last month. Dwight A. Pease, Hartford Supply's vice-pres., and H. D. Schumacher, Crosley's New England sales manager, were co-hosts.

★ Grunow products on the Pacific coast got a triple boost last month when the F. B. Connelly Co., Northwest distributors, held dealer meetings at Seattle, Portland and Spokane. More than 600 were there, and Kenneth A. Connelly, vice-pres. and general manager of the host company, presented Dr. J. D. Gordon, of the General Household Utilities Co., Carl D. Boyd, Grunow's western manager, and Connelly's sales manager, W. R. McCurdy.

★ Davidson Sales Co., South Bend, Ind., held "open house" for 100 dealers last month to give J. E. Davidson, its president, a chance to get the 1936 line over. Martin Seuss, local sales manager, described the new sets.

★ Radolek Co., 638 W. Randolph St., Chicago, headed by enterprising W. C. Braun, is one distributor who double-checks the performance of new products in order to keep all his stock in demand. One thing, Braun maintains a sales laboratory to test merchandise and to eliminate "duds." Also, Radolek has a radio parts store, where servicemen buy items listed in the Radolek catalog.

★ Central Kentucky dealers, or 75 of them who sell Crosley sets, went to Lexington, Ky., September 12 to the 1936 banquet staged by the Cooper-Louisville Co. of Louisville, Ky. J. E. Johnson and J. J. Crider represented the latter company, and C. H. Carey gave the main address.

★ C. W. Steltzriede, radio manager for the Saginaw Hardware Co., Saginaw, Mich., sponsored a special showing of 1936 Crosley radios last month with 63 dealers from his Northern Michigan territory in tow. W. W. Carroll, district manager, managed the presentation act.

★ Aeolian Company of Missouri, St. Louis, recently appointed 14 new RCA-Victor dealers: A. Dirksen & Sons, Springfield, Ill.; The Bruce Company, Springfield, Ill.; H. C. Asel Appliance Co., Jefferson City, Mo.; Taylor Furniture Co., Columbia, Mo., and the following in the city of St. Louis: Fred Schmidt Appliance Co., Allen Radio & Supply Co., Houts Radio Co., Mack Electric Co., Schopper Radio Co., Springer Electric Co., McClendon Radio Co., Rite Furniture Co., Weber Brothers, and L. Naes Radio & Refrigerator Co.

★ F. R. Gooding Co., Inc., Spartan jobbers of Wilmington, Del., have reported the recent appointment of 6 new dealers in the area. These include Walhar Bros., Wilmington; McMahon Bros., Wilmington; C. L. McCabe, Selbyville; George H. Waples, Milton, Peterman Radio Co., Milford; Delaware Light and Power Co., Milford.

The Gooding company further announced that R. P. Gooding has been named as radio parts manager.

★ Zenith Radio Distributing Co., Chicago, has added 7 new salesmen to the organization to sell battery sets in rural Illinois.

★ Metropolitan Electrical Supply Co., Chicago, has been named as the exclusive wholesale distributor for Fada home and auto receivers in the Chicago area. Edmund W. Getke is Metropolitan's president, and Sol S. Mandel secretary and treasurer.

★ W. L. Coutts, for the past 5 years general manager of the Motor Equipment Co., has a new distributor set-up at Salt Lake City, Utah. W. L. Coutts, Inc., will handle Atwater Kent radios and Leonard refrigeration.

★ Some 125 dealers in West Texas district were guests of the Shield Co., Inc., Fort Worth, early last month. W. W. Slaughter, vice-president and general manager of Shields, was the head man.

★ Wholesale Radio Service Co., Inc., of New York City, began activity in the Chicago territory September 21 with the opening of a new branch office on West Jackson Blvd. General manager is S. W. Berk; purchasing agent is Marvino Roye, and office manager is J. E. Synder. Technical staff for the new branch includes Arthur Rattray, Ed DeCaneq, John Morgan, Earl Ruleson, and Edward Hoffman.

# TRADE NEWS

## MALLORY DRY-CONDENSER PATENTS UPHELD

★ The Ruben dry-electrolytic condenser patents, Nos. 1,710,073 and 1,714,191, have just been upheld by the United States District Court for the Eastern District of New York. In an opinion by Judge Marcus B. Campbell in the case of Ruben Condenser Company and P. R. Mallory & Co., Inc., against Copeland Refrigeration Corporation, the Court declared both patents valid, and also held them infringed by dry-electrolytic condensers made by Delco Products Corporation and supplied to Copeland in conjunction with electric motors. The decision directs the entry of a decree for injunction against future infringement.

P. R. Mallory & Co., Inc., of Indianapolis, Ind., is the exclusive licensee under patents 1,710,073 and 1,714,191, as well as other Ruben patents relating to dry-electrolytic condensers. Sub-licenses are held by The Magnavox Company, Sprague Specialties Company, Cornell-Dubilier Corporation, Condenser Corporation of America and the Aerovox Corporation. Copies of Judge Campbell's opinion will be furnished upon request to P. R. Mallory & Co., Inc.

★ The Muter Co., Chicago, reports the appointment of Fred B. Stevens as Midwestern Sales Manager. Stevens had 11 years in radio, with Magnavox, Rola, and Quam-Nichols.

★ A note from Ernest J. Krause, president and founder of Radiobar, says that the company has announced the appointment of Roger Thompson as division manager. C. T. Hillman is eastern manager.

★ Marcia Susan Stevens is the name of the young lady who arrived recently at the homestead of E. F. Stevens, Jr., vice-president and general manager of Decca Records, Inc. This young lady, who made a debut during the Radio Show, tipped the scale at well over eight pounds.

★ Fred Strayer, Chicago representative for the Hygrade-Sylvania Corp., is receiving the sympathy of his many friends in the trade upon the death of his mother who was killed in an automobile accident September 27th en route from Emporium, Pa., to her home in Wilmette, Illinois.

★ J. W. McIver, sales promotion manager of the General Electric Co., Bridgeport, Conn., bought the cigars and the drinks for practically everyone at the Radio Show, September 19th; the occasion being the arrival of a second heir to the McIver fortunes.

★ Hygrade Sylvania Corp., Emporium, Pa., has appointed Virgil Graham engineer in charge of its tube-application laboratory. Mr. Graham resigned late last month as a Stromberg-Carlson engineer and took up the Hygrade work. During the last 12 years, Graham has been actively associated with industry stand-

ardization for the Radio Manufacturers' Association, the Standards Section of the RMA Engineering Division, the Underwriters' Laboratories Industry Conference, the Institute of Radio Engineers, and other organizations in the industry.

★ A mighty pleasant get-together party in celebration of the first home game of the World Series was staged by Ford, Browne and Mathews, well-known Chicago advertising agency, on October 4th. The party would have been perfect if the Cubs had won but notwithstanding their defeat, a good time was had by all. Among those who dropped in to say "Hello" during the course of the afternoon were R. G. Zenda, general sales manager, Lenz Elec. Mfg. Co.; D. E. Bright, president of Gen-E-Motor Company; R. B. Smith, general manager of Consolidated Radio Products Co.; Howard Briggs, general sales manager of Howard Radio Company, and others.

★ R. B. Smith, general manager of the Consolidated Radio Products Co. of Chicago, manufacturer of Nathaniel Baldwin speaker products, announced recently the appointment of Harry Fox as Pacific Coast representative of his company and also the appointment of Harold Bretton, 200 Broadway, as representative in the important New York territory.

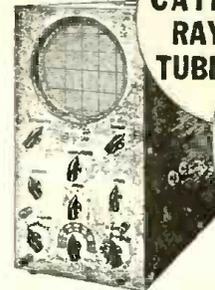
★ The radio speaker industry welcomed to its midst last month a member of the fair sex in the person of Miss Bert Engel, for many years an executive for the Utah Radio Products Co. This talented and capable lady is now directing the destinies of the Vitavox Sales Co. with headquarters at 1307 South Michigan Avenue, Chicago, Ill.

★ "Les Muter Day" in honor of this popular radio executive was fittingly celebrated October 3rd at the Calumet Country Club marking the close of the golfing season for the Chicago Radio cohorts. The golf scores were remarkably low, but we were informed that after dark some exceptional bridge hands were passed upon by Jack Scanlon, general sales manager of Utah Radio Products Co., aided by Burt Browne and Ralph Mathews of the advertising firm of Ford, Browne and Mathews.

★ Albany, capital city of the Empire State, was well represented at the epoch-making RCA-Victor banquet on October 9th through the medium of Max Landy, president, and Max Hegleman, general sales manager of the Capital City Distributing Co., RCA distributors in that territory. Max No. 1, and Max No. 2, as they are known to their intimates, not only spoke enthusiastically on business conditions in the Albany district, but told their friends at the press table how they had been shaking hands with Governor Lehman at regular intervals during the past year or so.

## OSCILLOGRAPH

by NATIONAL UNION  
3" OR 5" CATHODE RAY TUBE



EXCLUSIVE NEW DESIGN SWEEP CIRCUIT

FREE WITH NATIONAL UNION TUBE PURCHASES

The improved National Union Oscillograph incorporates an exclusive new design sweep circuit giving perfect linearity and synchronization for the visual inspection of individual wave forms from 10 to 250,000 cycles and permits inspection of waves to above 1,000,000 cycles. The only commercial oscillograph having an adjustable linear sweep circuit extending above the audio range. All controls on front panel except two position controls on side near front. Thirteen outstanding features. Get complete details and learn how you can own one free the easy National Union way.

### OTHER INSTRUMENTS

Remember you can get many types of instruments free with National Union tube purchases. Send coupon for latest information.

NATIONAL UNION RADIO CORPORATION OF N. Y.  
570 Lexington Ave., New York, N. Y.

Send me complete information about free service shop equipment  The N. U. oscillograph.

Name \_\_\_\_\_

Street \_\_\_\_\_

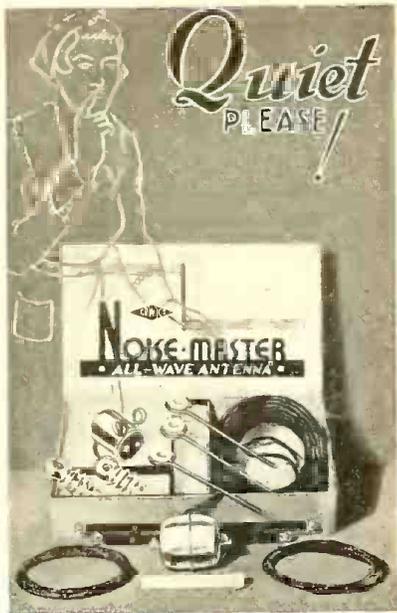
City \_\_\_\_\_ State \_\_\_\_\_

My jobber is \_\_\_\_\_ RT 1035

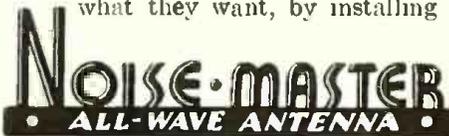


Tear out this ad and pin to your letter-head for FREE copy of the NEW UTAH General Catalog of vitalized radio parts

UTAH RADIO PRODUCTS CO., Orleans St., Chicago



**"QUIET"** ... is the insistent demand of millions who today own all-wave receiving sets. Give them what they want, by installing



This remarkable unit, A.A.K. patented and engineered with traditional CORWICO thoroughness, is actually AUTOMATIC electrically—no adjustment is needed and no manual operation is required, once "NOISE-MASTER" is properly installed.

**FOR EVERY SET AND LOCATION**

"NOISE-MASTER" picks up and clarifies feeble overseas signals, straining out the "man-made" static that sometimes seems to make radio a curse instead of a blessing. Minimizing the noises caused by household appliances near the set, "NOISE-MASTER" improves broadcast as well as shortwave reception. It successfully operates more than one set from a single aerial. We guarantee that "NOISE-MASTER" will eliminate noise when properly installed, and urge you to recommend it at every opportunity.

CAT. No. 14 **\$6.75**  
LIST PRICE



Send for latest complete literature describing this and other up-to-the-minute antenna units

**CORNISH WIRE CO., Inc.**  
30 Church St. New York City

# SALES STIMULATORS

*New promotion material available from leading manufacturers*

**FOOTBALL SPECIAL**

★ Hygrade Sylvania's "Radio Log" will have a new feature this Fall. Revised programs will include a complete intercollegiate football schedule for all the important American teams, presenting the complete data on the times and location of the main clashes. Regular features of Sylvania's log are its geographical set-up, its black type megacycle digits in short-wave lists, and its time schedules for all zones.

**NEW GUIDE FOR SERVICEMEN**

★ Electrad, Inc., 173-5 Varick St., New York City, has printed for the benefit of servicemen a volume control guide of 100 pages which lists the replacement controls "for practically every radio receiver built since the inception of broadcasting." Opposite every set model number, the booklet lists the specifications of the appropriate Electrad control, its resistance in ohms, and the price.

Electrad engineers worked for 6 months on this hook; the distribution will be limited to 5,000. The guide will be given entirely free to servicemen and dealers who return to Electrad the top flap of one of its new volume control cartons.

**NEW INFO ON CIRCUITS**

★ Two new hooklets have been issued by Standard Transformer Corp., 850 Blackhawk St., Chicago, dealing with "Sound Amplifier Circuits" and "Amateur Transmitter Circuits." Former brochure illustrates and describes a series of audio amplifier circuits which have been selected for superior performance and power output.

In "Amateur Transmitter Circuits," the plans shown range from low power, inexpensive designs to the more involved and costly circuits, both for C. W. and phone transmitters. This hooklet is 12 cents, and the other is priced at 10 cents to cover mailing.

**EMERSON-C.I.T. FINANCING ARRANGEMENT**

★ Arrangements have just been completed between Commercial Investment Trust Corporation (C.I.T.) and Emerson Radio and Phonograph Corporation wherein the latter's dealers may avail themselves of deferred-payment financing service. Complete details have been sent to Emerson distributors who, in turn, are outlining the plan to their dealers.

Briefly, the plan calls for credit investigations, the immediate local discounting of dealer paper, and time-payment collection by C.I.T. on sales of sets.

In a hulletin to the trade, Emerson states that "no dealer today can hope to obtain a full quota of larger units of business from his market unless he is equipped to meet the deferred payment buying requirements of his prospective purchasers." Emerson prefers to know that the same high-grade, low-cost dignified financing service is available to all of its dealer organizations uniformly everywhere and has therefore arranged with C.I.T. to operate its official plan for financing deferred-payment retail sales of Emerson Radio.

**DISPLAY USES TELEVISION EFFECT**

★ A new animated electrical window display, centered around a panel lighted from within and having the appearance of a movie screen, is being offered to Kadette dealers by International Radio Corp. of Ann Arbor, Mich. A succession of easy-to-watch pictures appear on



the central panel and the series produces a "travel-read" sales message. Outfit comes with a second auxiliary reel which shows photographic reproductions of Kadette models.

The somewhat mysterious lighting effect on the panel suggests television to the pedestrian. The structure is substantial enough to support actual radio sets, 36 inches high and 54 inches long, made of heavy lithographed board.

**PRICES IN CODE**

★ Dale Parts, Inc., 29 Murray St., New York City, has just issued one of the most impressive and interesting catalogues released by any distributor in recent years. This company, which is one of the foremost johhers in New York City, handles a varied line of parts and accessories made by prominent manufacturers, and this new catalogue gives complete information including manufacturers' specifications on replacement parts, tubes, supplies, amplifiers, sound systems, sets, aerial equipment, wire, etc.

The hook is divided into eleven sections and features a tab index that is of immeasurable value as a time saver. One of the most important innovations is the presentation of list prices in code so that the

## DOUBLE-PURPOSE WINDOW



★ Exceptional window display is being offered by United American-Bosch Radio, in the form of a set of suspended placards, exhibited above a chassis. Posters carry dramatic copy on American-Bosch features, and can be turned over to expose a new one daily. The series of placards hangs in a group from a line supported by two pillars standing at the sides of the display.

Placards used in this window are such that they are well adapted to use by salesmen who wish to present to customers a brisk and complete summary of set features.

dealer and service man may take the catalogue into the customer's home without revealing at any time the cost figures of the merchandise. Maurice Despres, president of Dale Parts, Inc., personally supervised every detail of his new catalogue, three thousand of which are now being distributed in the metropolitan territory to dealers and service men.

## WINDOW STOPS 'EM

★ Arcturus Radio Tube Co., Newark, N. J., has put in the hands of its distributors a dramatic new type of window display which dealers may easily change for a new effect every day. The display pic-



tures various scenes which may be tuned in during popular radio broadcasts. The display is lithographed in 7 eye-catching colors, and is a two-plane effect carrying sharply executed illustrations by well-known artists.

## BULLETIN

★ The latest dope on the subject of "Operating Conditions for Class A Power Output Tubes" has been collected by the engineering department of Ken-Rad Corp., Owensboro, Ky., and published in a booklet under that title. Treatment is comprehensive and material of genuine value to service men and dealers.

## THIS FALL—TRADE UP!

(From page 17)

when he switches from one to the other.

Many dealers may neglect one of the most important policies of all in their dealings with salesmen; and that is, the value of constant instruction of the men. The best salesman in the world is apt to get rusty without guidance and suggestions from the boss.

## Salesmen understand

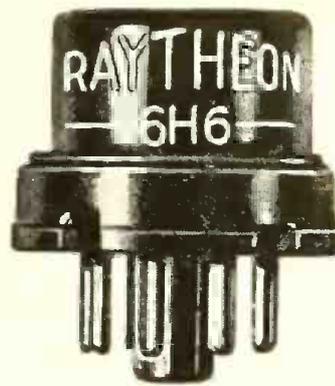
Make plans now to get your salesmen started right this season. If you haven't had a sales meeting in some time, call one now, and go over the selling points of the lines you are carrying. Emphasize the new features of this year's sets and make sure the men understand them and know how to sell them.

Most important of all, emphasize the importance of "trading up" this season, and make the men understand that this Fall offers the best opportunity that we have had in many years to sell the higher-priced receivers.

And, refresh them on their ability to "trade up" by stressing the main points of this article.

1. Demonstrate the small set willingly if that's what the customer asks for.
2. Don't sell it hard, but don't knock it either; leave the way open to come back to it if necessary.
3. Lead into switching by mentioning some new or unusual feature of a higher-priced model.
4. Take the customer completely away from the cheaper model so that the better sets can receive his full and undivided attention.
5. Demonstrate the better set, without making direct comparisons or comparative demonstrations.
6. Emphasize the points in which the better set is superior or which the smaller set totally lacks.

When your selling efforts are definitely gained toward "trading up," and your salesmen follow through along the same lines, you will find the public willing to spend more for radio this season than they have for some time. It's in the cards; average set prices are up, the better models are selling. Make sure your organization is keyed up to take fullest advantage of an exceedingly bright sales situation.



## Actions Speak Louder Than Words!

The manufacturer of the famous 4-Pillar Radio Tubes is making and delivering *all* types of the new Metal Tubes as initial equipment for 1936 receivers and for jobber and dealer replacement stock.

• • •

Raytheon's 34 new service deals are now ready. Ask for complete details.

**RAYTHEON**  
TRADE-MARK  
4-PILLAR RADIO TUBES

RAYTHEON PRODUCTION CORPORATION

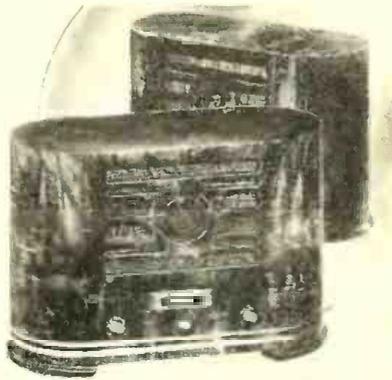
30 East 42nd Street, New York, N. Y.  
445 Lake Shore Drive, Chicago, Illinois  
55 Chapel St., Newton, Massachusetts  
555 Howard Street, San Francisco, Cal.

# NEW THINGS FROM THE MANUFACTURERS

## HIGH-FIDELITY MIKE

★ High-fidelity non-directional crystal microphone. Response within 5 db. from 40 to 10,000 cycles. Horizontal directivity eliminated. High output level—minus 55 db. Uses "Grafoil" bimorph crystal element. Diffraction, reflection, and phase-shift effects completely corrected. Completely shielded and moisture-proof. Weighs only 6 oz.—2¼ in. diameter. Shure Brothers Co., 215 W. Huron St., Chicago, Ill.—**RADIO TODAY**

## STREAMLINE COMPACT



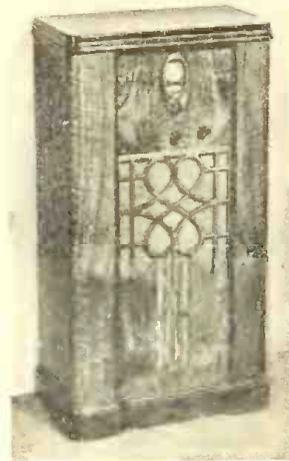
★ Duo-tone table model—finished front and back. Six-tube AC-DC superhet. Dual range 530-1,300 kc. Automatic volume control, illuminated horizontal sliding scale. Built-in line filter. Rust-proof chassis and dust-proof dynamic speaker. Hand-rubbed cabinet. Model 106—list \$34.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York City.—**RADIO TODAY**

## RMA STANDARDIZED TUBE TESTER



★ Tube tester with selective switching—tests all types under load. Elements tested separately. Leakage revealed by sensitive neon bulb—tested while hot. Meets specifications of RMA standards. Cover provided for portability. Model 420—net \$29.94. Triumph Mfg. Co., 4017 W. Lake St., Chicago, Ill.—**RADIO TODAY**

## 8-TUBE SUPERHETERODYNE



★ All-wave superhet with 8 metal tubes. Triple-tuned i.f. for true fidelity—12 in. full-range speaker. Double action automatic volume control—logarithmic manual control. Dual-ratio tuning—separate dial for accurate logging. Antenna matching coils automatically switched as band changes. Three bands—540 to 18,000 kc. Arvin model 81M—list \$99.50. Noblitt-Sparks Industries, Columbus, Ind.—**RADIO TODAY**

## FARM BATTERY CHARGER



★ Charger for six volt batteries. Propeller automatically adjusts self to wind conditions—speed control safeguards generator from overload. Cut-out prevents overcharging. Ammeter shows rate of charge. Mounts atop barn or house. Special co-operative price of \$10 to purchasers of Crosley battery radios. Ace Products Corp., Cincinnati, Ohio.—**RADIO TODAY**

★ Wind-driven battery charger for 6-volt batteries. Aeroplane type propeller operates with light wind. Generator has cut-off—battery cannot be overcharged. Deluxe model has capacity of two batteries. Distributed by Zenith Radio Corp., to owners of Zenith farm radios at special co-operative prices. List \$29.50 for utility model. Wincharger Corp., 2702 Hawkeye Drive, Sioux City, Iowa.—**RADIO TODAY**

## COMPACT PHONE TRANSMITTER

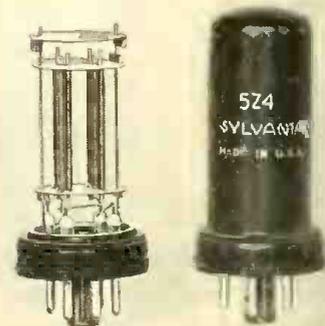
★ Phone transmitter suitable for police, portable broadcast, or amateur use. Conservative power output of 40 watts—100 percent grid modulated. Crystal-controlled oscillator—dual power supplies. Meter indication of modulation percentage—over-modulation indicator. Antenna matching network. Self-contained—21½ in. x 18 in. x 12 in. high. Operating controls on panel. Complete and ready to operate—model 45 A—list \$483.85. Collins Radio Co., Cedar Rapids, Iowa.—**RADIO TODAY**

## HIGH FIDELITY, 12 TUBES



★ All-wave true-fidelity superheterodyne. Pre-selection on all wave-lengths. Range switch illuminates desired dial range, selects proper antenna—520 to 23,000 kc. Acoustical labyrinth and wide angle sound diffusion for faithful reproduction—15 watts output. Dual-ratio tuning dial plus tuning meter give ease of control. Glass rectifier and 11 metal tubes. Model 84—list \$275. Stromberg Carlson Telephone Mfg. Co., Rochester, N. Y.—**RADIO TODAY**

## NEW 5Z4 RECTIFIER



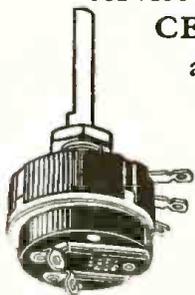
★ New type 5Z4 metal tube—reduced size—no loss in electrical characteristics. Metal shell 3¼ in. x 1 5/16 in. diameter. Filament current reduced to 1.5 amps. Rating of 125 mills with 400 volts (rms) per plate. Will replace octal glass 5Y3 rectifier. Hygrade Sylvania Corp., Emporium, Penna.—**RADIO TODAY**



## Ceiling unlimited for Old Man Centralab

He's flying high these days . . . and the service man who is throttled to Centralab's speed is bound to be well satisfied with 1937's possibilities. '36 has been a big year for Old Man CENTRALAB.

The famous smooth control with the long resistor has the place of honor on thousands of service benches and in as many service kits. Fly with CENTRALAB again in '37.



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

# Centralab

Milwaukee, Wis.

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

FRENCH CENTRALAB CO.  
118 Avenue Ledru-Rollin  
Paris XI, France

FIXED RESISTORS  
VOLUME CONTROLS  
WAVE CHANGE SWITCHES  
SOUND PROJECTION CONTROLS

# RADIO TODAY'S SECOND

Who's Who, and Where to Buy. Containing over 2000 listings of manufacturers, trade-names and products

## RECEIVING SETS

Amateur . . . . . AM  
Auto . . . . . A  
Battery portable . . . . . BP  
Commercial . . . . . COM  
Farm . . . . . F  
Home . . . . . H  
Phonograph-radio . . . . . PR

- ACRATONE—Federated Purchasers, Inc.  
ADMIRAL—Continental Radio & Telev. Corp.  
AETNA RADID CORP., Div. Walgreen Drug Co., 1066 W. Adams St., Chicago, Ill., "Aetna"—H  
AIR KING PRODUCTS CO., 27 Hooper St., Brooklyn, N. Y., "Air King"—F, H  
AIR LINE—Montgomery Ward & Co.  
AIR MASTER—Automatic Radio Mfg. Co.  
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago, Ill., "Knight"—A, F, H—See advt. p. 52  
ALONSON—Commonwealth Radio Mfg. Co.  
AMERICAN BOSCH—United American Bosch Corp.  
AMPLEX RADID CORP., 240 W. 23rd St., New York, N. Y.—H  
AMPLION PRODUCTS CORP., 38 W. 21st St., New York, N. Y.—COM, PA, PR  
F. A. D. ANDREA, INC., 48-02 48th Ave., Woodside, L. I., N. Y., "Andrea"—A, H  
ANSLEY RADID CORP., 240 W. 23rd St., New York, N. Y., "Ansley Radio Dynaphone"—BP, PR  
ARCADIA—Wells-Gardner & Co.  
ARVIN—Noblitt-Sparks Industries  
AUTOCRAT RADID MFG. CO., 3855 N. Hamilton Ave., Chicago, Ill., "Autocrat"—A, F, H  
AUTMASTER—Automatic Radio Mfg. Co.  
AUTOMATIC RADIO MFG. CO., 122 Brookline Ave., Boston, Mass., "Automatic," "Tom Thumb," "Auto-Rola," "Airmaster," "Automaster"—A, H  
AUTO-ROLA—Automatic Radio Mfg. Co.  
BALKEIT RADID CORP., 549 W. Randolph St., Chicago, Ill., "Balkeit"—A, H  
BELMONT RADID CORP., 1257 Fullerton Ave., Chicago, Ill., "Belmont," "Freshman Masterpiece"—A, F, H  
BERKSHIRE CO., 130 N. Wells St., Chicago, Ill., "Berkshire"—A, F, H  
BESTONE—Nameo Mfg. Co.  
BRETING RADIO MFG. CO., 2177 Venice Blvd., Los Angeles, Calif., "Breting"—AM  
BROWNING—Tohe Deuschmann Corp.  
CAPEHART CORP., E. Pontiac St., Fort Wayne, Ind., "Capehart"—H, PR  
CAPITOL RADIO CD., 43 E. Ohio St., Chicago, Ill., "Capitol," "Mayfair," "Roosevelt"—A, F, H  
CASE ELECTRIC CORP., Marion, Ind.—A  
CAVALCADE RADIO CORP., 271 7th St., San Francisco, Calif., "Cavalcade"—A, F, H, PR  
CHAMPION RADIO LABORATORIES, 14553 Madison Ave., Lakewood, Ohio, "Champion," "Victory," "Monarch," "La Salle"—A, F, H  
CHANTICLEER RADID CO., 1728 Venice Blvd., San Francisco, Calif., "Chanticleer"  
CLIMAX RADIO & TELEV. CO., 511 Sangamon St., Chicago, Ill., "Climax"—A, F, H  
CLINTON MFG. CO., 1217 W. Washington Blvd., Chicago, Ill., "Clinton"—A, H  
CLIPPER—Radio Products Sales Co.  
CDLONIAL RADIO CORP., 254 Rano St., Buffalo, N. Y., "Colonial"—A, H, PR  
COMMONWEALTH RADIO MFG. CO., 4848 Lincoln Ave., Chicago, Ill., "Alonson"—H  
CONTINENTAL RADIO & TELEVISION CORP., 325 W. Huron St., Chicago, Ill., "Admiral"—A, F, H—See advt. outside rear cover  
CORONA RADIO & TELEVISION CORP., 420 N. Sacramento Blvd., Chicago, Ill., "Corona"—A, F, H  
CRESCENT RADIO MFG. CO., 3026 32nd Ave., S., Minneapolis, Minn.
- CRDSLEY RADID CORP., 1329 Arlington St., Cincinnati, Ohio, "Crosley," "Roanion"—A, BP, F, H—See advt. p. 28  
DETROLA RADID & TELEVISION CORP., 3630 W. Fort St., Detroit, Mich., "Detrola"—A, AM, F, H  
DELCO—United Motors Service  
TOBE DEUSCHMANN CORP., Canton, Mass., "Browning 35," "Tohe Tuner"—AM, H—Kits only  
DE WALD—Pierce Airo, Inc.  
DIAMOND RADID CO., 2482 University Ave., St. Paul, Minn., "Diamond," "Northland"—A, F, H  
DICTOGRAPH PRODUCTS CO., INC., 580 Fifth Ave., New York, N. Y., "Dictograph"—H—See advt. p. 23  
DUNN-HALL CO., 1477 W. Adams St., Los Angeles, Calif., "Dunn-Hall," "Tiny Tim"—H  
EASTERN RADIO SPECIALTY CO., 227 Greenwich St., New York, N. Y., "Peak"—AM, COM  
ECONOMIC SUPPLY CO., 2017 Grand Ave., Kansas City, Mo., "Esco"—A, F, H  
ELECTRICAL RESEARCH LABORATORIES, INC., 2222 Diversey Pky., Chicago, Ill., "Erla"—A, F, H, PR  
ELECTROTONE—Harris Mfg. Co.  
EL REY RADIO MFG. CORP., 8406 1/2 S. Broadway, Los Angeles, Calif.—H  
EMERSON RADIO & PHONOGRAPH CORP., 111 8th Ave., New York, N. Y., "Emerson"—A, BP, F, H, PR  
ENSIGN—Espey Mfg. Co.  
ERLA—Electrical Research Laboratory  
ESPEY MFG. CO., INC., 124 E. 25th St., New York, N. Y., "Ensign," "Espey"—BP, F, H, PR  
FADA RADIO & ELECTRIC CO., 30-20 Thompson Ave., Long Island City, N. Y., "Fada"—A, BP, F, H, PR  
FAIRBANKS, MORSE & CO., Home Appliance Div., 21st & Northwestern Ave., Indianapolis, Ind., "Fairbanks-Morse"—F, H  
FAIRCHILD AERIAL CAMERA CORP., 62-10 Woodside Ave., Woodside, L. I., N. Y., "Fairchild"—COM  
FEDERATED PURCHASERS, INC., 25 Park Place, New York, N. Y., "Acratone"—A, F, H  
FERGUSON RADIO CORP., 745 Broadway, New York, N. Y.—H  
FIRESIDE—Freely Corp.  
FORDSON EXPORT CORP., 2111 Woodward Ave., Detroit, Mich., "Fordson"—A, BP, F, H  
FREED MFG. CO., 44 W. 18th St., New York, N. Y., "Freed-Eisemann"—BP, F, H, PR—See advt. p. 49  
FREED-EISEMANN—Freed Mfg. Co.  
FREELY CORP., 2 W. 20th St., New York, N. Y., "Fireside"—A, H  
FRESHMAN MASTERPIECE—Belmont Radio Corp.  
GALVIN MFG. CORP., 847 W. Harrison St., Chicago, Ill., "Motorola"—A, H  
GAROD RADIO CORP., 115 Fourth Ave., New York, N. Y., "Garod"—F, H, PR  
GAYLORD MFG. CO., 1227 Washington Blvd., Chicago, Ill., "Gaylord," "Synratone"—A, AM, BP, COM, F, H, PR  
GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn., "General Electric"—A, F, H, PR—See advt. p. 64 and inside rear cover  
GENERAL HOUSEHOLD UTILITIES CO., 2638 N. Pulaski Rd., Chicago, Ill., "Grunow"—A, F, H  
GENERAL TELEVISION & RADIO CORP., 267 W. 17th St., New York, N. Y., "General"—AM, COM, H  
GILFILLAN BROS., INC., 1815 Venice Blvd., Los Angeles, Calif., "Gilfillan"—A, F, H, PR  
GLOBE TROTTER RADIO CO., 549 W. Randolph St., Chicago, Ill., "Globe Trotter"—H  
GREBE MFG. CO., INC., 119 Fourth Ave., New York, N. Y.—F, H, PR  
GROSS RADIO, INC., 51 Vesey St., New York, N. Y.—AM  
GRUNOW—General Household Utilities Co.  
HAIGIS LABORATORIES, INC., Maple Shade, N. J., "Haigis"—AM

# ANNUAL TRADE DIRECTORY

Complete buying guide for radio dealer, serviceman, jobber and manufacturer. Index on page 41.

HALLICRAFTERS, INC., 2611 S. Indiana, Chicago, Ill., "Skyrider," "Hallicrafters"—AM  
 HALSON RADIO MFG. CORP., 120 E. 16th St., New York, N. Y., "Halsol"—A, H, PR  
 HAMMARLUND MFG. CO., 424 W. 33rd St., New York, N. Y., "Super-Pro," "Pro"—AM, COM—See advt. p. 40  
 HARRIS MFG. CO., 2422 W. 7th St., Los Angeles, Calif., "Electro-tone"—PR  
 HEINTZ & KAUFMAN, LTD., S. San Francisco, Calif., "Heintz & Kaufman, Ltd."—COM  
 HERALD—International Trading Corp.  
 HETRO ELECTRICAL INDUSTRIES, INC., 4611 Ravenswood Ave., Chicago, Ill., "Hetro"—A, F, H, PR  
 HOBBS—Mission Bell Radio Mfg. Co.  
 HERBERT H. HORN, 1201 S. Olive St., Los Angeles, Calif., "Tiffany Tone"—A, H, PR  
 HOWARD RADIO CO., 1731 Belmont Ave., Chicago, Ill., "Howard"—A, AM, F, H, PR  
 INTERNATIONAL RADIO CORP., 4th & William Sts., Ann Arbor, Mich., "Kadette"—BP, H—See advt. p. 19  
 INTERNATIONAL TRADING CORPORATION, 176 W. Adams St., Chicago, Ill., "Terald"—A, BP, F, H  
 JACKSON BELL—Pacific Radio Corp.  
 KADETTE—International Radio Corp.  
 KARADIO CORP., 750 Washington Ave. N., Minneapolis, Minn., "Karadio"—A  
 KELETRON CO., 116 John St., New York, N. Y., "Keletron"—A, F, H  
 KINGSTON RADIO CO., Kokomo, Ind., "Kingston"—H  
 KNIGHT—Allied Radio Corp.  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LA SALLE—Champion Radio Lab.  
 LA SALLE RADIO CORP., 140 Washington St., New York, N. Y., "La Salle"—H, PR  
 LAUREHK RADIO MFG. CO., E. Michigan St., Adrian, Mich., "Laurehk," "Musique"—BP, F, H  
 LEAR DEVELOPMENT CO., 121 W. 17th St., New York, N. Y.—COM—See advt. p. 62  
 LEHMAN RADIO SALON, INC., 1013 Madison Ave., New York, N. Y., "Port-O-Matic"—PR  
 L'TATRO MFG. CO., 417 W. Water St., Decorah, Iowa, "L'Tatro"—F  
 LUXOR RADIO MFG. CO., 521 W. 23rd St., New York, N. Y., "Luxor"—H  
 MAJESTIC RADIO & TELEVISION CO., Marion, Ind., "Majestic"—H  
 MARCONI, INC., 879 Madison Ave., New York, N. Y.—PR—See advt. p. 43  
 MASTERPIECE—McMurdo Silver Corp.  
 MAYFAIR—Capitol Radio Co.  
 MELBURN RADIO MFG. CO., 2218 S. Hoover St., Los Angeles, Calif., "Melburn"—A, H  
 MIDWEST RADIO CORP., 909 Broadway, Cincinnati, Ohio, "Miraco"—A, F, H, PR  
 MIRACO—Midwest Radio Corp.  
 MISSION BELL RADIO MFG. CO., INC., 833 Venice Blvd., Los Angeles, Calif., "Hobbs," "Mission Bell"—A, H  
 MONARCH—Champion Radio Lab.  
 MONTGOMERY WARD & CO., Chicago, Ill., "Air Line"—A, F, H  
 MOTOROLA—Galvin Mfg. Corp.  
 MUSIQUE—Laurehk Radio Mfg. Co.  
 NAMCO MFG. CO., INC., 142 W. 20th St., New York, N. Y., "Bestone"—H, BP, PR  
 NATIONAL CO., 61 Sherman St., Malden, Mass., "National"—AM, COM  
 NOBLITT-SPARKS INDUSTRIES, Columbus, Ind., "Arvin"—A, F, H  
 NORTHLAND—Diamond Radio Co.  
 PACIFIC RADIO CORP., 844 W. Adams St., Chicago, Ill., "Pacific"—A, F, H  
 PACIFIC RADIO CORP., 1479 W. Adams Blvd., Los Angeles, Calif., "Jackson Bell"—H  
 PACKARD BELL RADIO CO., 1318 S. Grand Ave., Los Angeles, Calif., "Packard Bell"—A, H  
 PATHE RADIO & TELEVISION CO., 1401 W. 11th St., Los Angeles, Calif., "Patbe"—H  
 PATTERSON RADIO CO., 1320 S. Los Angeles St., Los Angeles, Calif.—AM

PEAK—Eastern Radio Specialty Co.  
 PER WAL RADIO & TELEVISION CO., 140 N. Dearborn St., Chicago, Ill., "Per Wal"—A, AM, F, H  
 PETER PAN RADIO MFG. CO., 1487 W. Adams St., Los Angeles, Calif., "Peter Pan"—A, H  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—A, F, H, PR—See advt. p. 6  
 PHILMORE MFG. CO., 113 University Pl., New York, N. Y., "Philmore"—AM, BP, H  
 PIERCE AIRO, INC., 510 6th Ave., New York, N. Y., "De Wald"—A, BP, F, H, PR  
 PILGRIM ELECTRIC CORP., 44 W. 18th St., New York, N. Y., "Pilgrim"—A, BP, F, H  
 PILOT RADIO CORP., 37-06 36th St., Long Island City, N. Y., "Pilot"—AM, COM, F, H, PR  
 PLA-PAL RADIO & TELEVISION CO., 230 E. Ohio St., Chicago, Ill.—A, BP, F, H  
 PORT-O-MATIC—Lehman Radio Salon, Inc.  
 PRO—Hammarlund Mfg. Co.  
 RACO—Radio Constructors Labs.  
 RADIOBAR CO. OF AMERICA, 7100 McKinley St., Los Angeles, Calif., "Radiobar"—H, PR  
 RADIO CONSTRUCTORS LABS., 136 Liberty St., New York, N. Y., "Raco"—AM  
 RADIODYNE—Western Coil & Electrical Co.  
 RADIO MFG. ENGINEERS, INC., 306 First Ave., Peoria, Ill.—AM  
 RADIO PRODUCTS CORP., 618 W. Elm St., Chicago, Ill.—A, F, H  
 RADIO PRODUCTS SALES CO., 238 W. 15th St., Los Angeles, Calif., "Clipper"—H  
 RADIO SUPPLIES, 125 E. 46th St., New York, N. Y.—A, AM, H  
 RADIO TRANCEIVER LABORATORIES, 8627 115th St., Richmond Hill, N. Y., "Radio Tranceiver Laboratories"—AM, BP  
 RADOLEK CO., 601 W. Randolph St., Chicago, Ill., "Radolek"—A, F, H—See advt. p. 49  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA-Victor"—A, AM, F, H, PR—See advt. p. 4  
 RECORDING EQUIPMENT MFG. CO., 611 Sunset Blvd., Hollywood, Calif., "Remco"—BP, COM, PR  
 REGAL RADIO LABS., 118 E. 28th St., New York, N. Y.—H  
 REMCO—Recording Equipment Mfg. Co.  
 REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—A, F, H  
 REXTON RADIO CORP., 1217 W. Washington Blvd., Chicago, Ill., "Rexton"—H  
 ROOSEVELT—Capitol Radio Co.  
 ROYALE RADIO MFG. CO., 2313 W. Pico St., Los Angeles, Calif., "Royale"—H  
 J. L. SARA CO., 123 Liberty St., New York, N. Y., "Sara"—H, PR  
 E. M. SARGENT CO., 212 9th St., Oakland, Calif., "Sargent"—AM, COM  
 SAVIL RADIO ENGINEERING CORP., 71 Grand St., New York, N. Y.—H  
 E. H. SCOTT RADIO LABORATORIES, INC., 4450 Ravenswood Ave., Chicago, Ill., "Scott"—H  
 SEARS, ROEBUCK & CO., 925 S. Homan St., Chicago, Ill., "Silver-tone"—A, AM, F, H  
 SENGBUSCH SELF-CLOSING INKSTAND CO., Air-tite Div., 2218 Claybourn St., Milwaukee, Wis.—H  
 SENTINEL RADIO CORP., 2222 Diversey Pkwy., Chicago, Ill., "Sentinel"—A, F, H, PR  
 SETCHELL-CARLSON MFG. CO., INC., 2233 University St., St. Paul, Minn., "Setchell-Carlson"—A, F, H  
 MCMURDO SILVER CORP., 2900 S. Michigan Blvd., Chicago, Ill., "Masterpiece"—H  
 SILVER MARSHALL MFG. CO., 2611 S. Indiana Ave., Chicago, Ill., "Silver Marshall"—A, H  
 SILVERTONE—Sears, Roebuck & Co.  
 SIMPLEX RADIO CO., Monroe & King Sts., Sandusky, Ohio, "Simplex"—A, AM, BP, COM, F, H  
 SKYRIDER—The Hallicrafters, Inc.  
 SPARKS-WITHINGTON CO., E. Gausson Ave., Jackson, Mich., "Sparton"—A, F, H, PR  
 SPARTON—Sparks-Withington Co.  
 STEWART-WARNER CORP., 1826 Diversey Pkwy., Chicago, Ill., "Stewart-Warner"—A, F, H

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SUPER-PRO—Hammarlund Mfg. Co.  
SYNCRATONE—Gaylord Mfg. Co.  
TIFFANY TONE—Herbert H. Horn  
TINY-TIM—Dunn-Hall Co.  
TOBE TUNER—Tobe Deuschmann Corp.  
TRAV-LER RADIO & TELEVISION CORP., 1036 W. Van Buren St., Chicago, Ill. "Trav-Ler"—A, F, H  
TROY RADIO MFG. CO., 1144 S. Olive St., Los Angeles, Calif. "Troy"—A, BP, H—See advt. p. 29  
TRUETONE—Western Auto Supply Co.  
ULTRAMAR MFG. CORP., 1160 Howe St., Chicago, Ill. "Ultramar"—A, BP, F, PR  
UNITO AMERICAN BOSCH CORP., 3664 Main St., Springfield, Mass. "American-Bosch"—A, F, H—See advt. p. 1  
UNITO MOTORS SERVICE, 3044 Grand Blvd., Detroit, Mich. "Delco"—A, F, H  
UNIVERSAL BATTERY CO., 3410 S. La Salle St., Chicago, Ill. "Universal"—A, F, H  
UNIVERSAL TUBE MFG. CO., 62 Kingston Ave., Brooklyn, N. Y.—H  
VICTORY—Champion Radio Labs.  
WARWICK MFG. CO., 1700 W. Washington Blvd., Chicago, Ill. "Warwick"—A, F, H  
WATTERSON RADIO MFG. CO., Box 54, Dallas, Texas. "Watterson"—BP, F, H  
WELLS-GARDNER & CO., 2701 N. Kildare Ave., Chicago, Ill. "Arcadia," "Wells-Gardner"—A, F, H  
WESTERN AUTO SUPPLY CO., 2107 Grand St., Kansas City, Mo. "Truetone"—A, H  
WESTERN COIL & ELECTRICAL CO., 215 State St., Racine, Wis. "Radiodyne"—A, F, H  
WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y. "Western Electric"—COM  
WESTINGHOUSE ELECTRIC SUPPLY CO., 150 Varick St., New York, N. Y. "Westinghouse"—A, F, H  
WHITE WIND ELECTRIC CO., 2300 E. Douglas Ave., Wichita, Kan. "White"—F, H  
WHOLESALE RADIO SERVICE CO., INC., 100 6th Ave., New York, N. Y. "Lafayette"—A, AM, BP, F, H, PR  
WILCOX-GAY CORP., Charlotte, Mich. "Wilcox-Gay"—F, H  
ZENITH RADIO CORP., 3620 S. Iron St., Chicago, Ill. "Zenith"—A, BP, F, H  
ZEPHYR RADIO CO., 13139 Hamilton Ave., Detroit, Mich. "Zephyr"—A, F, H

## ANTENNAS & ACCESSORIES



- Accessories . . . . . ACC  
All-wave home . . . . . AW  
Auto . . . . . A  
Kits . . . . . K  
Master systems . . . . . MS  
Wires . . . . . W

- ABC RADIO LABORATORIES, 3334 N. New Jersey St., Indianapolis, Ind. "ABC"—A  
ACME WIRE CO., New Haven, Conn.—W  
AIR QUEEN—Knox Porcelain Corp.  
ALQEN PRODUCTS CO., 715 Center St., Brockton, Mass. "Fade-out"—AW  
AMERICAN BOSCH—United American Bosch  
AMERICAN ENAMELEO MAGNET WIRE CO., Port Huron, Mich.—W  
AMERICAN RADIO HARDWARE CO., INC., 476 Broadway, New York, N. Y. "Arco"—A, ACC—See advt. p. 51  
AMY, ACEVES & KING, 11 W. 42nd St., New York, N. Y.—MS  
ANTENNA MAST-ER—D. & H. Mfg. Co., Inc.  
ARHCO—American Radio Hardware Co., Inc.  
AUTO TOP—Wedge Mfg. Co.  
B C—Porcelain Products, Inc.  
BELOEN MFG. CO., 4647 W. Van Buren St., Chicago, Ill. "Belden"—ACC, AW, K  
BIRCO—Birnback Radio Co.  
BIRNBACH RADIO CO., 145 Hudson St., New York, N. Y. "Bircor"—A, ACC, AW, K, MS

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 BROWNIE—Porcelain Products, Inc.  
 BURCH PRESTEEL PRODUCTS CO., Chattanooga, Tenn., "Burch"—ACC  
 CLAMPIPE—Mueller Electric Co.  
 CONSOLIDATED WIRE & ASSOCIATED CORPS., 512 S. Peoria St., Chicago, Ill., "Consolidated," "Rub-Tenna"—A, ACC, AW, K  
 CONTINENTAL WIRE CO., 110 Lafayette St., New York, N. Y., "Continental"—A, ACC, AW, K  
 CORNISH WIRE CO., INC., 30 Church St., New York, N. Y., "Corwico"—ACC, AW, K—See advt. p. 45  
 CORWICO—Cornish Wire Co., Inc.  
 CRESCENT INSULATED WIRE & CABLE CO., Trenton, N. J., "Crescent"—W  
 D. & H. MANUFACTURING CO., INC., 18 W. Irvington Pl., Denver, Colo., "Antenna Mast-er"—A  
 DELCO—United Motors Service  
 TOBE DEUTSCHMANN CORP., Canton, Mass., "Filterizer"—AW, K  
 EFFARSEE—Fishwick Radio Co.  
 EMERSON RADID & PHONOGRAPH CORP., 111 Eighth Ave., New York, N. Y., "Emerson"—AW, K  
 ESSEX WIRE CORP., 14310 Woodward Ave., Detroit, Mich.—W  
 FADA RADIO & ELECTRIC CO., 30-20 Thomson Ave., Long Island City, N. Y., "Fada"—AW  
 FADE-OUT—Alden Products Co.  
 F & H RADID LABDRATDRIES, Fargo, N. Dak., "F & H"—A, ACC  
 FAIRBANKS, MDRSE & CO., 21st & Northwestern Ave., Indianapolis, Ind., "Fairbanks-Morse"—AW  
 FILTERIZER—Tobe Deutschmann Corp.  
 FISHWICK RADIO CO., 139 W. 4th St., Cincinnati, Ohio, "Effarsee"—A, AW  
 M. M. FLERON & SONS, 113 N. Broad St., Trenton, N. J., "Fleron"—A, ACC, AW, K—See advt. p. 44  
 FORDSON EXPDRT CORP., 211 Woodward Ave., Detroit, Mich., "Fordson"—A, AW, K  
 FOWLER MFG. CO., 9 Ruffert St., St. Louis, Mo.—K  
 GALVIN MFG. CORP., 847 W. Harrison St., Chicago, Ill., "Motorola Topper"—A  
 GENERAL CABLE CORP., White Plains, N. Y.—W  
 GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn., "G E," "V-Doublet"—AW, K  
 G E—General Electric Co.  
 GENERAL HOUSEHOLD UTILITIES CO., 2638 N. Pulaski Rd., Chicago, Ill., "Grunow"—AW  
 GENERAL INSULATED WIRE CORP., 53 Park Pl., New York, N. Y.—W  
 GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—A, AW, K, MS  
 GEN-WIN—General Winding Co.  
 GRUNDW—General Household Utilities Co.  
 HDLYDKE CO., INC., 720 Main St., Holyoke, Mass.—ACC  
 HERBERT H. HORN, 1201 S. Olive St., Los Angeles, Calif., "Stratosphere"—AW, K  
 ICA—Insuline Corp. of America  
 INLAND MANUFACTURING DIV., General Motors Corp., 14 Coleman Ave., Dayton, Ohio, "Inlandenna"—A  
 INLANTENNA—Inland Mfg. Div., General Motors Corp.  
 INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—A, ACC, AW, K, MS  
 J. F. D. MANUFACTURING CO., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y., "J. F. D."—A, ACC, AW, K—See advt. p. 51  
 E. F. JOHNSON CO., Waseca, Minn., "Johnson"—ACC  
 KNDX PORCELAIN CORP., Knoxville, Tenn., "Air Queen," "Knox"—ACC, AW  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LAUREHK RADIO MFG. CO., E. Michigan St., Adrian, Mich., "Laurehk"—A, ACC, K  
 LENZ ELECTRIC MFG. CO., 1751 N. Western Ave., Chicago, Ill.—W  
 LITTLEFUSE LABDRATDRIES, 4238 Lincoln Ave., Chicago, Ill.—ACC  
 MAGIC ROD—Radio Electric Service  
 MEISSNER MFG. CO., 7th & Belmont Sts., Mt. Carmel, Ill., "Meissner"—ACC  
 MIDWEST RADID CORP., 909 Broadway, Cincinnati, Ohio, "Miraco"—ACC, AW, K, MS  
 MIRACO—Midwest Radio Corp.  
 MOTORDLA TOPPER—Galvin Mfg. Corp.  
 MUELLER ELECTRIC CO., 1573 E. 31st St., Cleveland, Ohio, "Clampipe"—ACC  
 NDBLITT-SPARKS INDUSTRIES, INC., Columbus, Ind.—A  
 NDRWEST RADID LABDRATDRIES, 3454 Fullerton Ave., Chicago, Ill., "Streamline"—A  
 PACIFIC RADID CORP., 834 W. Adams St., Chicago, Ill.—A

PHILCO RADID & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—A, ACC, AW  
 PHILMORE MFG. CO., 113 University Pl., New York, N. Y., "Philmore"—A, AW, K  
 PILOT RADID CORP., 37-06 36th St., Long Island City, N. Y., "Pilot"—ACC, AW, K  
 PORCELAIN PRODUCTS, INC., 124 W. Front St., Findlay, Ohio, "Brownie," "B C," "Thur-Star"—ACC, AW, K  
 PREMEX SALES DIV., Chisholm-Ryder Co., Niagara Falls, N. Y., "Premex"—ACC, AW, K—See advt. p. 44  
 QUAM-NICHOLS CO., Cottage Grove Ave., Chicago, Ill., "Quam"—A, AW, K  
 RADIAERIAL—Western Coil & Electrical Co.  
 RADIO ELECTRIC SERVICE, 1918 Newton St., Saginaw, Mich., "Magic Rod"—A  
 RADIO ENGINEERING LABS., INC., 25-14 41st Ave., Long Island City, N. Y.—A  
 RADDLEK CO., 601 W. Randolph St., Chicago, Ill., "Radolek"—A, ACC, AW, K  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—A, ACC, AW, K, MS  
 RED HEAD—Seibtman Bros.  
 RUB-A-TENNA—Consolidated Wire & Associated Corps.  
 SCHIFFMANN BROTHERS, 3840 N. Ashland Ave., Chicago, Ill., "Red Head"—A  
 MCMURDD SILVER CORP., 2900 South Michigan Blvd., Chicago, Ill., "Silver"—AW, K  
 SNUG-FIT—F & H Radio Labs.  
 SNYDER, INC., 813 Noble St., Philadelphia, Pa., "Snyder"—A, ACC  
 SPARKS-WITHINGTON CO., E. Ganson Ave., Jackson, Mich., "Sparton"—K  
 SPARTON—Sparks-Withington Co.  
 STA-PUT—Consolidated Wire & Associated Corps.  
 STRATOSPHERE—Herbert H. Horn  
 STREAMLINE—Norwest Radio Labs.  
 SUPREME INSTRUMENTS CORP., 414 Howard St., Greenwood, Miss.—AW, K  
 TACD—Technical Appliance Corp.  
 TECHNICAL APPLIANCE CORP., 17 E. 16th St., New York, N. Y., "Taco"—ACC, AW, K, MS—See advt. p. 44  
 ULTRAMAR MFG. CORP., 1160 Howe St., Chicago, Ill., "Ultramar"—AW  
 UNITED AMERICAN BOSCH CORP., 3664 Main St., Springfield, Mass., "American Bosch"—A, ACC, AW  
 UNITED MDRS SERVICE, 3044 Grand Blvd., Detroit, Mich., "Delco"—A, AW, K  
 V-DOUBLET—General Electric Co.  
 VICTORY MFG. CO., INC., 2021 S. Michigan Ave., Chicago, Ill., "Victory"—A  
 WARD PRODUCTS CORP., 1523 E. 45th St., Cleveland, Ohio, "Ward"—A, AW, K—See advt. p. 44  
 WEDGE MFG. CO., 2334 S. Michigan Ave., Chicago, Ill., "Auto Top Aerial"—A  
 WESTERN COIL & ELECTRICAL CO., 215 State St., Racine, Wis., "Radioerial"  
 WHOLESALE RADID SERVICE CO., INC., 100 Sixth Ave., New York, N. Y., "Lafayette"—A, ACC, AW, K, MS  
 WILCOX-GAY CORP., Charlotte, Mich., "Wilcox-Gay"—AW, K  
 WINCHARGER CORP., 2700 Hawkeye Drive, Sioux City, Iowa, "Wincharger"—ACC  
 ZENITH RADID CORP., 3620 S. Iron St., Chicago, Ill., "Zenith"—A, ACC, AW, K

BATTERIES, DRY & WET



- Primary "A" . . . . . A
- "B" . . . . . B
- "C" . . . . . C
- Dry cells . . . . . DC
- Flashlight . . . . . FL
- Storage . . . . . S

ACDUSTICDN—Dictograph Products Co., Inc.  
 AIR CELL—National Carbon Co.  
 BOND ELECTRIC CORP., New Haven, Conn., "Bond"—A, B, C, DC, FL  
 BURGESS BATTERY CO., 111 W. Monroe St., Chicago, Ill., "Burgess"—A, B, C, DC, FL  
 DICTOGRAPH PRODUCTS CO., INC., 580 Fifth Ave., New York, N. Y., "Acousticon"—DC  
 ECONDMIC SUPPLY CO., 2017 Grand Ave., Kansas City, Mo., "Esco"—S

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*noise-filtered*  
radio . . . . .



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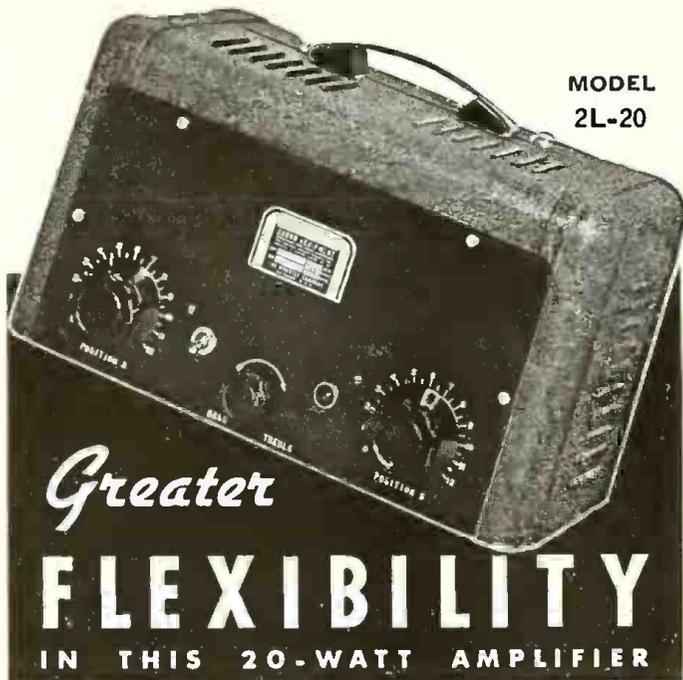
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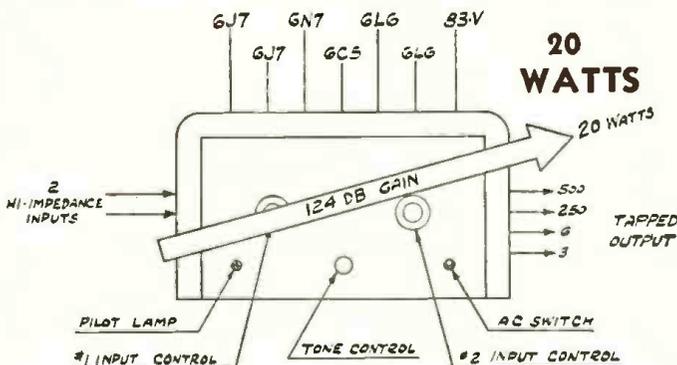
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30 CHURCH ST., NEW YORK CITY



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- ★ IMPROVED TAPPED OUTPUT COMBINATION
- ★ USES BEAM TYPE TUBES



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

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Tone-flow radio Tubes

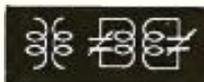
TUNG-SOL LAMP WORKS, INC.  
Radio Tube Division

SALES OFFICES: Atlanta, Boston, Charlotte, Chicago, Dallas, Detroit, Kansas City, Los Angeles, New York.  
General Office: Newark, N. J.

**BATTERIES—Cont'd.**

ELECTRIC STORAGE BATTERY CO., Allegheny Ave. & 19th St., Philadelphia, Pa., "Exide"—S  
 ESCO—Economic Supply Co.  
 EVEREADY—National Carbon Co.  
 EXIDE—Electric Storage Battery Co.  
 GEN-E-ROTOR, 908 Keo. St., Des Moines, Iowa, "Gen-E-Rotor"—S  
 GLOBE-UNION, INC., 900 E. Keefe Ave., Milwaukee, Wis., "Globe-Union"—S  
 LAYERBILT—National Carbon Co.  
 MONARK BATTERY CO., INC., 4556 W. Grand Ave., Chicago, Ill., "Monark"—S—See advt. p. 58  
 NATIONAL CARBON CO., INC., 30 E. 42nd St., New York, "Layerbilt," "Eveready," "Air Cell"—A, B, C, DC, FL  
 RAY-O-VAC, Madison, Wis., "Ray-o-vac"—A, B, C, DC, FL  
 U S L BATTERY CORP., Niagara Falls, N. Y., "USL"—S  
 UNIVERSAL BATTERY CO., 3410 S. LaSalle St., Chicago, Ill., "Universal"—S  
 WHITE WIND ELECTRIC CO., 2300 E. Douglas Ave., Wichita, Kan., "White"—S  
 WILLARD STORAGE BATTERY CO., E. 131st St. & St. Clair Ave., Cleveland, Ohio, "Willard"—S

**COILS & I. F. TRANSFORMERS**



I.F. coils . . . . . IF  
 R.F. coils . . . . . RF  
 Transmitting . . . . . T

AIREX—Electronic Products Co.  
 ALADDIN RADIO INDUSTRIES, INC., 466 W. Superior St., Chicago, Ill., "Aladdin"—IF, RF  
 ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass., "Na-Ald"—RF  
 AUTOMATIC WINDING CO., 94 Devon Terr., Kearny, N. J.—IF, RF  
 BEST MFG. CO., INC., 1200 Grove St., Irvington, N. J., "Best"  
 CARRON MFG. CO., 415 S. Aberdeen St., Chicago, Ill., "Carron"—IF, RF  
 COTO-COIL CO., INC., 229 Chapman St., Providence, R. I., "Coto"—IF, RF, T  
 ELECTRONIC PRODUCTS CO., 5356 E. Ninth St., Los Angeles, Calif., "Airex"—T  
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y., "Ferranti"—T  
 GENERAL MFG. CO., 8066 S. Chicago Ave., Chicago, Ill., "Gen-Ral"—IF, RF, T  
 GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—IF, RF, T  
 GEN-RAL—General Mfg. Co.  
 GEN-WIN—General Winding Co.  
 EDWIN I. GUTHMAN & CO., INC., 400 S. Peoria St., Chicago, Ill., "Guthman"—IF, RF—See advt. p. 53  
 HAMMARLUND MFG. CO., 424 W. 33rd St., New York, N. Y., "Hammarlund"—IF, RF, T—See advt. p. 40  
 ICA—Insuline Corp. of America  
 INSULINE CORP. OF AMERICA, 25 Park Place, New York, N. Y., "ICA"—IF, RF, T  
 JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—T  
 E. F. JOHNSON CO., Waseca, Minn.—T  
 LEOTONE RADIO CO., 63 Dey St., New York, N. Y.—IF  
 FRED M. LINK, 125 W. 17th St., New York, N. Y.—RF, T  
 MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—IF, RF  
 MELBURN RADIO MFG. CO., 2218 S. Hoover St., Los Angeles, Calif.—RF  
 J. W. MILLER CO., 5917 S. Main St., Los Angeles, Calif., "Miller"—IF, RF  
 NA-ALD—Alden Products Co.  
 NATIONAL CO., 61 Sherman St., Malden, Mass., "National"—IF, RF, T  
 NORWALK ENGINEERING CORP., 53 Chestnut St., South Norwalk, Conn.—IF, RF, T  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—IF, RF

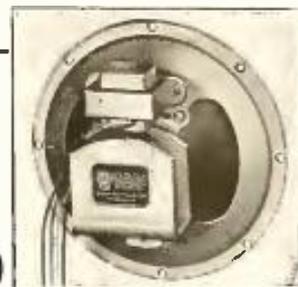
RADIO ENGINEERING LABS., INC., 25-14 41st St., Long Island City, N. Y., "REL"—T  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—IF, RF, T  
 REL—Radio Engineering Labs  
 J. & L. SARA CO., 123 Liberty St., New York, N. Y., "Sara"—IF, RF  
 SHORT WAVE INDUCTOR CO., 1428 N. Wells St., Chicago, Ill.—IF, RF  
 F. W. SICKLES CO., 300 Main St., Springfield, Mass., "Sickles"—IF, RF, T  
 TELERADIO ENGINEERING CORP., 484 Broome St., New York, N. Y., "Telradio"—IF, RF  
 ULTRAMAR MFG. CORP., 1160 Howe St., Chicago, Ill., "Ultramar"—IF, RF

**CONDENSERS, FIXED**



Dry electrolytic . . . . . DE  
 Mica . . . . . M  
 Paper . . . . . P  
 Transmitting . . . . . T  
 Wet electrolytic . . . . . WE

ACRACON—Condenser Corp. of America  
 AEROVOX CORP., 70 Washington St., Brooklyn, N. Y., "Aerovox," "Hi-Farad"—DE, M, P, T, WE—See advt. p. 47  
 AIREX—Electronics Products Co.  
 ALADDIN RADIO INDUSTRIES, INC., 466 W. Superior St., Chicago, Ill.—M  
 AMCO—Gaylord Mfg. Co.  
 AMNIL—Girard Continental Condenser Corp.  
 ARISTON LABORATORY, Arlston Mfg. Corp., 4045 Diversey Ave., Chicago, Ill., "Arlston"—DE, P, T, WE  
 ATLAS CONDENSER PRODUCTS CO., 548 Westchester Ave., New York, N. Y., "Atlas Mites"—P  
 NATHANIEL BALDWIN—Consolidated Condenser Co.  
 B-L ELECTRIC MFG. CO., 19th & Washington Ave., St. Louis, Mo.—E  
 BLUE RIBBON—Curtis Condenser Corp.  
 C-O—Cornell-Dubilier Corp.  
 CERAMICONS—Erie Resistor Corp.  
 CONDENSER CORP. OF AMERICA, Hamilton Blvd., South Plainfield, N. J., "Aeracorn"—DE, P, WE  
 CONDENSER PRODUCTS, 1389 N. Branch St., Chicago, Ill., DE, P, WE  
 CONSOLIDATED CONDENSER CO., 365 W. Superior St., Chicago, Ill., "Nathaniel Baldwin"—DE, P, WE—See advt. p. 31  
 CONSOLIDATED WIRE & ASSOCIATED CORPS., 512 S. Peoria St., Chicago, Ill., "Red Head," "Red Seal," "Triple Seal"—DE, P, T  
 CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental"—P, T  
 CORNELL-DUBILIER CORP., 1000 Hamilton Blvd., South Plainfield, N. J., "Cornell-Dubilier"—DE, M, P, T, WE—See advt. p. 51  
 COSMIC RADIO CORP., 699 E. 135th St., New York, N. Y., "Cosmic," "Megrite"—DE, P  
 CROLITES—Henry L. Crowley & Co., Inc.  
 HENRY L. CROWLEY & CO., INC., No. 1 Central Ave., West Orange, N. J., "Crollites"—DE  
 CURTIS CONDENSER CORP., 3088 W. 106th St., Cleveland, Ohio, "Standard," "Super," "Blue Ribbon"—DE—See advt. p. 49  
 TOBE DEUTSCHMANN CORP., Canton, Mass., "Tohe"—De, P, T  
 DOMINO—Solar Mfg. Corp.  
 DUMONT ELECTRIC CO., 514 Broadway, New York, N. Y., "Dumont"—DE, M, P, T, WE  
 DWYER ELECTRIC PRODUCTS CO., 10 S. La Salle St., Chicago, Ill., "Dwyer"—T  
 "ECCOR"—Economy Condenser Corp.  
 ECONOMY CONDENSER CORP., 3033 N. Pulaski Rd., Chicago, Ill., "Eccor"—DE, P, T  
 ELECTRO MOTIVE MFG. CO., INC., 797 E. 140th St., New York, N. Y., "El Menco"—M  
 ELECTRONICS PRODUCTS CO., 5356 E. 9th St., Los Angeles, Calif., "Airex"—T  
 "EL MENCO"—Electro Motive Mfg. Co., Inc.  
 ERIE RESISTOR CORP., Erie, Pa., "Ceramicons"—T  
 EX-STAT—Tilton Electric Corp.  
 RCA FARADON—RCA Mfg. Co.  
 JOHN E. FAST & CO., 3115 N. Pulaski Rd., Chicago, Ill., "Fast"—P, T  
 FILTERMATIC MFG. CO., 6913 Ditman St., Philadelphia, Pa., "F. M. C."—M



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APPEARING IN THIS ISSUE, PAGE 36,  
CONTINUED IN SUCCEEDING ISSUES

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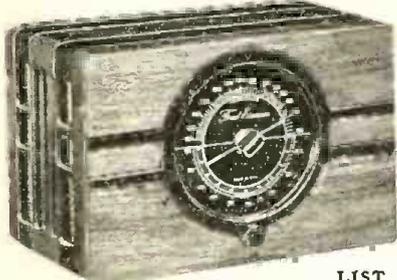
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- A. M. FLECHTHEIM & CO., INC., 692 Broadway,  
New York, N. Y., "Flechtheim Superior"—LDE,  
M, P, T, WE
- F.M.C.—Filtermatic Mfg. Co.
- GAYLORD MFG. CO., 1227 Washington Blvd., Chi-  
cago, Ill., "Amco"—DE, M, P, T, WE
- GENERAL RADIO CO., 30 State St., Cambridge,  
Mass., "G-R"—M
- G-H—Girard-Hopkins
- GIRARD CONTINENTAL CONDENSER CORP., 2341  
Wolfram St., Chicago, Ill., "Super Seal," "Amnil"  
—P
- GIRARD-HOPKINS, 1437 23rd Ave., Oakland, Calif.  
—"G-H"—DE, P, T
- G-R—General Radio Co.
- HI-FARAD—Aerovox Corp.
- ILLINOIS CONDENSER COMPANY, 3252 W. North  
Ave., Chicago, Ill., "Illinois Condenser Co."—DE
- JENKINS & ADAIR, INC., 3333 Belmont Ave.,  
Chicago, Ill., "J & A"—T
- KELLOGG SWITCHBOARD & SUPPLY CO., 1066 W.  
Adams St., Chicago, Ill., "Kellogg"—P
- LEEDS & NORTHRUP CO., 4970 Stenton Ave.,  
Philadelphia, Pa.—Precision M
- LITTLE GIANT—Solar Mfg. Corp.
- MAGNAVOX CO., 21231 Bueter Rd., Fort Wayne,  
Ind., "Magnavox"—DE, WE
- P. R. MALLORY & CO., INC., 3029 E. Washington  
St., Indianapolis, Ind., "Mallory"—DE, P, T, WE
- MEGRITE—Cosmic Radio Corp.
- MICAMOLD PRODUCTS CORP., 1087 Flushing Ave.,  
Brooklyn, N. Y., "Micamold"—DE, M, P, T
- MITES—Atlas Condenser Products Co.
- MORRILL & MORRILL, 30 Church St., New York,  
N. Y., "Morrill"—P, T
- PHILCO RADIO & TELEVISION CORP., Tioga & C  
Sts., Philadelphia, Pa., "Philco"—DE, M, P, WE
- POTTER CO., North Chicago, Ill., "Potter"—DE,  
P, T
- RCA MANUFACTURING CO., Front & Cooper Sts.,  
Camden, N. J., "RCA Paradon"—DE, M, P, T, WE
- RED SEAL—Consolidated Wire & Associated Corps.
- RED HEAD—Consolidated Wire & Associated Corps.
- SANGAMO ELECTRIC CO., Springfield, Ill., "San-  
gamo"—M, T
- SEVISON MAGNETO ENGINEERING CO., 379 Phil-  
lips Ave., Toledo, Ohio—M, P
- SOLAR MFG. CORP., 599 Broadway, New York,  
N. Y., "Solar," "Domino," "Little Giant"—DE,  
M, P, WE
- SPRAGUE PRODUCTS CO., N. Adams, Mass.,  
"Sprague '600' Line"—DE, M, P, T, WE—See  
advt p. 54
- SPRAGUE "600" LINE—Sprague Products Co.
- STANDARD—Curtis Condenser Corp.
- STROMBERG-CARLSON TELEPHONE MFG. CO., 100  
Carlson Rd., Rochester, N. Y.—P
- SUPER—Curtis Condenser Corp.
- SUPER SEAL—Girard Continental Condenser Corp.
- TILTON ELECTRIC CORP., 15 E. 26th St., New  
York, N. Y., "Ex-Stat"—DE, P
- TOBE—Tohe Deutschmann Corp.
- TRIPLE SEAL—Consolidated Wire & Associated  
Corps.
- WHITE WIND ELECTRIC CO., 2300 E. Douglas  
Ave., Wichita, Kan., "White"—DE, M

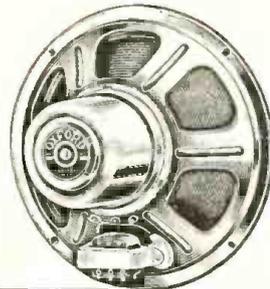
**CONDENSERS, VARIABLE**



- Air trimmer . . . . . A  
Mica trimmer . . . . . M  
Receiver tuning . . . . . RT  
Transmitter tuning . . . . . TT

- ALDEN PRODUCTS CO., 715 Center St., Brockton,  
Mass., "Na-Ald"—M, RT
- AMERICAN RADIO HARDWARE CO., INC., 476  
Broadway, New York, N. Y., "Arhco"—RT
- AMERICAN STEEL PACKAGE CO., Squire Ave.,  
Defiance, Ohio, "Defange"—RT
- ARHCO—American Radio Hardware Co., Inc.
- BUD RADIO INC., 1937 E. 55th St., Cleveland,  
Ohio, "Bud"—RT, TT
- ALLEN D. CARDWELL MFG. CORP., 81 Prospect  
St., Brooklyn, N. Y., "Cardwell"—A, RT, TT

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### HIGH-FIDELITY CONSOLE

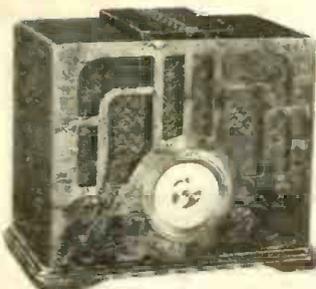
★ Ten metal tube console—shadow tuning—dual-speed, rubber-drive vernier dial. Selectivity-fidelity control. All wave—540 to 18,000 kc. Full vision dial—one scale at a time. Mechanism controlled by band switch. Dual-section tuning condensers for easy tuning on low waves. Overspaced oscillator condenser. Modern type walnut cabinet. Model 810G—list \$149. Atwater Kent Mfg. Co., 4700 Wissahickon Ave., Philadelphia, Penna.—RADIO TODAY

### METAL TUBE CHECKING ADAPTER



★ Universal adapter for testing metal tubes in type 36 socket of any tube checker. Three octal sockets. Tests everyone of the ten metal tubes—two toggle switches for thorough and complete test of tubes. List price—\$6.50. Alden Products Co., Brockton, Mass.—RADIO TODAY

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dial printed in colors. Tone control, automatic overload control, and slow motion tuning. AC-DC models—glass or metal tubes. AC-DC models—glass, or metal and glass. Hand polished walnut veneer cabinet. Freed-Eisemann model T-367-S. Freed Mfg. Co., 127 West 17th St., New York City.—RADIO TODAY

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of coil and increases selectivity. Coils more compact. Available to experimenters or manufacturers. Henry L. Crowley & Co., 1 Central Ave., West Orange, N. J.—RADIO TODAY

### SKIP-BAND SUPERHETERODYNE



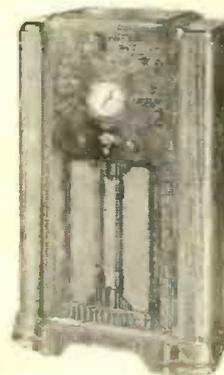
★ Six metal-tube superhet. Dual wave—540 to 1800 and 5400 to 18,000 kc. Slide rule tuning with automatic vernier—one scale visible at a time. Stabilized 8-inch dynamic speaker with hum bucking coil. Automatic volume control—tone control. Undistorted output of 2 watts. Modified modern cabinet design of hand-rubbed walnut. Model A-64. General Electric Co., Bridgeport, Conn.—RADIO TODAY.

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★ Metalized resistor with high-voltage insulation. Sealed against moisture—crack-proof and break-proof. Extremely small in size—body of 1/2 watt is 3/8 in. x 3/16 in. diameter. Tinned flexible leads moulded to ends. Vibration-proof and permanent. Color coded and marked—100 ohms to 10 megohms. List price—1 watt \$.25, 1/2 watt \$.20. International Resistance Co., 2100 Arch St., Philadelphia, Pa.—RADIO TODAY

### FIVE-BAND ALL-WAVE SUPER



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- DE ADCO PRODUCTS CO., 9 W. Illinois St., Chicago, Ill., "DeJong"—RT
- DEFIANCE—American Steel Package Co.
- DE JONG—De Adeo Products
- DE-JUR-AMSCO CDRP., Bridge St., Shelton, Conn., "De-Jur-Amsco"—M, RT
- DWYER ELECTRIC PRODUCTS CO., 10 South LaSalle St., Chicago, Ill., "Dwyer"—TT
- ELMENCO—Electro Motive Mfg. Co., Inc.
- ELECTRO MOTIVE MFG CO., INC., 797 E. 140th St., New York, N. Y., "Elmenco"—M
- FEDERAL INSTRUMENT CORP., 325 Classon Ave., Brooklyn, N. Y., "Federal"—A, M, RT
- ALBERT W. FRANKLIN MFG. CORP., 160 Varick St., New York, N. Y.—M
- GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth, N. J., "G. I."—RT
- GENERAL RADIO CO., 30 State St., Cambridge, Mass., "G. R."—Special purpose
- G. I.—General Instrument Corp.
- G-R—General Radio Co.
- EDWIN I. GUTHMAN & CO., INC., 400 S. Peoria St., Chicago, Ill., "Guthman"—A, M
- HAMMARLUND MFG. CO., 424 W. 33rd St., New York, N. Y., "Hammarlund"—A, M, RT, TT—See advt. p. 40
- HEINTZ & KAUFMAN, LTD., South San Francisco, Calif., "Heintz & Kaufman, Ltd."—TT
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y.—A, M, RT, T
- E. F. JOHNSON CO., Waseca, Minn.—T
- LEEO & NORTHRUP CO., 4970 Stenton Ave., Philadelphia, Pa.—Precision
- FRED M. LINK, 125 W. 17th St., New York, N. Y.—TT
- MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—A, M, RT
- J. W. MILLER CO., 5917 S. Main St., Los Angeles, Calif., "Miller"—M
- NA-ALD—Alden Products Co.
- NATIONAL CO., 61 Sherman St., Malden, Mass., "National"—A, M, RT, TT
- PHILCO RADIO & TELEVISION CDRP., Tioga & C Sts., Philadelphia, Pa., "Philco"—M, RT
- RADIO CONDENSER CO., Davis St., Camden, N. J., "R. C. C."—RT
- RADIO ENGINEERING LABS., INC., 25-14 41st Ave., Long Island City, N. Y., "Rel"—T
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA Faradon"—A, M, RT
- R. C. C.—Radio Condenser Co.
- REL—Radio Engineering Labs., Inc.
- RELIANCE OIE & STAMPING CO., 1260 Claybourn Ave., Chicago, Ill., "Reliance"—RT
- F. W. SICKLES CO., 300 Main St., Springfield, Mass., "Sickles"—A, M
- SOLAR MFG. CDRP., 599 Broadway, New York, N. Y., "Solar"—M
- TELERADIO ENGINEERING CDRP., 484 Broome St., New York, N. Y., "Teleradio"—M
- UNITED SCIENTIFIC LABORATORIES, INC., 510 Sixth Ave., New York, N. Y., "United Scientific Lab."—Compens. Midgets

**DIALS & PARTS**



- Complete dials . . . . . D
- Escutcheons . . . . . E
- Knobs . . . . . K

- ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—D, E, K
- AMERICAN EMBLEM CO., INC., P. O. Box 116, Utica, N. Y.—E
- O. L. AULO CO., 5th Ave. & 5th St., Columbus, Ohio—E
- BASTIAN BROS. CO., 1600 N. Clinton Ave., Rochester, N. Y.—D
- BUD RADID, INC., 1937 E. 55th St., Cleveland, Ohio, "Bud"—D, K
- CONSOLIDATED WIRE & ASSOCIATED CORPS., 512 S. Peoria St., Chicago, Ill.—K
- CONTINENTAL DIAMOND FIBRE CO., Newark, Del., "Dilophane"—D

- CDTO-CDIL, INC., 229 Chapsman St., Providence, R. I., "Coto"—D, E
- CROWE NAME PLATE & MFG. CO., 1749 Grace St., Chicago, Ill., "Crowe"—D, E, K
- CUTLER-HAMMER, INC., N. 12th & W. St. Paul Ave., Milwaukee, Wis., "Cutler-Hammer"—K
- DAVEN CO., 158 Summit St., Newark, N. J.—E, K
- DE-JUR AMSCO CDRP., Bridge St., Shelton, Conn., "De-Jur Amsco"—D
- DILOPHANE—Continental Diamond Fibre Co.
- DRAKE MFG. CO., 1713 W. Hubbard St., Chicago, Ill., Bulb Sockets
- HUGH H. EBY, INC., 2066 Hunting Pk. Ave., Philadelphia, Pa.—K
- ERIE RESISTOR CORP., Erie Pa., "Erie"—D, E, K
- FEDERAL INSTRUMENT CORP., 325 Classon Ave., Brooklyn, N. Y., "Federal"—D, E
- GENERAL RADIO CO., 30 State St., Cambridge, Mass.—D, K
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—D, E, K
- J. F. D. MFG. CO., Brooklyn, N. Y., "JFD"—Auto radio flexible shafts—See advt. p. 51
- KAY PRODUCTS CO., 3901 Queens Blvd., Long Island City, N. Y., "Kay"—Auto Radio control heads
- MAGNAVDX CO., 21231 Bueter Rd., Fort Wayne, Ind., "Transradiant"—D
- P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—D, E, K
- MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—D
- NATIONAL CO., 61 Sherman St., Malden, Mass.—D, K
- NEILLITE—Watertown Mfg. Co.
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—K
- RADIO CITY PRODUCTS CO., INC., 88 Park Pl., New York, N. Y.—K
- RADIO ENGINEERING LABS., INC., 25-14 Forty-first Ave., Long Island City, N. Y.—D
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—D, E, K
- RECTO MOLOEO PRODUCTS, INC., Appleton at B. & O. K. R., Cincinnati, Ohio—K
- SHEET METAL SPECIALTY CO., 1417 W. Pico St., Los Angeles, Calif.—D, E
- SUPREME INSTRUMENTS CO., 414 Howard St., Greenwood, Miss., "Supreme"—K
- TRANSRAOIAN—Magnavox Co.
- VICTORY MFG. CO., INC., 2021 S. Michigan Ave., Chicago, Ill.—Auto radio flexible shafts
- WARSAW BUTTON CO., Warsaw, N. Y.—K
- WATERTOWN MFG. CO., Echo Lake Rd., Watertown, Conn., "Neillite"—D, K
- S. S. WHITE DENTAL MFG. CO., Industrial Div., 10 E. 40th St., New York, N. Y.—Auto radio flexible shafts
- YAXLEY—P. R. Mallory & Co., Inc.

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- Coil shields . . . . . CS
- Grommets . . . . . G
- Plugs . . . . . P
- Racks & panels . . . . . RP
- Radio tools . . . . . T
- Resin solder . . . . . RS
- Sockets . . . . . SKT
- Soldering lugs . . . . . SL
- Tube shields . . . . . TS
- Washers . . . . . W

- ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—BP, G, P, SL, T, TS, W
- AMERICAN PHENOLIC CDRP., 500 S. Throop St., Chicago, Ill., "Amphenol"—CH, P, SKT
- AMERICAN RADIO HARDWARE CO., INC., 476 Broadway, New York, N. Y., "Arhco"—BP, G, P, SKT, SL, T, W—See advt. p. 51
- AMPHENDL—American Phenolic Corp.
- ARRCO—American Radio Hardware Co., Inc.
- AUTONATOR LABORATORIES, 8440 S. Chicago Ave., Chicago, Ill.—CH, RP

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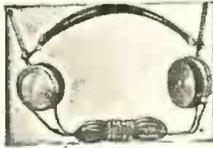
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- BELDEN MFG. CO., 4647 W. Van Buren St., Chicago, Ill.—SL
- BUO RADIO, INC., 1937 E. 55th St., Cleveland, Ohio, "Bud"—CS, P, RP, SKT, SL, T, TS, W
- CANNON ELECTRIC DEVELOPMENT CO., BOX 75, Station A, Los Angeles, Calif.—P, SKT
- CHICAGO TELEPHONE SUPPLY CO., Elkhart, Ind., "C.T.S."—P
- CINCH MFG. CORP., 2335 Van Buren St., Chicago, Ill., "Cinch"—BP, P, SKT, SL
- C.T.S.—Chicago Telephone Supply Co.
- OAVEN CO., 158 Summit St., Newark, N. J.—RP
- HUGH H. EBY, INC., 2066 Hunting Park Ave., Philadelphia, Pa.—BP, CS, P, SKT, SL
- ELECTRIC SOLDERING IRON CO., INC., 342 W. 14th St., New York, N. Y.—T
- ERIE CAN CO., 816 Erie St., Chicago, Ill., "Erie Can Co."—CH, CS, RP, TS
- EX-STAT—Tilton Electric Corp.
- FAHNESTOCK ELECTRIC CO., 46-44 11th St., Long Island City, N. Y.—Clips
- FEDERAL INSTRUMENT CORP., 325 Classon Ave., Brooklyn, N. Y., "Federal"—BP, SL, W
- FEDERAL SALES CO., 26 South Jefferson St., Chicago, Ill., "Federal Sales Co."—BP, G, SL, W—See advt. p. 53
- ALBERT W. FRANKLIN MFG. CORP., 160 Varick St., New York, N. Y.—P, SKT
- GARINER METAL CO., 4820 S. Campbell Ave., Chicago, Ill.—RS
- GENERAL CEMENT MFG. CO., 2012 Cumberland St., Rockford, Ill., "G-C"—T
- G-C—General Cement Mfg. Co.
- GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth, N. J., "G. I."—G, W
- G. I.—General Instrument Corp.
- GENERAL RADIO CO., 30 State St., Cambridge, Mass.—BP, RP, SKT
- GENERAL WINDING CO., 254 W. 31st St., New York, N. Y.—BP
- GOAT RADIO TUBE PARTS INC., 314 Dean St., Brooklyn, N. Y., "Goat Form-Fitting"—TS
- HAMMARLUNO MFG. CO., INC., 424 W. 33rd St., New York, N. Y.—CS, SKT, TS—See advt. p. 40
- HEGELER ZINC CO., Danville, Ill.—CS, TS
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y.—BR, CB, CS, G, P, RP, SL, SKT, T, TS, W
- ICA—Insuline Corp. of America
- E. F. JOHNSON CO., Waseca, Minn., "Johnson"—P
- J. F. O. MFG. CO., 4111 Ft. Hamilton Parkway, Brooklyn, N. Y., "J. F. O."—T—See advt. p. 51
- JUSTRITE MFG. CO., 2061 Southport St., Chicago, Ill.—T
- HOWARD B. JONES, 2300 Wabansia Ave., Chicago, Ill., "Howard B. Jones"—P, SKT
- K-O MFG. CO., Lancaster, Pa., "K-D Pliers"—T
- KESTER SOLOER CO., 420 Wrightwood Ave., Chicago, Ill., "Kester"—RS
- KELLOGG SWITCHBOARD & SUPPLY CO., 1066 W. Adams St., Chicago, Ill., "Kellogg"—SL
- LITTLEFUSE LABORATORIES, 4238 Lincoln Ave., Chicago, Ill.—Fuses & Mountings
- P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—BP, G, P, SKT, SL, T, W
- MANUFACTURERS SCREW & SUPPLY HOUSE, 215 W. Illinois St., Chicago, Ill.—BP, G, SL, W
- MEISSNER MFG. CO., 7th & Belmont, Mt. Carmel, Ill., "Meissner"—SKT
- MUELLER ELECTRIC CO., 1573 E. 31st St., Cleveland, Ohio, "Mueller Universal Clips"
- MUTER CO., 1255 So. Michigan Ave., Chicago, Ill., "Muter"—SL
- NATIONAL CO., 61 Sherman St., Malden, Mass., "National"—CH, CS, RP, SKT, TS
- PARKER-KALON CORP., 198 Varick St., New York, N. Y.—Self-tapping screws
- PAR METAL PRODUCTS CORP., 35-25 41st St., Long Island City, N. Y., "Par Metal"—CU, RP
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa.—CS, SKT, TS
- PHILMORE MFG. CO., INC., 113 University Pl., New York, N. Y., "Philmore"—BP, P
- QUALITY HARWARE & MACHINE CORP., 5849 Ravenswood Ave., Chicago, Ill.—CH
- RCA—RCA Mfg. Co.,
- RCA MFG. CO., Front & Cooper Sts., Camden, N. Y., "RCA"—BP, CS, P, RP, SKT, T, TS
- RECTO MOLEDO PRODUCTS INC., Appleton at B. & O. R. R., Cincinnati, Ohio—BP

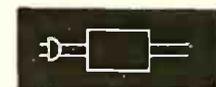
- RUBY CHEMICAL CO., 68 McDowell St., Columbus, Ohio—RS
- SHAKEPROOF LOCK WASHER CO., 2539 N. Keeler Ave., Chicago, Ill.—W
- TELERADIO ENGINEERING CORP., 484 Broome St., New York, N. Y., "Teleradio"—BP, CS, SKT
- TILTON ELECTRIC CORP., 15 E. 26th St., New York, N. Y., "Ex-Stat"—T
- UNITED RADIO MFG. CO., 191 Greenwich St., New York, N. Y.—CH, RP, Engraving
- WEBER BROS. METAL WORKS, 108 N. Jefferson St., Chicago, Ill.—CH
- WROUGHT WASHER MFG. CO., 2225 S. Bay St., Milwaukee, Wis.—W
- YAXLEY—P. R. Mallory & Co., Inc.

## HEADPHONES



- ACME SPECIALTY CO., 1770 W. Berteau Ave., Chicago, Ill., "Acme," "Acme Deluxe," "Rex"
- BRUSH DEVELOPMENT CO., 1893 E. 40th St., Cleveland, Ohio, "Brush"
- C. F. CANNON CO., Springwater, N. Y., "Cannon Ball"—See advt. p. 52
- DICTOGRAPH PRODUCTS CO., INC., 580 Fifth Ave., New York, N. Y., "Dictograph"—See advt. p. 23
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"
- PHILMORE MFG. CO., INC., 113 University Place, New York, N. Y., "Philmore"
- REX—Acme Specialty Co.
- TRIMM RADIO MFG. CO., 1770 W. Berteau St., Chicago, Ill., "Trimmm"

## LINE FILTERS



- AOC—Audio Development Co.
- AEROVOX CORP., 83 Washington St., Brooklyn, N. Y.
- AUDIO DEVELOPMENT CO., 4351 France Ave., S. Minneapolis, Minn., "ADC"
- AUTOMATIC ELECTRICAL DEVICES CO., 324 E. 3rd St., Cincinnati, Ohio, "Filterad"
- BUD RADIO, INC., 1937 E. 55th St., Cleveland, Ohio, "Bud"
- C-O—Cornell-Dubilier Corp.
- CONSOLIDATED WIRE & ASSOCIATED CORPS., 512 S. Peoria St., Chicago, Ill., "Filtron," "Robotrol"
- CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental," "Filternoys"
- CORNELL-DUBILIER CORP., 1000 Hamilton Blvd., South Plainfield, N. J., "C-D," "Cornell-Dubilier"
- TOBE DEUTSCHMANN CORP., Canton, Mass., "Tohe Filterette"
- ELIM-O-STAT—Solar Mfg. Co.
- ESPEY MFG. CO., INC., 124 E. 25th St., New York, N. Y., "Si-len-ser"
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y., "Ferranti"
- FILTERAO—Automatic Electric Devices
- FILTERNOYS—Continental Carbon, Inc.
- FILTRON—Consolidated Wire & Associated Corps.
- FULTON RADIO CORP., 100 6th Ave., New York, N. Y., "Fulton"
- GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"
- GEN-WIN—General Winding Co.
- ICA FILTERVOLOS—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA Filterfolds"
- J. & A.—Jenkins & Adair, Inc.
- JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J. & A."
- J. W. MILLER CO., 5917 S. Main St., Los Angeles, Calif., "Miller"
- PACENT ENGINEERING CORP., 79 Madison Ave., New York, N. Y., "Pacent"

PHILMORE MFG. CO., 113 University Pl., New York, N. Y., "Philmore"  
 RCA MANUFACTURING CO., Front & Cooper Sts., Camden, N. J., "RCA"  
 RECORDING EQUIPMENT MFG. CO., 6611 Sunset Blvd., Hollywood, Calif., "Remco"  
 REMCO—Recording Equipment Mfg. Co.  
 ROBOTROL—Consolidated Wire & Associated Corps.  
 SI-LEN-SER—Espey Mfg. Co., Inc.  
 McMURDO SILVER CORP., 2900 S. Michigan Blvd., Chicago, Ill.  
 SNYDER, INC., 813 Noble St., Philadelphia, Pa.  
 SOLAR MFG. CO., 599 Broadway, New York, N. Y., "Elim-O-Stat"  
 TACO—Technical Appliance Corp.  
 TECHNICAL APPLIANCE CORP., 17 E. 16th St., New York, N. Y.  
 TOBE FILTERETTE—Tobe Deutschmann Corp.  
 UNITED TRANSFORMER CORP., 72 Spring St., New York, N. Y., "UTC"  
 UTC—United Transformer Corp.

**MICROPHONES**



- Carbon . . . . . CAR
- Condenser . . . . . CON
- Crystal . . . . . CRY
- Dynamic . . . . . DYN
- Home broadcasting . . . . . HB
- Velocity . . . . . VEL
- Accessories . . . . . ACC
- Connectors . . . . . CTR
- Stands . . . . . STD

ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—ACC, CTR  
 AMERICAN MICROPHONE CO., INC., 1915 S. Western Ave., Los Angeles, Calif., "American"—CAR, CON, CRY, STD, ACC  
 AMPERITE CO., 561 Broadway, New York, N. Y., "Amperite," VEL, STD—See advt. pp. 40, 54  
 AMPLION PROD. CORP., 38 W. 21st St., New York, N. Y., "Amplion," CAR, DYN  
 ASTATIC MICROPHONE LABORATORY, 830 Market St., Youngstown, Ohio, "Astatic"—CRY, STD  
 ATLAS SOUND CORP., 1451 39th St., Brooklyn, N. Y., "Atlas Velvet Action"—ACC, STD  
 AUDIO RESEARCH, INC., 105 E. 16th St., New York, N. Y., "Audio Research"—DYN  
 BELDEN MFG. CO., 4647 W. Van Buren St., Chicago, Ill., "Belden"—CEL  
 MAJOR EDWARD BOWES—Pilgrim Electric Corp.  
 BRUNO LABORATORIES, INC., 30 W. 15th St., New York, N. Y., "Bruno," "Velotron"—VEL, ACC, BBL, CTR, STD  
 BRUSH DEVELOPMENT CO., 1893 E. 40th St., Cleveland, Ohio, "Brush"—CRY, ACC, STD—See advt. p. 59  
 BUD SPEAKER CO., 1112 Jackson St., Toledo, Ohio  
 BULLET—Transducer Corp.  
 CANNON ELECTRIC DEVELOPMENT CO., P. O. Box 75, Station A, Los Angeles, Calif., "Cannon"—ACC, CTR  
 CARRIER MICROPHONE CO., 525 S. Commercial St., Inglewood, Calif., "Carrier"—CAR, CON, DYN, VEL, STD  
 CLARION—Transformer Corp. of America  
 COLORTONE, INC., Box 366, South Bend, Ind.—ACC  
 CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental"—ACC  
 S. H. COUCH COMPANY, INC., North Quincy, Mass., "Pam"—CAR  
 DICTOGRAPH PRODUCTS CO., INC., 580 5th Ave., New York, N. Y., "Dictograph"—CAR  
 EASTERN MIKE-STAND CO., 56 Christopher St., Brooklyn, N. Y., "Eastern"—STD—See advt. p. 55  
 ELECTRO-VOICE MFG. CO., 324 E. Colfax Ave., South Bend, Ind., "Electro-Voice"—CAR, VEL, ACC, CTR, STD  
 ELECTRONIC SOUND LABS., INC., 5912 Melrose Ave., Hollywood, Calif., "Electronic Sound"—DYN, VEL  
 ELLIS ELECTRICAL LABORATORY, INC., 189 W. Madison St., Chicago, Ill., "Ellis Microphones"—CAR, ACC, CBL, CTR, STD  
 FIRESIDE—Freely Corporation  
 FOX SOUND EQUIPMENT CORP., 3120 Monroe St., Toledo, Ohio—"Fox Sound Equipment"—CRY



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**SPECIFICATIONS** for 1937  
 Sets show that the majority of next year's radios will be G-Tube equipped.

When you realize that ARCTURUS was first with the "G" Tube—introducing it in April, 1935, a full year ahead of other manufacturers—you get a clearer picture of the part Arcturus plays in the forward march of radio progress.

ARCTURUS' continued pioneering achievements are significant to radio dealers and servicemen because it is their best assurance that with ARCTURUS they will keep a step ahead of the procession.

As evidence of this progressive policy, ARCTURUS is the ONLY line which offers you the 4 types of tubes set owners ask for today—the GLASS tube, the "G" tube, CORONET, and CORONET for replacing glass tubes.

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GLASS—"G"—CORONET  
RADIO TUBES





GLASS



"G"



CORONET  
THE PERFECTED  
METAL TUBE



CORONET  
TO REPLACE  
OLD GLASS TUBES

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EYELETS	ETC. STEEL WASHERS	ETC. ESCUTCHEON SCREWS
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FULTON RADIO CORP., 100 6th Ave., New York, N. Y., "Fulton"—VEL, STD

FREELY CORPORATION, 2 W. 20th St., New York, N. Y., "Fireside"—HB

GATES RADIO & SUPPLY CO., 115 North St., Quincy, Ill., "Gates"—VEL, STD

THOMAS B. GIBBS & CO., 900 W. Lake St., Chicago, Ill., "Gibbs"—CAR, CRY

HOLYOKE COMPANY, INC., 720 Main St., Holyoke, Mass.—ACC

HOPE—Texicon Co.

ICA—Insuline Corp. of America

INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—CAR

J. & A.—Jenkins & Adair, Inc.

JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J. & A."—CON

KELLOGG SWITCHBOARD SUPPLY CO., 1066 W. Adams St., Chicago, Ill., "Kellogg"—CAR

MACY ENGINEERING CO., 1451 39th St., Brooklyn, N. Y., "Macy"—ACC, STD

MELLOPHONE CORP., 714 University Ave., Rochester, N. Y., "Mellophone"—CAR

MILES REPRODUCER CO., INC., 114 W. 14th St., New York, N. Y., "Miles"—CAR, CON, CRY, DYN, VEL, ACC, CBL, CTR

PAM—S. H. Couch Co., Inc.

PHILMORE MANUFACTURING CO., INC., 113 University Pl., New York, N. Y., "Philmore"—CAR

PILGRIM ELECTRIC CORP., 44 W. 18th St., New York, N. Y., "Major Edward Bowes"—HB

RACON ELECTRIC CO., INC., 52 E. 19th St., New York, N. Y.—DYN

RADIO RECEPTOR CO., INC., 106 7th Ave., New York, N. Y., "Radio Receptor Co., Inc."—DYN—See advt. p. 55

RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—CAR, CON, DYN, VEL, ACC, CBL, CTR, STD

RECORDING EQUIPMENT MFG. CO., 6611 Sunset Blvd., Hollywood, Calif., "Remco"—CRY, DYN, ACC, CBL, STD

REMCO—Recording Equipment Mfg. Co.

REMLER CO., LTO., 2101 Bryant St., San Francisco, Calif., "Remler"—CON, ACC, CTR, STD

SEGELSOUND, INC., 235 Pine St., Gardner, Mass., "Segelsound"—STD

SHURE BROS., 225 W. Huron St., Chicago, Ill., "Shure"—CAR, CON, CRY, ACC, CBL, CTR, STD

SOUND SYSTEMS, INC., 6545 Carnegie Ave., Cleveland, Ohio, "S.S.I."—CRY, ACC, CBL, CTR, STD

SSI—Sound Systems, Inc.

STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y.—CAR

SUNCO—Sunat Engineering Co.

SUNOT ENGINEERING CO., 4238 Lincoln Ave., Chicago, Ill., "Sunco"—CRY

TEXICON CO., 17 Bleecker St., New York, N. Y., "Hope"—STD

TRANSOUER CORPORATION, 30 Rockefeller Plaza, New York, N. Y., "Bullet"—DYN—See advt. p. 50

TRANSFORMER CORPORATION OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—VEL, ACC, STD

TURNER CO., 909 17th St., N. E., Cedar Rapids, Iowa, "Turner"—CRY

UNITED SOUND ENGINEERING CO., 2233 University Ave., St. Paul, Minn., "U.S.E."—CAR, ACC, STD

UNIVERSAL MICROPHONES CO., 424 Warren Lane, Inglewood, Calif., "Universal"—CAR, CON, CRY, DYN, VEL, ACC, STD

U.S.E.—United Sound Engineering Co.

VELOTRON—Bruno Laboratories, Inc.

WEBSTER COMPANY, 3825 W. Lake St., Chicago, Ill., "Webster-Chicago"—CAR, CRY, VEL, STD

WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—CAR, DYN, VEL, ACC, CBL, CTR, STD

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Discs (blank) . . . D

Electric phonographs . . . EL

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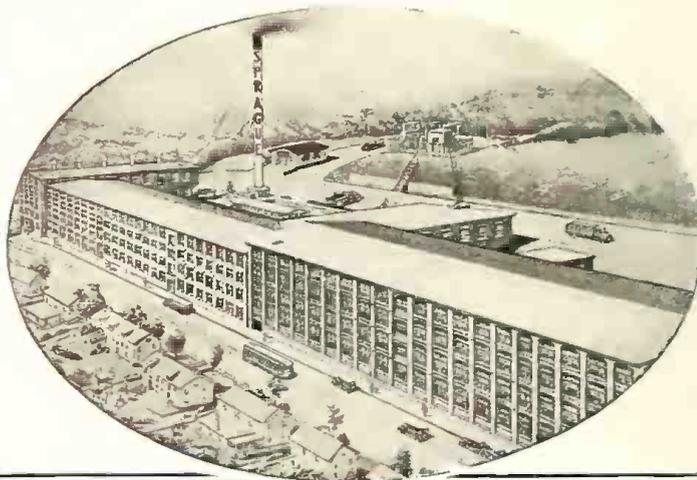


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 Recording supplies . . . . . RS  
 Turntables . . . . . TT

ACA RECORDED SOUND SYSTEM—Amplifier Co. of America  
 ALLIED RECORDING CO., 128 W. 46th St., New York, N. Y.—RM  
 AMPLIFIER COMPANY OF AMERICA, 37 W. 20th St., New York, N. Y. "ACA Recorded Sound System"—RM  
 AMPLION PROD. CORP., 38 W. 21st St., New York, N. Y. "Amplion"—CN, PU, RM  
 ANSLEY RADIO CORP., 240 W. 23rd St., New York, N. Y. "Ansley Dynaphone"—EL, PU, REP  
 ASTATIC MICROPHONE LABORATORY, 830 Market St., Youngstown, Ohio. "Astatic"—PU  
 AUDAK CO., 500 Fifth Ave., New York, N. Y. "Audax"—PU  
 AUDIO RESEARCH, INC., 105 E. 16th St., New York, N. Y.—RM  
 BELL SOUND SYSTEMS, INC., 61 E. Goodale St., Columbus, Ohio—ARC, REP  
 CAPEHART CORPORATION, E. Pontiac St., Fort Wayne, Ind., "Capehart"—ARC  
 CLARION—Transformer Corp. of America  
 COLUMBIA SOUND CO., INC., 135 Liberty St., New York, N. Y. "Columbia"  
 COMMONWEALTH RADIO MFG. CO., 4848 Lincoln Ave., Chicago, Ill., "Com-rad"—EL  
 COM-RAD—Commonwealth Radio Mfg. Co.  
 DECCA RECORDS, INC., 50 W. 57th St., New York, N. Y. "Decca"—EL  
 DIEHL MANUFACTURING CO., Elizabethport, N. J., "Diehl"—TT  
 DYNAPHONE—Ansley Radio Corp.  
 ELECTRICAL LABORATORIES, INC., 49 E. 21st St., New York, N. Y. "Electrical Laboratories"—PU, RM  
 ELECTRO ACOUSTIC PRODUCTS CO., 2131 Bueter Rd., Fort Wayne, Ind., "Magnavox"—EL  
 ELECTRONIC SOUND LABS., INC., 5912 Melrose Ave., Hollywood, Calif., "Electronic Sound"—CN, D, EL, RM, RS  
 FAIRCHILD AERIAL CAMERA CORP., 62-10 Woodside Ave., Woodside, L. I., N. Y. "Fairchild-Proctor"—CN, D, PU, RM, RS  
 FIDELITONE RECORDS, INC., 424 Madison Ave., New York, N. Y. "Fidelitone Recorder"—CN, D, RM  
 GATES RADIO & SUPPLY CO., 115 North St., Quincy, Ill., "Gates"—PU  
 GENERAL INDUSTRIES CO., 3537 Taylor St., Elyria, Ohio—ARC, TT  
 HARORAY, INC., 524 W. Broadway, New York, N. Y., "Haraday"—ARC  
 HARRIS MFG. CO., 2422 W. 7th St., Los Angeles, Calif., "Harris Electronics"—ARC, EL, PU  
 HOLLOWAY CO., 72 Spring St., New York, N. Y., "Holloway"—REP, RM  
 J. & A.—Jenkins & Adair, Inc.  
 JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J. & A."—RM  
 MAGNA—Unit Reproducers Mfg. Co.  
 MAGNAVOX—Electro Acoustic Products Co.  
 MARCONIPHONE, INC., 679 Madison Ave., New York, N. Y., "Marconiphone"—REP  
 MEYER KOULISH CO., INC., 64 Fulton St., New York, N. Y., "Koulish"—CN  
 MILES REPRODUCER CO., INC., 114 W. 14th St., New York, N. Y., "Miles"—CN, D, REP, RM, RS  
 MIRROR RECORD CORPORATION, 58 W. 25th St., New York, N. Y.—CN, D, RM, RS  
 MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Muterphone"—EL  
 MUTERPHONE—The Muter Co.  
 PACENT ENGINEERING CORP., 79 Madison Ave., New York, N. Y., "Pacent"—PU  
 PIEZOELECTRIC LABORATORIES, 612 Rockland Ave., New Dorp, N. Y.—D, RM, RS  
 PRESTO RECORDING CORP., 137 W. 19th St., New York, N. Y., "Presto"—CN, D, REP, RM, TT  
 B. A. PROCTOR CO., INC., 17 W. 60th St., New York, N. Y., PU, RM  
 RADIOTONE RECORDING CO., 6103 Melrose Ave., Hollywood, Calif., "Radiotone"—CN, D, EL, PU, REP, RM  
 RANGERTONE, INC., 201 Verona Ave., Newark, N. J., "Rangerecorder"—CN, D, RM, RS  
 RCA MFG. CO., Camden, N. J., "RCA Victor"—D, EL, PU, REP, RM  
 RECORDING EQUIPMENT MFG. CO., 6611 Sunset Blvd., Hollywood, Calif., "Remco"—CN, D, RM, RS—See advt. p. 60  
 REMCO—Recording Equip. Mfg. Co.  
 REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—REP, RM  
 SONORA ELECTRIC PHONOGRAPH CO., INC., 160 Varick St., New York, N. Y., "Sonora"—EL

STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y.—ARC, PU  
 TRANSFORMER CORP. OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—REP  
 TURNER CO., 909 17th St., N. E., Cedar Rapids, Iowa, "Turner Portibox"—REP  
 UNIT REPRODUCERS MFG. CO., 999 E. Main St., Rochester, N. Y., "Magna"—PU  
 UNIVERSAL MICROPHONE CO., 424 Warren Lane, Inglewood, Calif., "Universal"—CN, D, PU, RM, RS  
 UPCO ENGINEERING LABORATORIES, INC., 254 Canal St., New York, N. Y.—PU  
 WEBSTER ELECTRIC CO., Racine, Wis., "Webster Electric"—PU, REP  
 WEBSTER-CHICAGO—Webster Co.  
 WEBSTER CO., 3825 W. Lake St., Chicago, Ill., "Webster-Chicago"—PU

RECORDS



AMERICAN RECORD CORP., 1776 Broadway, New York, N. Y., "Perfect"  
 BLUEBIRD—RCA Mfg. Co.  
 BRUNSWICK RADIO CORP., 1776 Broadway, New York, N. Y., "Brunswick," "Vocalion," "Melotone"  
 CHAMPION—Decca Records, Inc.  
 COLUMBIA PHONOGRAPH CO., 1776 Broadway, New York, N. Y., "Columbia"  
 DECCA RECORDS, INC., 50 W. 57th St., New York, N. Y., "Decca," "Champion"  
 FIDELITONE RECORDS, INC., 424 Madison Ave., New York, N. Y., "Fidelitone"  
 MELOTONE—Brunswick Radio Corp.  
 PEERLESS ALBUM CO., INC., 38 W. 21st St., New York, N. Y.—Record albums  
 PERFECT—American Record Corp.  
 RCA MFG. CO., Camden, N. J., "Blue-Bird," "Victor"—See advt. p. 4  
 VOCALION—Brunswick Radio Corp.  
 VICTOR—RCA Mfg. Co.

RESISTORS & VOLUME CONTROLS



Fixed composition . . . . . FC  
 Fixed wirewound . . . . . FW  
 Precision . . . . . PRE  
 Suppressors . . . . . SU  
 Variable . . . . . V  
 Volume controls . . . . . VC

AEROVOX CORP., 70 Washington St., Brooklyn, N. Y., "Pyrohm"—FC, FW  
 ALLEN-BRAOLEY CO., 1326 S. Second St., Milwaukee, Wis.—FC, SV, VC  
 ATLAS RESISTOR CO., 423 Broome St., New York, N. Y.—FW  
 CANDOHMS—The Muter Co.  
 CARBORUNDUM CO., Glohbar Div., Niagara Falls, N. Y., "Glohbar"—FC, SU  
 CENTRALAB, 900 E. Keefe Ave., Milwaukee, Wis.—FC, SU, V, VC—See advt. p. 42  
 CHICAGO TELEPHONE SUPPLY CO., Elkhart, Ind., "C. T. S."—V, VC  
 CLAROSTAT MFG. CO., 285 N. Sixth St., Brooklyn, N. Y., "Clarostat"—FW, PRE, V, VC—See advt. p. 57  
 CONTINENTAL CARBON, INC., 13900 Lorain Ave., Cleveland, Ohio, "Continental"—FC, SU  
 CROLITES—Henry L. Crowley & Co., Inc.  
 HENRY L. CROWLEY & CO., INC., 1 Central Ave., West Orange, N. J., "Crolites"—FC  
 C. T. S.—Chicago Telephone Supply Co.  
 DAVEN CO., 158-60 Summit St., Newark, N. J., "Super-Darohm"—FW, PRE  
 DE-JUR AMSCO CORP., Bridge St., Shelton, Conn., "De-Jur Amasco"—V  
 DEPENDABLE—Radio City Products Co., Inc.  
 ELECTRAD, INC., 175 Varick St., New York, N. Y., "Electrad"—FW, P, V, VC—See advt. p. 35  
 ELECTRO MOTIVE MFG. CO., INC., 797 E. 140th St., New York, N. Y., "Elmenco"—FC, FW, SU  
 ELMENCO—Electro Motive Mfg. Co., Inc.

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**RESISTORS—Con't.**

- ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa., "Erie"—FC, SU
- EX-STAT—Tilton Electric Corp.
- A. M. FLECHTHEIM & CO., INC., 692 Broadway, New York, N. Y., "Flechtheim Superior"—FC, SU
- FLECHTHEIM SUPERIOR—A. M. Flechtheim & Co., Inc.
- GENERAL RADIO CO., 30 State St., Cambridge, Mass., "G-R"—Special Purpose
- G-H—Girard Hopkins
- GIRARD HOPKINS, 1437 23rd Ave., Oakland, Calif., "G-H"—FC
- GLOBAR—Carborundum Co.
- G-R—General Radio Co.
- HARDWICK & HINDLE, INC., 40 Herson St., Newark, N. J., "H & H"—Special purpose
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—SU
- INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia, Pa., "IRC"—FC, FW, PRE, SU, V, VC
- IRC—International Resistance Co.
- JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—VC
- LEEDS & NORTHRUP, 4970 Stenton Ave., Philadelphia, Pa.—PRE
- LYNCH MFG. CO., INC., 33 North Ave., Cranford, N. J.—FC, FW, PRE
- P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Yaxley"—FW, PRE, SU, V, VC
- MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn, N. Y., "Micamold"—FC, FW, SU
- MICROHM—Precision Resistor Co.
- MORRILL & MORRILL, 30 Church St., New York, N. Y.—PRE
- MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Candohms," "Zipohms"—FW, PRE—See advt. p. 57
- OHIOHM—Ohio Carbon Co.
- OHMITE MFG. CO., 4835 W. Flourney St., Chicago, Ill., "Ohmite," "Red Devil"—FW, V
- OHMSPUN—The States Co.
- OHIO CARBON CO., 12508 Berea Rd., Cleveland, Ohio, "Ohlohm"—FC, SU
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—FC, FW, SU, V, VC
- PRECISION RESISTOR CO., 334 Badger Ave., Newark, N. J., "Microhm"—FC, WC, PRE, V
- PYROHM—Acrovox Corp.
- RADIO CITY PRODUCTS CO., INC., 88 Park Place, New York, N. Y., "Dependable"—PRE
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—FC, FW, PRE, V, VC, SU
- READRITE METER WORKS, 136 E. College Ave., Bluffton, Ohio, "Readrite"—FW, PRE
- RED DEVIL—Ohmite Mfg. Co.
- REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif.—VC
- SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa., "Shallcross"—PRE
- SPEER CARBON CO., Theresia St., St. Marys, Pa., "Speer"—FC, SU
- STACKPOLE CARBON CO., Tannery St., St. Marys, Pa., "Stackpole"—FC, SU, V, VC
- STATES CO., 19 New Park Ave., Hartford, Conn., "Ohmspun"—FW
- SUPER-DAVOHM—The Daven Co.
- TECH LABORATORIES, 703 Newark Ave., Jersey City, N. J., "Tech Lab"—PRE, V, VC
- TILTON ELECTRIC CORP., 15 E. 26th St., New York, N. Y., "Ex-Stat"—FC, FW, SU, V, VC
- TRIPLETT ELECTRICAL INSTRUMENT CO., 122 Main St., Bluffton, Ohio, "Triplet"—FW, PRE
- UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—FW, VC
- VITROHM—Ward Leonard Electric Co.
- WARD LEONARD ELECTRIC CO., Mt. Vernon, N. Y., "Vitrohm"—FW, SU, V
- S. S. WHITE DENTAL MFG. CO., Industrial Div., 10 E. 40th St., New York, N. Y., "S. S. White Molded"—FC
- WIRT CO., 5221 Greene St., Philadelphia, Pa., "Wirco Phenocote"—FC, FW, SU, V, VC
- YAXLEY—P. R. Mallory & Co., Inc.
- ZIPOHMS—Muter Co.

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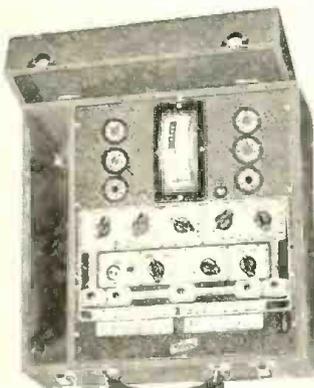
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- BODINE ELECTRIC CO., 2254 W. Ohio St., Chicago, Ill.—CON, GEN
- BRIGGS & STRATTON, Milwaukee, Wis.—CH
- CARTER MOTOR CO., 361 W. Superior St., Chicago, Ill., "Genemotor"—CH, CON, GEN
- CONTINENTAL MOTORS CORP., 12801 E. Jefferson, Detroit, Mich., "Tiny Tim"—CH
- DIEHL MFG. CO., Elizabethport, N. J., "Diehl"—CON
- ELECTRICAL RESEARCH LABORATORIES, INC., 2222 Diversey Pkwy., Chicago, Ill.—CH, W
- ELECTRIC SPECIALTY CO., Stamford, Conn., "Esco"—CON, GEN
- ESCO—Electric Specialty Co.
- FARMPower PRODUCTS CORP., 2525 Clybourn Ave., Chicago, Ill., "Farmpower," "Rurlpower"—CH, W
- FORDSON EXPORT CORP., 2111 Woodward Ave., Detroit, Mich., "Fordson"—CH, W
- GENEMOTOR—Carter Motor Co.
- GEN-E-ROTOR, 908 Keo St., Des Moines, Iowa, "Gen-e-rotor," "Queen Bee," "Old Faithful"—W
- HEINTZ & KAUFMAN, LTD., South San Francisco, Calif., "Heintz & Kaufman, Ltd."—AC
- IRON HORSE—Johnson Motors
- JANETTE MFG. CO., 556 W. Monroe St., Chicago, Ill., "Janette"—AC, CH, CON
- JOHNSON MOTORS, Waukegan, Ill., "Iron Horse Generator"—CH
- KATO ENGINEERING CO., 727 S. Front St., Mankato, Minn., "Kato"—AC, CH, W
- LAUSON CO., New Holstein, Wis.—ENG
- LEAR DEVELOPMENT, INC., 121 W. 17th St., New York, N. Y., "Learadio"—AC—See advt. p. 62
- LEARADIO—Lear Development, Inc.
- MERCURY ELECTRIC CO., 1045 Washington Blvd., Chicago, Ill.—CH
- MIDWEST-TIMMERMANN CO., 727 Iowa St., Dubuque, Iowa, "Washer Charger"—CH
- OLD FAITHFUL—Gen-E-Rotor
- D. W. ONAN & SONS, 43 Royalston Ave., Minneapolis, Minn., "Onan"—AC—See advt. p. 57
- PARRIS-DUNN CORP., 115 South 15th St., Clarinda, Iowa, "Dunn"—W—See advt. p. 5
- PIONEER GEN-E-MOTOR CORP., 466 W. Superior St., Chicago, Ill., "Pioneer"—AC, CH, CON, GEN, W
- POWER—Wedge Mfg. Co.
- POWERACK CO., 100 Thames St., Brooklyn, N. Y., "Powerack"—Auto A.C. fan belt gen
- QUEEN BEE—Gen-E-Rotor
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA Photophone"—CON
- RURLPOWER—Farmpower Products Corp.
- SENTINEL RADIO CORP., 2222 Diversey Pkwy., Chicago, Ill.—CH, W
- TINY TIM—Continental Motors Corp.
- WASHER CHARGER—Midwest-Timmermann Co.
- WEDGE MFG. CO., 2334 S. Michigan Ave., Chicago, Ill., "Wedge-Power"—AC, CH
- WHITE WIND ELECTRIC CO., 2300 E. Douglas Ave., Wichita, Kans.
- WINCHARGER CORP., 2700 Hawkeye Drive, Sioux City, Iowa, "Wincharger"—W
- WIND GENERATOR—Gen-e-rotor

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- AKRAD PRODUCTS CO., 362 Wooster Ave., Akron, Ohio
- AMERICAN RADIO RELAY LEAGUE, W. Hartford, Conn.

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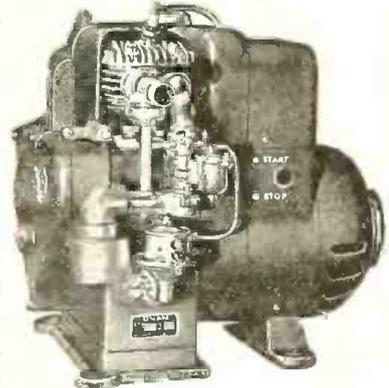
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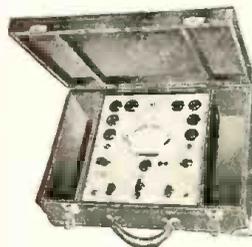
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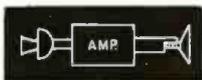
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- CAPITAL RADIO RESEARCH LABS., 993 National Press Bldg., Washington, D. C.
- GERNSBACK PUBLICATIONS, INC., 101 Hudson St., New York, N. Y.
- McGRAW-HILL BOOK CO., 330 W. 42nd St., New York, N. Y.
- PACIFIC RADIO CO., INC., Box 3278, San Francis, Calif.
- RADIO & TECHNICAL PUBLISHING CO., 45 Astor Place, New York, N. Y.—See advt. p. 31
- JOHN F. RIERER, PUBLISHER, 1440 Broadway, New York, N. Y.—See advt. p. 58
- SUPREME PUBLICATIONS, 3727 W. 13th St., Chicago, Ill.
- D. VAN NOSTRAND CO., INC., 250 Fourth Ave., New York, N. Y.
- JOHN WILEY & SONS, INC., 440 Fourth Ave., New York, N. Y.

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- Power amplifiers . . . . . PA
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- Sound systems (complete) . . . SS

- ACA—Amplifier Co. of America
- ACOUSTICON—Dictograph Products Co., Inc
- AQC—Audio Development Co.
- AIRLINE—Montgomery Ward & Co.
- ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago, "Knight"—ICS, PA, PRE, SS—See advt p. 52
- ALLOY TRANSFORMER CO., INC., 135 Liberty St., New York, N. Y.—K
- AMERICAN CARRIER CALL CORP., 36 W. 44th St., New York, N. Y., "Carrier Call"—ICS
- AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J., "Amertran"—PA, PRE
- AMERTRAN—American Transformer Co.
- AMPERITE CO., 561 Broadway, New York, N. Y., "Amperite"—PRE
- AMPLIFIER COMPANY OF AMERICA, 37 W. 20th St., New York, N. Y., "ACA"—BC, ICS, K, PA, PRE, SS
- AMPLION PROD. CORP., 38 W. 21st St., New York, N. Y., "Amplion"—ICS, PA, PRE, SS
- AMPLIVOX RADIO & SOUND LABS., 227 Fulton St., New York, N. Y.—ICS
- ATLAS SOUND CORP., 1451 39th St., Brooklyn, N. Y., "Atlas"—BC, ICS, K, PA, PRE, SS
- AUDIO DEVELOPMENT CO., 4351 France Ave., S., Minneapolis, Minn., "ADC"—BC, PA, PRE, SS
- AUTOCRAT RADIO CO., 3855 N. Hamilton Ave., Chicago, Ill.—PA
- BELFONE—Bell Sound Systems, Inc.
- BELL SOUND SYSTEMS, INC., 61 E. Goodale St., Columbus, Ohio, "Bell Sound Systems," "Belfone,"—KS, PA, PRE, SS
- BENOIX RADIO MFG. CO., Wood Lake, Minn., "Bendix"—SS
- BERCO—Brown-Ebinger Radio Co.
- DAVID BOGEN CO., INC., 626 Broadway, New York, N. Y., "Bogen Supreme Fidelity"—BC, ICS, PA, PRE, SS
- W. C. BRAUN, INC., 601 W. Randolph St., Chicago, Ill., "Radolek," "Ozarka"—BC, PA, PRE, SS
- BROWN-EBINGER RADIO CO., 3924 Washington Blvd., St. Louis, Mo., "Berco"—SS
- CARRIER CALL—American Carrier Call Corp.
- CLARION—Transformer Corp. of America
- COLLINS RADIO CO., Cedar Rapids, Iowa—BC, PRE
- COLUMBIA SOUND CO., 135 Liberty St., New York, N. Y.—ICS, K, PRE, SS
- S. H. COUCH CO., INC., North Quincy, Mass., "Pam," "Sampson"—PA, PRE, SS
- OAVEN CO., 158 Summit St., Newark, N. J., "Daven"—BC
- HERMAN A. DE VRY, INC., 1111 Center St., Chicago, Ill., "De Vry"—SS
- DICTOGRAPH PRODUCTS CO., INC., 580 Fifth Ave., New York, N. Y., "Dictograph," "Acousticon"—ICS
- ELAMCO—Electric Amplifier Corp.
- ELECTRIC AMPLIFIER CORP., 135 W. 25th St., New York, N. Y., "Elamco"—BC, ICS, PA, PRE, SS
- ELECTRICAL RESEARCH PRODUCTS, INC., 250 W. 57th St., New York, N. Y., "Western Electric Microphonic"—SS

- ELECTRO ACOUSTIC PRODUCTS CO., 2131 Bueter Rd., Fort Wayne, Ind., "Electro-Acoustic"—BC, ICS, K, PA, PRE, SS
- ELECTRO-CALL—United Scientific Lab.
- ELECTRONIC SOUND LABORATORIES, INC., 5912 Melrose Ave., Hollywood, Calif., "Electronic Sound"—BC, ICS, PA, PRE, SS
- ELECTRUX SOUND SYSTEMS, 616 Fifth St., Minneapolis, Minn., "Electrux"—ICS, K, PA, PRE, SS
- ESPEY MANUFACTURING CO., INC., 124 E. 25th St., New York, N. Y.—PA
- FAIRCHILD AERIAL CAMERA CORP., 62-10 Woodside Ave., Woodside, L. I., N. Y., "Fairchild-Proctor"
- FEDERATED PURCHASERS, INC., 25 Park Place, New York, N. Y.—ICS, PA, PRE, SS
- FOX SOUND EQUIPMENT CORP., 3120 Munroe St., Toledo, Ohio, "Fox Sound Equipment"—SS
- FULTON RADIO CORP., 100 Sixth Ave., New York, N. Y., "Fulton"—BS, ICS, PA, PRE, SS
- GATES RADIO & SUPPLY CO., 115 North St., Quincy, Ill., "Gates"—BC, IC, PA, PRE
- GENERAL RADIO CO., 30 State St., Cambridge A, Mass., "G-R"—Special
- GENERAL TELEVISION & RADIO CORP., 267 W. 17th St., New York, N. Y., "General"—PA
- GENERAL TRANSFORMER CORP., 530 S. Throop St., Chicago, Ill., "Stentorian"—K
- THOMAS B. GIBBS & CO., 900 W. Lake St., Chicago, Ill., "Gibbs"—PA, PRE, SS
- G-R—General Radio Co.
- HARORAY, INC., 524 West Broadway, New York, N. Y., "Haraday"—SS
- HOLLOWAY CO., 72 Spring St., New York, N. Y., Holloway"—PA, PRE, SS
- HOLTZER-CABOT ELECTRIC CO., 125 Amory St., Boston, Mass.—ICS
- J & A—Jenkins & Adair, Inc.
- JEFFERSON ELECTRIC CO., 900 25th St., Bellwood, Ill., "Jefferson"—K
- JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—BC, ICS, PA, PRE, SS
- KENYON TRANSFORMER CO., INC., 840 Barry St., New York, N. Y., "Kenyon"—K
- KNIGHT—Allied Radio Corp.
- LAFAYETTE—Wholesale Radio Service Co., Inc.
- LA SALLE RADIO CORP., 140 Washington St., New York, N. Y., "La Salle"—BC, KS, K, PA, PRE, SS
- LAUREHK RADIO MFG. CO., E. Michigan St., Adrian, Mich., "Laurehk"—ICS, K, SS
- FRED M. LINK, 125 W. 17th St., New York, N. Y.—BC, ICS, PA, PRE
- LIPMAN ENGINEERING CO., 415 Van Braam St., Pittsburgh, Pa., "Lipman Full Range Sound System"—ICS, PA, SS
- MASTERPIECE—McMurdo Silver Corp.
- MELLOPHONE CORP., 714 University Ave., Rochester, N. Y., "Mellophone"—SS
- MILES REPRODUCER CO., INC., 114 W. 14th St., New York, N. Y., "Miles"—BC, ICS, K, PA, PRE, SS
- MONTGOMERY WARD & CO., W. Chicago & N. Larr Sts., Chicago, Ill., "Airline"—PA, PRE, SS
- MORLEN ELECTRIC CO., INC., 60 W. 15th St., New York, N. Y., "Morlen, Inc."—PA, PRE, SS
- OPERADIO MFG. CO., 13th & Ind. Sts., St. Charles, Ill., "Operadio"—BC, ICS, PA, PRE, SS—See advt. p. 56
- OZARKA—W. C. Braun, Inc.
- OTTAWA RADIO CO., Ottawa, Ill.
- PACENT ENGINEERING CORP., 79 Madison Ave., New York, N. Y., "Pacent"—BS, ICS, PA, PRE, SS
- PAM—S. H. Couch Co., Inc.
- PER WAL RADIO & TELEVISION CO., 140 N. Dearborn St., Chicago, Ill., "Per Wal"—PA, SS
- PICTUR-FONE CORP., 212 W. North St., Lima, Ohio, "Pictur-Fone"—ICA, PA, PRE, SS
- PIEZO-ELECTRIC LABORATORIES, 612 Rockland Ave., New Dorp, N. Y.—BC, PA, PRE, SS
- PUBLIC-AD, INC., 2015 East 65th St., Cleveland, Ohio, "Public-Ad"—BC, ICS, PA, PRE, SS
- RADIO AMPLIFIERS LABORATORIES, 59 Walker St., New York, N. Y., "RAL"—ICS, PA, PRE, SS
- RADIO RECEPTOR CO., INC., 106 7th Ave., New York, N. Y., "Radio Receptor"—PA, PRE, SS
- RADIO SUPPLIES, 125 E. 46th St., New York, N. Y.—BC, ICS, PA, PRE, SS
- RAIOTONE RECORDING CO., 6103 Melrose Ave., Hollywood, Calif., "Radiotone"—BC, PA, PRE, SS
- RAOOLEK COMPANY, 601 W. Randolph St., Chicago, Ill., "Radolek"—BC, PA, PRE, SS—See advt. p. 49
- RAL—Radio Amplifiers Labs.
- RAULAND CORP., 3341 Belmont Ave., "Rauland"—BC, SS
- RCA—RCA Mfg. Co.
- RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—BC, ICS, PA, PRE, SS
- RECORDING EQUIPMENT MFG. CO., 6611 Sunset Blvd., Hollywood, Calif., "Remco"—BC, PA, PRE, SS

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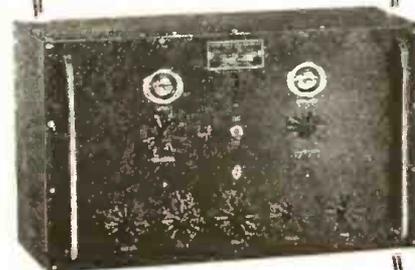
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(Additions to September listing)

Model Number	Retail Price Complete	Cabinet	Kilocycle Range	Power Supply	Number of Tubes
<b>Air-King Products Co., Inc., 27 Hooper St., Brooklyn, N. Y.</b>					
6E		Table	535-18500	AC	6m.
6EC		Cons.	535-18500	AC	6m.
9EJ		Table	135-18300	AC	9m.
9EC		Cons.	135-18300	AC	9m.
15		Table	550-1700	AC-DC	5mg.
42		Table	550-1700	AC-DC	4mg.
58		Table	550-4500	AC-DC	5mg.
66		Table	550-18000	AC-DC	6mg.
201		Cons.	550-18000	AC-DC	6mg.

**Autocrat Radio Co., 3855 N. Hamilton Ave., Chicago, Ill.**

4C, 4M	\$15.00	Table	550-1724	AC-DC	4g.
5	33.32	Auto	550-1500	6v.DC	5g.
16-AC-S	44.32	Table	550*16600	AC	6g.
25-AC-L	42.23	Table	130*16600	AC	5g.
26-AC-L	48.89	Table	130*16600	AC	6g.
40, 40M	15.00	Table	550-1724	AC-DC	4g.
40-S-W	18.00	Table	550-4000	AC-DC	4g.
42	15.00	Table	550-1724	AC-DC	4g.
42-S-W	18.00	Table	550-4000	AC-DC	4g.
45	18.00	Table	550-1724	AC-DC	5g.
45-S-W	19.00	Table	550-4000	AC-DC	5g.
52	18.00	Table	550-1724	AC-DC	5g.
52-S-W	19.00	Table	550-4000	AC-DC	5g.
51-UL	39.23	Table	130*16600	AC-DC	5g.
61-UL	46.10	Table	130*16600	AC-DC	6g.
66-UL	43.89	Table	550*16600	AC-DC	6g.
260-UL	46.10	Table	130*16600	AC-DC	6g.
518	41.10	Auto	550-1500	6v.DC	5g.
618	45.55	Auto	550-1500	6v.DC	6g.
661-US	43.89	Table	550*16600	AC-DC	6g.
900	54.50	Table	142-25000	AC	9m.g.
900	70.50	Cons.	142-25000	AC	9m.g.
910	87.50	Cons.	142-25000	AC	9m.g.
BA-41	53.33	Table	540*17650	6v.DC	6g.

**Balket Radio Corp., 549 W. Randolph St., Chicago, Ill.**

101	\$44.95	Auto	Broadcast	6v. DC	6g.
155BA	34.95	Table	540-1800	Batt.	5g.
AD150	19.95	Table	540-1715	AC-DC	4g.
AD160	29.95	Table	540-3000	AC-DC	5g.
AM151	22.50	Table	540-1715	AC-DC	4m.
AS152	31.95	Table	540-2720	AC	5g.
GT14A	31.50	Table	530-17600	AC	5g.
GT15B	35.95	Table	530-17600	AC	5g.
GT16A	38.45	Table	530-17600	AC	5g.
GT17B	39.95	Table	530-17600	AC	6c.
GT18A	43.95	Table	530-17600	AC	6c.
GT19B	48.95	Table	530-17600	AC	6c.
GT20	57.50	Table	530-17600	AC	7c.
GT33	39.95	Table	530-17600	AC-DC	6g.
GT34LW	43.95	Table	150*17600	AC-DC	6g.
GT100X	64.95	Cons.	530-17600	AC	6c.
GT114X	48.95	Cons.	530-17600	AC	5g.
GT116X	51.95	Cons.	530-17600	AC	6c.
GT118BX	62.00	Cons.	540-18000	Batt.	6g.
GT156BA	47.95	Table	530-17600	6v.DC	6g.
GT157BA	50.00	Table	540*16500	6v.DC	7g.
GT200X	79.95	Cons.	530-17600	AC	7c.

**Case Electric Corp., Marion, Ind.**

500	\$39.95	Table	545-18000	AC	5c.
501	49.95	Cons.	545-18000	AC	5c.
700	55.00	Table	545-18000	AC	7c.
701	67.50	Cons.	545-18000	AC	7c.
1000	79.50	Table	545-21000	AC	10c.
1001	99.50	Cons.	545-21000	AC	10c.
1003	124.50	Cons.	545-21000	AC	10c.

**Commonwealth Radio Mfg. Co. (Com-Rad), 4846 Lincoln Ave., Chicago Ill.**

15		Table	540*18500	AC	5g.
25		Table	135*18500	AC	5g.
16		Table	540*18500	AC	6g.
26		Table	135*18500	AC	6g.
17		Cons.	540*18500	AC	7g.
27		Cons.	135*18500	AC	7g.
551		Table	540*18500	AC-DC	5g.
251		Table	135*18500	AC-DC	5g.
661		Table	540*18500	AC-DC	6g.
261		Table	135*18500	AC-DC	6g.
660		Table	540*18500	AC-DC	6g.
260		Table	135*18500	AC-DC	6g.

**Consolidated Radio Products Co., (Royal) Box 23, Northwestern Sta., Detroit, Mich.**

R4M	\$21.00	Table	540-4000	AC-DC	4g.
R4Z	15.95	Table	550-1750	AC-DC	4g.
R5C	22.50	Table	540-4000	AC-DC	5g.
R5D	30.50	Table	540-4000	AC-DC	5g.
R5DB	37.25	Table	540-4000	6v.DC	5g.
R5DC	39.25	Cons.	540-4000	AC-DC	5g.

c. indicates combination of metal tubes and glass tubes in receiver  
 g. indicates glass tubes in receiver  
 m. indicates metal tubes in receiver  
 mg. indicates metal-glass tubes in receiver  
 \* in kilocycle range indicates not continuous range between limits indicated  
 \*\* less batteries  
 † includes hatteries

Model Number	Retail Price Complete	Cabinet	Kilocycle Range	Power Supply	Number of Tubes
R5DF	39.50	Table	540-4000	32v.DC	5g.
R6G	39.50	Table	540-16000	AC	5g.
R6GC	58.25	Cons.	540-16000	AC	6g.
R6GM	46.50	Table	540-16000	AC	6m.
R6GMC	64.50	Cons.	540-16000	AC	6m.
R8J	69.50	Table	150-22000	AC	8g.
R8JC	85.50	Cons.	150-22000	AC	8g.
R8JM	78.50	Table	150-22000	AC	8m.
R8JMC	95.00	Cons.	150-22000	AC	8m.
RTA	37.50	Auto	540-1600	6v.DC	5g.
RTS	34.00	Auto	540-1600	6v.DC	5g.

**Continental Radio & Television Corp. (Admiral), 325 W. Huron St., Chicago, Ill.**

ML156	\$39.75	Table	540-17000	AC	6c.
ML215A	52.00	Cons.	540-17000	AC	6c.
ML266	42.00	Table	540-17000	AC	6c.
ML477	49.75	Table	540-17000	AC	7c.
ML481	67.50	Cons.	540-17000	AC	7c.
MX218	48.50	Cons.	540-17000	AC	6c.
MX239	34.50	Table	540-17000	AC	6c.
MX241	36.00	Table	540-17000	AC	6c.
X112	29.75	Table	540-17000	AC	5g.
X118	44.50	Cons.	540-17000	AC	5g.
X141	32.00	Table	540-17000	AC	5g.
X341	39.75	Table	150-17000	AC-DC	6g.
X541	34.00	Table	540-17000	AC-DC	6g.
X641	42.00**	Table	540-17000	Batt.	6g.
X718	52.00**	Cons.	540-17000	Batt.	6g.

**Detrola Radio Corp., 3630 West Fort St., Detroit, Mich.**

2B1		Table	Broadcast	Batt.	5g.
4WG2		Table	545-4000	AC-DC	4g.
4WM3		Table	545-4300	AC-DC	4c.
4XG1		Table	545-4000	AC	4g.
4XM2		Table	545-4000	AC	4c.
5WG1		Table	545-4300	AC-DC	5g.
5XG1		Table	550*16000	AC	5g.
5XM9		Table	550-5400	AC	5g.
5XW2		Table	550-16000	AC	5g.
5XM4		Cons.	550-16000	AC	5c.
6B1		Table	Broadcast	6v.DC	6g.
6M		Auto	Broadcast	6v.DC	6g.
6XM1		Table	540-18000	AC	6c.
6XM5		Cons.	540-18000	AC	6c.
6WG1		Table	545-18000	AC-DC	6g.
6WM1		Table	545-17500	AC-DC	6c.
6WM3		Cons.	545-17500	AC-DC	6c.
6XM9		Table	540-18000	AC	6g.
6ZM1		Table	540-18000	AC	6c.
6ZM3		Cons.	540-18000	AC	6c.
7ZM1		Table	540-18000	AC	7c.
7ZM3		Cons.	540-18000	AC	7c.
10ZM3		Table	150-17500	AC	10c.
10ZM3		Cons.	150-17500	AC	10c.
32V1		Table	535-17500	32v.DC	7g.

**Espey Mfg. Co., 124 East 25 St., New York City**

558	\$56.50	Table	140*15500	AC	5g.
545	19.50**	Table	550-1700	Batt.	4g.
553	39.50	Table	140*1550	AC-DC	5g.
555	39.50	Table	550*18000	AC-DC	5g.
560	39.50	None	550*18000	AC-DC	5g.
564	69.50	Table	530*18000	AC	6g.
565	69.50	Table	133*18200	AC	6g.
5181	58.50	None	120-37500	AC-DC	18c.

**Fada Radio and Electric Co., Thompson Ave., Long Island City, N. Y.**

150C	\$59.95	Cons.	535*15800	AC	5c.
150T	39.95	Table	535*15800	AC	5c.
155	19.99	Table	540-1750	AC-DC	5g.
157	32.95	Table	540*6500	AC-DC	5c.
160C	69.95	Cons.	535*18500	AC	6m.
160T	52.95	Table	535*18500	AC	6m.
166	49.95	Auto	530-1550	6v.DC	6g.
170C	82.95	Cons.	535*18500	AC	7m.
170CK	99.95	Cons.	535*18500	AC	7m.
170T	62.95	Table	535*18500	AC	7m.
190C	124.50	Cons.	540-24000	AC	9m.
190CK	144.50	Cons.	540-24000	AC	9m.
190T	84.50	Table	540-24000	AC	9m.
192C	99.95	Cons.	535*18500	AC-DC	9c.
192CK	124.75	Cons.	535*18500	AC-DC	9c.
192T	72.50	Table	535*18500	AC-DC	9c.
1462D	39.95	Table	530*15800	AC-DC	6g.

**Galvin Mfg. Corp. (Motorola)—additions to Sept. listing**

62	\$39.95	Auto	540-1550	6v.DC	g.
79	49.50	Auto	540-1550	6v.DC	g.
110	64.50	Auto	540-1550	6v.DC	g.
Above models designed for turret-top cars					
F-57	37.95	Auto	540-1550	6v.DC	g.
F-75	47.50	Auto	540-1550	6v.DC	g.
F-100	64.50	Auto	540-1550	6v.DC	g.
Above models designed for 1935 V-8 Ford cars					

**Garod Radio Corp., 34 East 12 St., New York City**

73	\$69.00	Table	540*19500	AC	7g.
83	69.50	Table	540*19500	AC-DC	11c.
83LW	74.50	Table	140*16000	AC-DC	11c.
311	79.50	None	540*19500	AC-DC	11c.



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## SOUND SYSTEMS—Cont'd.

- REMCO—Recording Equipment Mfg. Co.  
REMLER CO., LTO., 2101 Bryant St., San Francisco, Calif., "Remler"—BC, ICS, PA, PRE, SS  
SAMPSON—S. H. Couch Company, Inc.  
J. & L. SARA CO., 123 Liberty St., New York N. Y., "Sara"—PA  
SEARS, ROEBUCK & CO., 925 S. Homan St., Chicago, Ill., "Silvertone"—PA, SS  
SEGELSOUND, INC., 235 Pine St., Gardner, Mass., "Segelsound"—ICS, PA, PRE, SS  
SETCHELL-CARLSON CO., INC., 2233 University St., St. Paul, Minn., "Setchell-Carlson"—BC, PA, SS  
McMURRO SILVER CORP., 2900 S. Michigan Blvd., Chicago, Ill., "Masterpiece"—BC, PA, PRE, SS  
SILVERTONE—Sears, Roebuck & Co.  
SIMPLEX RADIO CO., Monroe & King Sts., Sandusky, Ohio, "Simplex"—ICS, SS  
SOUND SYSTEMS, INC., 6545 Carnegie Ave., Cleveland, Ohio, "S. S. I."—BC, ICS, PRE, SS  
S. S. I.—Sound Systems, Inc.  
STANDARD TRANSFORMER CORP., 850 Blackhawk St., Chicago, Ill.—K  
STENTORIAN—General Transformer Corp.  
STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Road, Rochester, N. Y., "Stromberg-Carlson"—ICS, PRE, SS  
TECH LABORATORIES, 703 Newark Ave., Jersey City, N. J., "Tech Lab"—BC  
L. H. TERPENING, 220 E. 23rd St., New York, N. Y., "L. H. Terpening"—BC, PA, PRE, SS  
TOLEDO SOUND EQUIPMENT LABORATORIES, 1215 Jackson St., Toledo, Ohio, "Toledo"—BC, PRE, PA, SS  
TRANSFORMER CORPORATION OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—ICS, PA, PRE, SS  
TURNER CO., Cedar Rapids, Iowa, "Turner"—PA, SS  
UNITED SCIENTIFIC LAB., INC., 510 Sixth Ave., New York, N. Y., "Electrocall"—ICS, SS  
UNITED SOUND ENGINEERING CO., 2233 University Ave., St. Paul, Minn., "U.S.E."—ICS, PA, SS—See advt. p. 59  
UNITED TRANSFORMER CORP., 72 Spring St., New York, N. Y., "UTC"—K  
UNIVERSAL MICROPHONES CO., 424 Warren Lane, Inglewood, Calif.—BC, PRE  
USE—United Sound Engineering Co.  
UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—K  
UTC—United Transformer Corp.  
VOLU-TONE CO., 226 N. Main St., Los Angeles, Calif., "Volu-Tone"—Pa, SS  
WARD PRODUCTS CORP., 1523 E. 45th St., Cleveland, Ohio, "Zephyr"—SS  
WEBSTER-CHICAGO—Webster Co.  
WEBSTER CO., 3825 W. Lake St., Chicago, Ill., "Webster-Chicago"—ICS, PA, PRE, SS—See advt. p. 46  
WEBSTER ELECTRIC CO., Racine, Wis., "Webster Electric"—ICS, PA, PRE, SS  
WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—BC, PA, PRE, SS  
WESTERN ELECTRIC MIRROPHONIC SOUND SYSTEM—Electrical Research Products, Inc.  
WESTERN SOUND & ELECTRIC LAB., INC., 311 W. Kilb Ave., Milwaukee, Wis.—BC, ICS, PA, PRE, SS  
WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Ave., New York, N. Y., "Lafayette"—ICS, K, PA, PRE, SS  
ZEPHYR—Ward Products Corp.

## SPEAKERS & PARTS



- |                                    |     |
|------------------------------------|-----|
| Accessories . . . . .              | ACC |
| Baffles . . . . .                  | B   |
| Cones . . . . .                    | C   |
| Electro-dynamic . . . . .          | D   |
| Fields . . . . .                   | F   |
| Horns . . . . .                    | H   |
| Magnetic . . . . .                 | M   |
| Permanent magnet dynamic . . . . . | PM  |

- ALCO PRODUCTS CO., 715 Center St., Brockton, Mass.—ACC  
AMERICAN FELT CO., 315 4th Ave., New York, N. Y.—ACC  
AMERICAN REPROUCER CO., 3115 Carroll Ave., Chicago, Ill.—D  
AMPLION PROO. CORP., 38 W. 21st St., New York, N. Y., "Amplion"—ACC, B, D, F, H, M  
ARISTON MFG. CORP., 4045 Diversey Ave., Chicago, Ill., "Ariston"—D  
ARLAB MFG. CO., 1250 N. Paulina St., Chicago, Ill., "Arlab"—D, M, PM  
ATLAS SOUND CORP., 1451 39th St., Brooklyn, N. Y.—D, M, PM, ACC, B, C, F, H  
NATHANIEL BALOWIN—Consolidated Radio  
BERCO—Brown-Ebinger Radio Co.  
BEST MFG. CO., INC., 1200 Grove St., Irvington, N. J., "Best"—D, PM, M  
BROWN-EBINGER RADIO CO., 3924 Washington Blvd., St. Louis, Mo., "Berco"—B, H  
BRUSH DEVELOPMENT CO., 1893 E. 40th St., Cleveland, Ohio, "Brush"—Crystal  
CARRON MFG. CO., 415 S. Aberdeen St., Chicago, Ill., "Carron"—ACC, C, F  
CINAUDAGRAPH CORP., 2 Selleck St., Stamford, Conn., "Cinaudagraph," "Magic Magnet"—PM  
CLEVELAND WIRE CLOTH & MFG. CO., 3573 E. 78th St., Cleveland, Ohio—ACC  
CLARION—Transformer Corp. of America  
COLORTONE, INC., Box 366, South Bend, Ind., "Colortone"—ACC, B, D, H  
CONSOLIDATED RADIO PRODUCTS CO., 361 W. Superior St., Chicago, Ill., "Nathaniel Baldwin"—D, M, PM—See advt. p. 31  
CONTINENTAL MOTORS CORP., 12801 E. Jefferson St., Detroit, Mich., "Permoflux"—PM  
OYNA-TEX—Masland Mfg. Corp.  
ELECTRONIC SOUND LABS., INC., 5912 Melrose Ave., Hollywood, Calif.—B, H  
EX-STAT—Tilton Electric Corp.  
FEDERAL INSTRUMENT CORP., 325 Classon Ave., Brooklyn, N. Y., "Lyric"—D  
FOX SOUND EQUIPMENT CO., 3120 Munroe St., Toledo, Ohio, "Fox"—B, D  
FULTON RADIO CORP., 100 6th Ave., New York, N. Y., "Fulton"—D, PM  
GENERAL ILLUMINATING CORP., 16 Calender St., Providence, R. I., "General"—B, H  
THOMAS B. GIBBS & CO., 900 W. Lake St., Chicago, Ill., "Gibbs"—D  
HAWLEY PRODUCTS CO., 201 N. First Ave., St. Charles, Ill., "Hawley"—B, C, H  
HEINTZ & KAUFMAN, LTO., South San Francisco, Calif., "Heintz and Kaufman"  
HOLYOKE CO., INC., 720 Main St., Holyoke, Mass.—ACC  
HOPE—Texicon Co.  
INCA MFG. CO., Fort Wayne, Ind.—F  
INTERNATIONAL TRANSFORMER CO., 22 W. 22nd St., New York, N. Y.—F  
JENSEN RADIO MFG. CO., 6601 S. Laramie Ave., Chicago, Ill., "Jensen"—ACC, D, PM  
KINETIC—Vitarox Co.  
LANSING MFG. CO., 6900 McKinley Ave., Los Angeles, Calif., "Lansing"—D, H  
LEOTONE RADIO CO., 63 Dey St., New York, N. Y., "Leotone"—B, C, D, F, M—See advt. p. 61  
LYRIC—Federal Instrument Corp.  
MACY ENGINEERING CO., 1451 39th St., Brooklyn, N. Y., "Macy"—ACC, B, F, M, PM  
MAGIC MAGNET—Cinaudagraph Corp.  
MAGNA—Unit Reproducers Mfg. Co.  
MAGNAVOX CO., 2131 Bueter Rd., Fort Wayne, Ind., "Magnarox"—ACC, B, C, D, PM  
MASLANO MFG. CORP., Amber & Willard Sts., Philadelphia, Pa., "Dyna-Tex"—C  
MASTERPIECE—McMurdo Silver Corp.  
MELLOPHONE CORP., 714 University Ave., Rochester, N. Y., "Mellophone"—D, H

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MILES REPRODUCER CO., INC., 114 W. 14th St., New York, N. Y., "Miles"—ACC, B, D, F, H  
 MULTIPLEX RADIO SERVICE, INC., 88 Fourth Ave., Brooklyn, N. Y., "Multiplex"—ACC, C, F  
 NOKOIL—Wright-DeCoster, Inc.  
 NORDEDALE MFG. CO., 2100 Fulton St., Chicago, Ill.—D  
 OPERADIO MFG. CO., 13th & Indiana Sts., St. Charles, Ill., "Operadio"—ACC, B, D, F, H, PM  
 OXFORD TARTAK RADIO CORP., 915 W. Van Buren St., Chicago, Ill., "Oxford"—D, H, M, PM—See adrt. p. 49  
 PACENT ENGINEERING CORP., 79 Madison Ave., New York, N. Y., "Pacent High Fidelity"—B  
 PERNOFLUX—Continental Motors Corp.  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—D, C, M  
 PREMIER PRODUCTS, INC., 1800 Grace St., Chicago, Ill., "Premier"—D, M  
 QUAM-NICHOLS, 33rd Pl. & Cottage Grove Ave., Chicago, Ill., "Quam"—D, M, PM—See adrt. p. 47  
 RACON ELECTRIC CO., INC., 52 E. 19th St., New York, N. Y., "Racon," "Broadband"—ACC, B, C, D, F, H, M, PM  
 RADIO LAMP CO., INC., 744 Madison Ave., New York, N. Y., "Radio Lamp"  
 RADIO RECEPTOR CO., INC., 106 7th Ave., New York, N. Y., "Radio Receptor"—ACC, B, D, H, M, PM  
 RADIO SPEAKERS, INC., 1338 S. Michigan Ave., Chicago, Ill.—D, PM—See adrt. p. 43  
 RCA MFG. CO., INC., Front & Cooper Sts., Camden, N. J., "RCA"—ACC, B, C, D, F, H, M, PM  
 REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—ACC, B, D, PM  
 ROLA CO., 2530 Superior Ave., Cleveland, Ohio, "Rola"—D  
 McMURDO SILVER CORP., 2900 S. Michigan Blvd., Chicago, Ill., "Masterpiece"—D, PM  
 SONOCHORDE SALES CO., 200 Boston Ave., Medford, Mass., "Sonochorde"  
 SOUND SYSTEMS, INC., 6545 Carnegie Ave., Cleveland, Ohio, "S.S.I."—ACC, B, D, H, PM  
 S.S.I.—Sound Systems, Inc.  
 STROMBERG-CARLSON TELEPHONE MFG. CO., 100 Carlson Rd., Rochester, N. Y.—B, D, H, M  
 TEXICON CO., 17 Blecker St., New York, N. Y., "Hope"—ACC, H, B—See adrt. p. 60  
 TILTON ELECTRIC CORP., 15 E. 26th St., New York, N. Y., "Ex-Stat"—C, F  
 TINDALL FABRICS CORP., 486 Pawtucket Ave., Pawtucket, R. I.—Grille cloths  
 TOLEDO SOUND EQUIPMENT LABS., 1215 Jackson St., Toledo, Ohio, "Toledo"—ACC, B, D, H  
 TRANSFORMER CORP. OF AMERICA, 69 Wooster St., New York, N. Y., "Clarion"—ACC, B, D, H, PM  
 UNIT REPRODUCERS MFG. CO., 999 E. Main St., Rochester, N. Y., "Magna"—PM  
 UNITED PRESSED PRODUCTS CO., 407 S. Aberdeen St., Chicago, Ill., "Seamless Moulded Paper"—C  
 UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—D, M, PM  
 VITAVOX SALES CO., 557 W. Jackson Blvd., Chicago, Ill., "Vitavox," "Kinetic"—D, M, PM  
 WEBER BROS. METAL WORKS, 108 N. Jefferson St., Chicago, Ill.—H  
 WEBSTER-CHICAGO—Webster Co.  
 WEBSTER CO., 3325 W. Lake St., Chicago, Ill., "Webster-Chicago"—ACC, B, D, H, PM  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"  
 WRIGHT-DeCOSTER, INC., 2233 University Ave., St. Paul, Minn., "Wright-deCoster," "Nokoil"—ACC, B, C, D, H, M, PM—See adrt. p. 61

SWITCHES



Power switches . . . . . P  
 Test equipment switches . . . . . TS  
 Time switches . . . . . TE  
 Wave change (receiver) . . . . . WC

ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—TS  
 AMERICAN RADIO HARDWARE CO., INC., 476 Broadway, New York, N. Y., "Arho"—TS  
 ARHCO—American Radio Hardware Co., Inc.  
 BULL DOG ELECTRIC PRODUCTS CO., 7610 Jos Campau, Detroit, Mich., "Bull Dog"—P

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CARLING TOOL & MCH. CO., 626 Capitol Ave., Hartford, Conn., "T. M. Co."—P, TS, WC  
 CENTRALAB, 900 E. Keefe Ave., Milwaukee, Wis., "Centralab"—TS, WC—See adrt. p. 42  
 CHICAGO TELEPHONE SUPPLY CO., Elkhart, Ind., "C.T.S."—P, WC  
 CONTINENTAL ELECTRIC CO., St. Charles, Ill., "Continental Vacuum Power Switches"—P  
 C.T.S.—Chicago Telephone Supply Co.  
 CUTLER-HAMMER, INC., N. 12th & W. St. Paul Ave., Milwaukee, Wis., "Cutler-Hammer"—P, TS  
 DAVEN CO., 158 Summit St., Newark, N. J., "Daren"—TS  
 DEPENDABLE—Radio City Products Co., Inc.  
 GENERAL RADIO CO., 30 State St., Cambridge, Mass.—TS  
 ICA—Insuline Corp. of America  
 INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—TS, WC  
 JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—TS  
 P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind.—"Yaxley"—P, TS, WC  
 MARK TIME—M. H. Rhodes, Inc.  
 MEISSNER MFG. CO., 7th & Belmont Sts., Mt. Carmel, Ill., "Meissner"—TS, WC  
 MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Muter"—TS  
 OAK MFG. CO., 711 W. Lake St., Chicago, Ill., "Oak"—TS, WC  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa.—P, TS, WC  
 PRECEPTOR MFG. CO., 179 Minna St., San Francisco, Calif., "Preceptor"—TS, WC  
 RADIO CITY PRODUCTS CO., INC., 88 Park Pl., New York, N. Y.—"Dependable"—TS, WC  
 RADIO ENGINEERING LABS., INC., 25-14 41st Ave., Long Island City, N. Y., "REL"—P  
 RCA MANUFACTURING CO., Front & Cooper Sts., Camden, N. J., "RCA"—P, TS, WC  
 READRITE METER WORKS, Bluffton, Ohio, "Readrite"—TS  
 RECORDING EQUIPMENT MFG. CO., 6811 Sunset Blvd., Hollywood, Calif.—TS  
 REMLER CO., LTD., 2101 Bryant St., San Francisco, Calif., "Remler"—TS  
 M. H. RHODES, INC., 1270 6th Ave., New York, N. Y., "Mark Time"—TE  
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa.—TS  
 TECH LABORATORIES, 703 Newark Ave., Jersey City, N. J., "Tech Lab"—TS  
 TORK CLOCK CO., INC., 31 South St., Mt. Vernon, N. Y., "Tymit"—TE  
 TRIPLETT ELECTRICAL INSTRUMENT CO., 122 Main St., Bluffton, Ohio, "Triplett"—TS  
 TYMIT—Tork Clock Co., Inc.  
 UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—TS  
 WIRT CO., 5221 Greene St., Philadelphia, Pa.—P, WC  
 YAXLEY—P. R. Mallory & Co., Inc.

TRANSFORMERS & CHOKES



Audio . . . . . A  
 Amateur transmitting . . . . . AM  
 Chokes . . . . . C  
 Comm'l transmitting . . . . . COM  
 Power . . . . . P

ACME-DELTA—Raytheon Mfg. Co.  
 ACME ELECTRIC & MFG. CO., 1441 Hamilton Ave., Cleveland, Ohio, "Acme"—A, AM, C, CT, P  
 ACOUSTIC—Audio Development Co.  
 ALLOY TRANSFORMER CO., INC., 135 Liberty St., New York, N. Y., "Alloy"—A, AM, C, CT, P  
 AMERICAN TRANSFORMER CO., 178 Emmet St., Newark, N. J., "Amertran"—A, AT, C, CT, P  
 AMERTRAN—American Transformer Co.  
 AMPLIFIER CO. OF AMERICA, 37 W. 20th St., New York, N. Y., "International"—A, AT, CT, P

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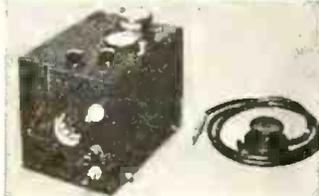
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## TRANSFORMERS—Cont'd.

- ARLAB MFG. CO., 1250 N. Paulina St., Chicago, Ill., "Lion"—A, C, P
- AUDIO DEVELOPMENT CO., 4351 France Ave., S., Minneapolis, Minn., "Acoustic"—A, AT, C, CT, P
- NATHANIEL BALDWIN—Consolidated Radio Products Co.
- CHICAGO TRANSFORMER CORP., 3501 W. Addison St., Chicago, Ill., "Chitran"—A, C, P
- CHITRAN—Chicago Transformer Corp.
- CONSOLIDATED RADIO PRODUCTS CO., 361 W. Superior St., Chicago, Ill., "Nathaniel Baldwin"—A, C, P
- COSMIC RADIO CORP., 699 E. 135th St., New York, N. Y., "Cosmic"—C
- COTO—Coto-Coil Co., Inc.
- COTO-COIL CO., INC., 229 Chapman St., Providence, R. I., "Coto"—A, AT, C, P
- DONGAN ELECTRIC MFG. CO., 2987 Franklin St., Detroit, Mich., "Dongan"—A, C, P
- DWYER ELECTRIC PRODUCTS CO., 10 S. La Salle St., Chicago, Ill., "Dwyer"—AT
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y., "Ferranti"—A, AM, C, CT, P
- FRANKLIN TRANSFORMER MFG. CO., 607 22nd Ave., N. E., Minneapolis, Minn., "Franklin"—A, AT, C, CT, P
- FREED TRANSFORMER CO., 100 6th Ave., New York, N. Y., "Freed"—A, C, P
- FULTON RADIO CORP., 100 6th Ave., New York, N. Y., "Fulton"—A, AT, C, P
- GENERAL RADIO CO., 30 State St., Cambridge, Mass., "G-R," "Variac"—A, autotransformers
- GENERAL TRANSFORMER CORP., 530 S. Throop St., Chicago, Ill.—A, AT, C, CT, P
- GENERAL WINDING CO., 254 W. 31st St., New York, N. Y., "Gen-Win"—A, AT, C, CT, P
- GEN-WIN—General Winding Co.
- HALLDORSON CO., 4500 Ravenswood Ave., Chicago, Ill., "Halldorson"—A, C, P
- HEINTZ & KAUFMAN, LTD., South San Francisco, Calif., "Heintz & Kaufman, Ltd."—CT
- INTERNATIONAL TRANSFORMER CO., 22 W. 22nd St., New York, N. Y., "International"—A, C, P
- J & A—Jenkins & Adair, Inc.
- JEFFERSON ELECTRIC CO., 900 25th Ave., Bellwood, Ill., "Jefferson"—A, C
- JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—A, C, CT, P
- KENYON TRANSFORMER CO., INC., 840 Barry St., New York, N. Y., "Kenyon"—A, AT, C, CT, P
- LION—ArLab Mfg. Co.
- LIPMAN ENGINEERING CO., 415 Van Braam St., Pitsburgh, Pa.—A, C, P
- MASTERPIECE—McMurdo Silver Corp.
- NATIONAL CO., 61 Sherman St., Malden, Mass., "National"—A, P
- NATIONAL MILL SUPPLY CO., 207 E. Columbia St., Fort Wayne, Ind.—A, C, P
- NORDENDALE MFG. CO., 2100 Fulton St., Chicago, Ill.—A, C
- PACENT ENGINEERING CORP., 79 Madison Ave., New York, N. Y., "Pacent"—A, C, P
- PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—A, C, P
- RADIO RECEPTOR CO., INC., 106 7th Ave., New York, N. Y., "Radio Receptor"—A, AT, C, CT, P
- RAYTHEON MFG. CO., 190 Willow St., Waltham, Mass., "Acme-Delta"—A, AM, C, CT, P
- RCA MANUFACTURING CO., Front & Cooper Sts., Camden, N. J., "RCA"—A, AT, C, CT, P
- ROBERTSON-OAVIS CO., 311 N. Desplaines St., Chicago, Ill.—A, C, P
- SEGELSOND, INC., 235 Pine St., Gardner, Mass., "Segelsound"—A, C, P, AT
- McMURDO SILVER CORP., 2900 S. Michigan Blvd., Chicago, Ill., "Masterpiece"—A, C, P
- SOUND SYSTEMS, INC., 6545 Carnegie Ave., Cleveland, Ohio—"S.S.I."—A, C, P
- S.S.I.—Sound Systems, Inc.
- STANCOR—Standard Transformer Corp.
- STANDARD TRANSFORMER CORP., 850 Blackhawk St., Chicago, Ill., "Stancor"—A, AM, C, P—See adrt. p. 34
- THORDARSON ELECTRIC MFG. CO., 500 W. Huron St., Chicago, Ill., "Thordarson" & "Tru-Fidelity"—A, AT, C, CT, P
- TRU-FIDELITY—Thordarson Electric Mfg. Co.
- UNITED TRANSFORMER CORP., 72 Spring St., New York, N. Y., "UTC"—A, AT, C, CT, P
- UNIVERSAL MICROPHONE CO., 424 Warren Lane, Inglewood, Calif.—A, AT, C, CT, P
- UTAH RADIO PRODUCTS, 820 Orleans St., Chicago, Ill., "Utah"—A, AT, C, P
- UTC—United Transformer Corp.
- VARIAC—General Radio Co.

WEBSTER-CHICAGO—Webster Co.  
WEBSTER CO., 3825 W. Lake St., Chicago, Ill.  
"Webster-Chicago"—A, AT, CT, P

## TEST EQUIPMENT



Adapters	AD
Audio oscillators	AO
Cathode-ray oscillographs	CRO
Condenser testers	CT
Crystal oscillators	CRY
Decade boxes (resistance)	DB
Impedance bridges	IB
Meters	M
Multi-meters	MM
Osc. frequency modulators	MOD
Ommeters	OHM
Output indicators	OI
Resistance bridges	RB
Set analyzers	SA
Signal generators	SG
Speaker tester	SPK
Tube testers	TT
Vacuum tube voltmeters	VTV
Vibrator testers	VT

- ALDEN PRODUCTS CO., 715 Center St., Brockton, Mass.—AD
- BENDIX-DAYRAO—Radio Products Co.
- BOONTON RADIO CORP., Boonton, N. J.—Com'l test equip.
- BUD RADIO, INC., 1937 E. 55th St., Cleveland, Ohio, "Bud"—AD
- BURTON-ROGERS CO., 755 Boylston St., Boston, Mass., "Höyt," "Burton-Rogers"—AD, M, MM, SA, SG, TT
- CARRON MFG. CO., 415 S. Aberdeen St., Chicago, Ill.—Specialties
- CHEKATUBE—J. M. P. Mfg. Co.
- CLOUGH-BREngle CO., 2815 W. 19th St., Chicago, Ill., "Clough-Brengle"—AO, CRO, MM, MOD, OI, SA, SG, VT, VTY—See advt. p. 35
- CONSOLIDATED WIRE & ASSOCIATED CORPS., 512 S. Peoria St., Chicago, Ill.—CT, OI, RB
- OAVEN CO., 158 Summit St., Newark, N. J., "Daven"—IB, M, OI, RB
- DEPENOBLE—Radio City Products Co., Inc.
- TOBE DEUTSCHMANN CORP., Canton, Mass., "Tobe"—AO, CT, IB
- ALLEN B. DUMONT LABORATORIES, INC., 532 Valley Road, Upper Montclair, N. J., "Dumont"—CRO, MOD
- FERRIS INSTRUMENT CORP., Boonton Ave., Boonton, N. J.—Com'l test equipment
- FULTON RADID CORP., 100 6th Ave., New York, N. Y., "Fulton"—CRO
- GENERAL ELECTRIC CO., Schenectady, N. Y.—M
- GENERAL RADIO CO., 30 State St., Cambridge A. Mass., "G-R"—Com'l test equipment
- G-R—General Radio Co.
- HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland, Ohio, "Hickok"—AD, AO, CT, CRO, IB, M, MM, MOD, OI, RB, SA, SG, SPK, VT, VTY—See advt. p. 57
- HOLLOWAY CO., 72 Spring St., New York, N. Y., "Holloway"—CRO
- HOYT—Burton-Rogers Co.
- HYDRO—Unit Reproducer Mfg. Co.
- ICA—Insuline Corp. of America
- INSULINE CORP. OF AMERICA, 25 Park Pl., New York, N. Y., "ICA"—AD, VTY
- JACKSON ELECTRICAL INSTRUMENT CO., 410 Kiser St., Dayton, Ohio, "Jackson"—CRO, MM, MOD, SA, SG, TT
- J-M-P MFG. CO., INC., 3049 N. 34th St., Milwaukee, Wis., "Chekatube"—CT, OHM, TT
- LEEOS & NORTHRUP, 4970 Stenton Ave., Philadelphia, Pa.—Special Types
- LITTLEFUSE LABORATORIES, 4238 Lincoln Ave., Chicago, Ill.—Instrument fuses
- L & L ELECTRIC CO., 346 Madison Ave., Memphis, Tenn., "ABC"—TT
- MILLION RADIO & TELEVISION, 361 W. Superior St., Chicago, Ill., "Million"—MM, OI, SA, SG, TT, VT
- MULTIPLEX RADIO SERVICE, INC., 88 Fourth Ave., Brooklyn, N. Y., "Multiplex"—SPK
- MUTER CO., 1255 S. Michigan Ave., Chicago, Ill., "Muter"—DB
- NEOBAM—Sundt Engineering Co.

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 POTTER CO., North Chicago, Ill.—CR0, CT  
 POWERTONE—Try-Mo Radio Co.  
 PRECEPTOR MFG. CO., 179 Minna St., San Francisco, Calif.—OI, RB, SA, TT, VT, VTV  
 PRECISION APPARATUS CORP., 821 E. New York Ave., Brooklyn, N. Y., "Precision"—SA, TT  
 RACO—Radio Constructors Labs.  
 RADIO CITY PRODUCTS CO., INC., 88 Park Pl., New York, N. Y., "Dependable"—AD, AO, CR0, CT, MDL, TT  
 RADIO CONSTRUCTORS LABS., 136 Liberty St., New York, N. Y., "Raco"—SG  
 RADIO PRODUCTS CO., 125 Sunrise Pl., Dayton, Ohio, "Bendix-Dayrad"—CR0, MM, SA, ST, TT, VT  
 RADIO TECHNICAL LABORATORY, 1328 Sherman Ave., Evanston, Ill.—TT—See advt. p. 58  
 RANGER-EXAMINER—Readrite Meter Works  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—AD, AO, CRY, CT, IB, MOD, RB, SG  
 REARITE METER WORKS, 136 E. College Ave., Bluffton, Ohio, "Ranger-Examiner," "Readrite"—AD, CT, M, MM, OI, SA, SG, TT  
 ROTO-RANGER—Simpson Electric Co.  
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa., "Shallcross"—IB, MM, OI, RB, SA  
 SIMPSON ELECTRIC CO., 5216 W. Kinzie St., Chicago, Ill., "Simpson," "Roto-Ranger"—M, MM, SA, SG, TT  
 SOLAR MFG. CORP., 599 Broadway, New York, N. Y., "Solar"—CT  
 SPRAGUE PRODUCTS CO., No. Adams, Mass., "Sprague"—Interference analyzer—See advt. p. 54  
 SUNOT ENGINEERING CO., 4238 Lincoln Ave., Chicago, Ill., "Neobeam Oscilloscope"—AO, OI, SA, VT, VTV  
 SUPERIOR INSTRUMENTS CO., 139 Cedar St., New York, N. Y., "Superior"—CT, SG—See advt. p. 40  
 SUPREME INSTRUMENTS CO., 414 Howard St., Greenwood, Miss., "Supreme"—AD, AO, CR0, CT, IB, M, MM, MOD, OI, RB, SA, SG, TT  
 TACO—Technical Appliance Corp.  
 TECHNICAL APPLIANCE CORP., 17 E. 16th St., New York, N. Y., "Taco"—OI  
 TECH LABORATORIES, 703 Newark Ave., Jersey City, N. J., "Tech Lab"—IB, OI, RB  
 TEFFT RADIO CO., Plymouth, Mich., "Tefft"—AO, CT, SA, SG, TT, VTV  
 TRIPLETT ELECTRICAL INSTRUMENT CORP., 123 Main St., Bluffton, Ohio, "Triplet"—AD, AO, CT, M, MM, MOD, OI, SA, SG, TT, VTV—See advt. p. 20  
 TRIUMPH MFG. CO., 4017 W. Lake St., Chicago, Ill., "Triumph"—AD, AO, CR0, CT, IB, MM, MOD, OI, RB, SA, SG, TT  
 TRY-MO RADIO CO., 85 Cortlandt St., New York, N. Y., "Powertone"—MM  
 ULTRAMAR MFG. CORP., 1160 Chatham Court, Chicago, Ill., "Ultramar"—MOD, OI  
 UNIT REPRODUCERS MFG. CO., 999 E. Main St., Rochester, N. Y., "Hydro"—AD  
 UNITED MOTORS SERVICE, 3044 Grand Blvd., Detroit, Mich., "United Motors"—CR0, MM, MOD, OHM, OI, SA, SG, SPK, TT, VTV  
 UNITED SOUND ENGINEERING CO., 2233 University Ave., St. Paul, Minn., "U. S. E."—AO, CR0, U. S. E.—United Sound Engineering Co.  
 EARL WEBBER CO., 1313 W. Randolph St., Chicago, Ill., "Webber"—CT, M, SA, SG, TT, VT  
 WESTINGHOUSE ELECTRIC CO., Newark, N. J., "Westinghouse"—M, MM  
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark, N. J., "Weston"—AD, CT, M, MM, OHM, OI, SA, TT, VTV—See advt. p. 37

TUBES



- Ballast . . . . . B
- Cathode-ray . . . . . CR
- Industrial . . . . . I
- Photo-cells . . . . . PC
- Receiving . . . . . R
- Transmitting . . . . . T

AMPEREX ELECTRONICS PRODUCTS CORP., 79 Washington St., Brooklyn, N. Y., "Amperex"—I, PC, T  
 AMPERITE CO., 561 Broadway, New York, N. Y., "Amperite"—B—See advt. p. 40

ARCTURUS RADIO TUBE CO., 720 Frelinghuysen Ave., Newark, N. J., "Arcturus"—CR, R—See advt. p. 53  
 B-L ELECTRIC MFG. CO., 19th & Washington Aves., St. Louis, Mo.—Dry Rectifiers  
 CATHOGE RAY & TELEVISION TUBE CO., Brockton, Mass.—CR  
 CLAROSTAT MFG. CO., 285 N. 6th St., Brooklyn, N. Y., "Clarostat"—B  
 CONTINENTAL ELECTRIC CO., St. Charles, Ill., "Cetron"—I, PC  
 CETRON—Continental Elec. Co.  
 CHAMPION RADIO WORKS, 88 Holten St., Danvers, Mass., "Champion"—B, R  
 CROSLY RADIO CORP., 1320 Arlington St., Cincinnati, Ohio, "Crosley"—R  
 ALLEN B. OUMONT LABORATORIES, INC., 532 Valley Rd., Upper Montclair, N. J., "Dumont"—CR  
 OURESITE LABORATORIES, 52 Courtlandt St., Paterson, N. J.—B  
 HUGH H. EBV, INC., 2066 Hunting Park Ave., Philadelphia, Pa.—PC  
 EIMAC—Eitel-McCullough, Inc.  
 EITEL-McCULLOUGH, INC., 798 San Mateo Ave., San Bruno, Calif., "Eimac"—T  
 ELECTROCELL—F. Loewenberg  
 ELECTRONIC PRODUCTS CO., 5356 E. Ninth St., Los Angeles, Calif., "Airex"—CR, I, T  
 FEDERAL TELEGRAPH CO., 200 Mt. Pleasant Ave., Newark, N. J., "Federal"—T  
 GAMMATRON—Heintz & Kaufman, Ltd.  
 GENERAL ELECTRIC CO., 1285 Boston Ave., Bridgeport, Conn.—R  
 GENERAL ELECTRIC CO., Schenectady, N. Y., "General Electric"—CRT, I  
 G-M LABORATORIES, INC., 1731 Belmont Ave., Chicago, Ill.—PC  
 HEINTZ & KAUFMAN, LTO., South San Francisco, Calif., "Gammatron"—I, T  
 HYGRADE SYLVANIA CORP., Emporium, Pa., "Sylvania"—R—See advt. p. 30  
 HYTRON CORP., 23 New Derby St., Salem, Mass., "Hytron"—B, CR, R, T  
 J. F. O. MFG. CO., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y., "JFO"—B  
 KELETRON CO., 116 John St., New York, N. Y., "Keletron"—R  
 KEN-RAD TUBE & LAMP CORP., INC., Owensboro, Ky., "Ken-Rad"—R  
 FRED M. LINK, 125 W. 17th St., New York, N. Y.—T  
 F. LOEWENBERG, 10 E. 40th St., New York, N. Y., "Electrocell"—PC  
 NATIONAL RADIO TUBE CO., INC., 3420 18th St., San Francisco, Calif., "National Radio"—T  
 NATIONAL UNION RADIO CORP. OF N. Y., 570 Lexington Ave., New York, N. Y., "National Union"—B, CR, I, PC, R  
 PHILCO RADIO & TELEVISION CORP., Tioga & C Sts., Philadelphia, Pa., "Philco"—R  
 RAYTHEON PRODUCTION CORP., 420 Lexington Ave., New York, N. Y., "Raytheon"—B, R, T  
 RCA MFG. CO., Front & Cooper Sts., Camden, N. J., "RCA"—B, CR, I, PC, R, T—See advt. p. 4  
 REPUBLIC RADIO MFG. CO., 225 Grant Ave., East Newark, N. J., "Republic," "Marvin," "Van Dyke," "Wizard," "Crusader," "Ceca," "Par," "Buck," "Cambridge," "Gold Bond," "Hyvac," "Speed"—R  
 SPARKS-WITHINGTON CO., E. Ganson Ave., Jackson, Mich., "Sparton"—R  
 SPARTON—Sparks-Withington Co.  
 SYLVANIA—Hygrade Sylvania Corp.  
 TAYLOR TUBES, INC., 2341 Wabansia Ave., Chicago, Ill., "Taylor"—I, TT  
 TRIAD MFG. CO., INC., Blackstone & Fountain Sts., Pawtucket, R. I., "Triad"—B, CR, R—See advt. p. 34  
 TUNG-SOL LAMP WORKS, INC., Radio Tube Div., 212 Fairmount Ave., Newark, N. J., "Tung-Sol"—R—See advt. p. 46  
 UNITED ELECTRONICS CO., 42 Spring St., Newark, N. J.  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—CR, I, T  
 WESTINGHOUSE ELECTRIC & MFG. CO., E. Pittsburgh, Pa., "Westinghouse"—I  
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark, N. J., "Photronic"—PC  
 WORLO BESTOS CORP., 52 Courtland St., Paterson, N. J., "Duresite"—B  
 ZENITH RADIO CORP., 3620 S. Iron St., Chicago, Ill., "Zenith"—B, R

VIBRATORS



- Auto radio . . . . . A
- Farm radio . . . . . F
- Inverters . . . . . INV

AMERICAN TELEVISION & RADIO CORP., 128 E. 10th St., St. Paul, Minn., "Atr"—A, F, INV  
 ATR—American Television & Radio Co.  
 ELECTRONIC LABORATORIES, INC., 122 W. New York Ave., Indianapolis, Ind., "Electronic"—A, F, INV  
 P. R. MALLORY & CO., INC., 3029 E. Washington St., Indianapolis, Ind., "Mallory"—A, F, INV  
 OAK MFG. CO., 711 W. Lake St., Chicago, Ill., "Oak"—A, F  
 RADIART CORP., Shaw Ave. at 133rd St., Cleveland, Ohio, "Radiart"—A, F  
 UTAH RADIO PRODUCTS CO., 820 Orleans St., Chicago, Ill., "Utah"—A, F—See advt. p. 30

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ADLER MANUFACTURING CO., 29th & Chestnut Sts., Louisville, Ky., "Adler-Royal"—C, T—See advt. p. 34  
 ALDEN CORP., Asheville, N. C.  
 CASWELL-RUNYDN CO., Huntington, Ind.  
 INGRAHAM CO., Bristol, Conn.  
 LUCE FURNITURE CORP., 655 Godfrey Ave., S. W., Grand Rapids, Mich.  
 MELBURN RADIO MFG. CO., 2218 S. Hooper St., Los Angeles, Calif.  
 STANDARD CABINET CO., INC., 543 Union St., Brooklyn, N. Y.  
 STEGER FURNITURE MFG. CO., INC., Steger, Ill.  
 SUPERIOR CABINET CORP., 3611 14th Ave., Brooklyn, N. Y., "Superior"  
 WARREN FURNITURE CO., Warren, Pa.  
 J. D. WARREN MFG. CO., 1936 Avon St., Montpelier, Ohio—Parts Cabinets

INSULATION

- Ceramics . . . . . C
- Fiber . . . . . F
- Mica . . . . . M
- Plastics . . . . . P

AMERICAN LAVA CORP., Cherokee Blvd. & Manufacturers Rd., Chattanooga, Tenn.—C  
 AMERICAN MICA WORKS CORP., 47 West St., New York, N. Y.—M  
 ARMITE—Spaulding Fibre Co., Inc.  
 ASSOCIATED ATTLEBORO MFRS., INC., Attleboro, Mass.—P  
 AUBURN BUTTON WORKS, Auburn, N. Y.—P  
 BAKELITE CORP., 247 Park Ave., New York, N. Y., "Bakelite"—P  
 BODNTON MOLDING CO., Boonton, N. J.—P  
 WILLIAM BRAND & CO., 276 4th Ave., New York, N. Y.—M  
 COLT'S PATENT FIRE ARMS MFG. CO., Hartford, Conn.—P  
 COMMUNICATIONS PRODUCTS, 245 Custer Ave., Jersey City, N. J.  
 CONTINENTAL-DIAMOND FIBRE CO., Newark, Del., "Diamond," "Dilecto"—F  
 FIBROC INSULATION CO., 560 Lincoln Ave., Valparaiso, Ind.—F, M  
 FORMICA INSULATION CO., 4638 Spring Grove Ave., Cincinnati, Ohio, "Formica"—P  
 FRANKLIN FIBRE LAMITEX CORP., Wilmington, Del.—F, P  
 FYBERDID—Wilmington Fibre  
 GENERAL ELECTRIC CO., Schenectady, N. Y., "G-E"—P  
 GENERAL PLASTICS, INC., North Tonawanda, N. Y.—P  
 ISOLANTITE, INC., 233 Broadway, New York, N. Y.—C  
 KURZ-KASCH CO., Dayton, Ohio—P  
 LAMICOID—Mica Insulator Co.  
 MICA INSULATDR CO., 200 Varick St., New York, N. Y., "Lamicoid"—P  
 MYCALEX CORPORATION OF AMERICA, 101 W. 31st St., New York, N. Y.—P  
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del., "Phenolite"—F, P  
 DHMDIO—Wilmington Fibre

RECTD MOLDED PRODUCTS, INC., Appleton at B. & O. R. R., Cincinnati, Ohio—P  
 RESINOX CORP., Terre Haute, Ind.—P  
 SPAULOID FIBRE CO., INC., 310 Wheeler St., Tonawanda, N. Y., "Spauldite," "Armite," "Spaulda"—F, P  
 STUPAKOFF LABORATORIES, INC., 6627 Hamilton Ave., Pittsburgh, Pa.—C  
 SYNTHANE CORP., Highland Ave., Oaks, Pa., "Synthane"—P  
 WESTINGHOUSE ELECTRIC & MFG. CO., E. Pittsburgh, Pa.—P  
 WILMINGTON FIBRE SPECIALTY CO., New Castle, Del., "Fyberoid," "Ohmoid"—F, P

ORGANS (ELECTRONIC) & MUSICAL INSTRUMENTS

HAMMOND CLOCK CO., 2915 N. Western Ave., Chicago, Ill.  
 MEISSNER LABORATORIES, Millburn, N. J.  
 RANGERTONE, INC., 201 Verona Ave., Newark, N. J.

RADIO LOGS & GLOBES

GEORGE F. CRAM CO., 30 E. Georgia St., Indianapolis, Ind.—Globes and Maps  
 HAYNES RADIO LOG, 161 W. Harrison St., Chicago, Ill.—Logs—See advt. p. 51  
 MILFRED MFG. CO., 757 Venice Blvd., Los Angeles, Calif., "Roto-Log"—Logs  
 SKY PILOT ORGANIZATION, Radio Park, Pearl River, N. Y.—Logs  
 WEBER-COSTELLO CO., Chicago Heights, Chicago, Ill.—Globes

TRANSMITTERS

- Amateur . . . . . AM
- Broadcast . . . . . BC
- Commercial . . . . . COM

DAVID BOGEN CO., INC., 626 Broadway, New York, N. Y., "Bogen Supreme Fidelity"—AM, BC, CDM  
 COLLINS RADIO CO., Cedar Rapids, Iowa—AM, BC, COM  
 DWYER ELECTRIC PRODUCTS CO., 10 S. La Salle St., Chicago, Ill., "Dwyer"—AM, COM, BC  
 EASTERN RADIO SPECIALTY CO., 227 Greenwich St., New York, N. Y., "Peak"—AM, OM  
 ELECTRONIC SOUND LABORATORIES, INC., 5912 Melrose Ave., Hollywood, Calif., "Electronic Sound"—AM, BC, COM  
 GATES RADIO & SUPPLY CO., 115 North St., Quincy, Ill., "Gates"—BC  
 GENERAL ELECTRIC CO., Schenectady, N. Y., "General Electric"—COM  
 HAIGIS LABORATORIES, INC., Maple Shade, N. J., "Haigis"—AM  
 HARVEY RADIO LABORATORIES, INC., 12 Boylston St., Brookline, Mass., "Harvey"—AM, CDM  
 HEINTZ AND KAUFMAN, LTO., South San Francisco, Calif., "Heintz and Kaufman"—COM  
 J & A—Jenkins & Adair, Inc.  
 JENKINS & ADAIR, INC., 3333 Belmont Ave., Chicago, Ill., "J & A"—BC, COM  
 LAFAYETTE—Wholesale Radio Service Co., Inc.  
 LEAR DEVELOPMENT CO., 121 West 17th St., New York, N. Y.—COM—See advt. p. 62  
 FRED M. LINK, 125 W. 17th St., New York, N. Y.—BC, CDM  
 MARINE RADIO CO., 124-11 101st Ave., Richmond Hill, L. I., N. Y.—AM, COM  
 PEAK—Eastern Radio Specialty Co.  
 PIEZOELECTRIC LABORATORIES, 612 Rockland Ave., New Dorp, N. Y.—BC, COM  
 PRECEPTOR MFG. CO., 179 Minna St., San Francisco, Calif., "Preceptor"—AM, COM  
 RACO—Radio Constructors Labs.  
 RADIO CONSTRUCTORS LABS., 136 Liberty St., New York, N. Y., "Raco"—AM  
 RADIO ENGINEERING LABS., INC., 25-14 41st Ave., Long Island City, N. Y.—AM, BC, COM  
 RADIO RECEPTOR CO., INC., 106 7th Ave., New York, N. Y., "Radio Receptor"—BC, COM  
 RADIO TRANCEIVER LABS., 8627 115th St., Richmond Hill, N. Y., "Radio Tranceiver Labs."—AM, CDM  
 RCA MFG. CO., INC., Front & Cooper Sts., Camden, N. J., "RCA"—AM, COM, BC  
 SUPREME INSTRUMENTS CO., 414 Howard St., Greenwood, Miss., "Supreme"—AM  
 WESTERN ELECTRIC CO., 195 Broadway, New York, N. Y., "Western Electric"—COM  
 WESTINGHOUSE ELECTRIC CO., Chicopee Falls, Mass., "Westinghouse"—COM  
 WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Ave., New York, N. Y., "Lafayette"—AM

G-E RADIO DEALERS  
 YOU'RE ON THE AIR  
 WITH

*The Hour of Charm*

*This captivating program, sponsored by General Electric's Dealers, is broadcast over the nation-wide NBC Red Network, and supplementary stations, every Monday afternoon at 4:00 (EST). The Hour of Charm reaches a selected audience of the best prospects for G-E Radio, the housewives, when they are most in the mood for relaxation from household duties.*



*Phil Spitalny and the All-Girl Singing Orchestra. At the left, Maxine, lovely Mistress of Ceremonies.*

The Hour of Charm promotes sales and good-will for General Electric Radio Dealers—

1. It is excellent entertainment—an all-girl singing orchestra and talented artists, blended into a real "Hour of Charm" by that musical maestro, Phil Spitalny.
2. It effectively brings desire for G-E Radio by persuasive commercials, skillfully built into the continuity.
3. In addition, it provides the best type of program to use in demonstrating a G-E Radio, at an hour when all dealers are open for business.

The Hour of Charm is YOUR program. Use it to demonstrate G-E Radio!

WATCH  
 G-E RADIO  
 IN 1936-1937!

*"s-s-sh that's G-E Focused Tone!"*

**GE**  
AUTOMATIC  
*Focused Tone*  
MEANS  
PERFECT TUNING  
PERFECT TONE

**GE**  
AUTOMATIC  
*Focused Tone*  
AUTOMATICALLY.  
INSTANTLY, VISIBLY.  
ASSURES PERFECT TONE

The story this new G-E Radio window display tells is overflowing with human-interest. You'll find it a sure-fire magnet for drawing attention and directing "shoppers" into your store. Few displays have ever equaled its beauty of color and originality of composition. There is none that tells the quality story in so convincing a manner.

You can't miss the sales and profit momentum from gift purchases with this General Electric Radio gift-season display in your window. Use it to make your "store frontage" work double time to pull in prospects for demonstrations and sales. It's a "nat-

ural" for the Xmas shopping season.

This eleven-color lithograph display is only one of a series of sales-promotion helps furnished to Authorized G-E Radio Dealers. The complete G-E Radio Sales-Promotion Service covers every sales-develop-

ment requirement that dealers need to direct their sales efforts more effectively and produce the most substantial results.

If you have not yet received your display—see your G-E Radio Distributor immediately.

**GENERAL  ELECTRIC**  
AUTOMATIC  
*Focused Tone Radio*  
Appliance and Merchandise Dept., General Electric Co., Bridgeport, Connecticut.

# HOLD EVERYTHING! WATCH Admiral<sup>IN'</sup> '37

LASH  
XTRA

ADMIRAL  
RADIOGRAM

FLASH  
EXTRA

TO RADIO DEALERS EVERYWHERE

YES, SIR! ADMIRAL CERTAINLY GAVE THE INDUSTRY PLENTY TO TALK ABOUT ... AND SELL ... IN '36. THOSE SENSATIONAL "TILT-TUNERS" THAT MADE TUNING EASY STANDING OR SITTING ... A 12 TUBE CONSOLE WITH TWICE THE POWER OF ANY OTHER RADIO SELLING UNDER \$100 ... "BATTERY MISERS" WITH THE LOWEST CURRENT DRAIN ON RECORD ... JUST TO MENTION A FEW ADMIRAL "HITS" OF THE YEAR!

BUT YOU "AIN'T SEEN NOTHIN' YET"! WATCH ADMIRAL IN '37! NEW LINE OF AUTO RADIOS TO BE ANNOUNCED NEXT MONTH WILL INTRODUCE A SENSATIONAL NEW FEATURE ... WILL MAKE EVERY SINGLE CAR OWNER A POTENTIAL CUSTOMER NO MATTER IF HE ALREADY HAS A CAR RADIO OR NOT! ADMIRAL HOME RADIOS FOR '37 READY IN MAY. HOLD EVERYTHING ... AND WATCH ADMIRAL!

CONTINENTAL RADIO & TELEVISION CORP.  
325 W. Huron St., Chicago, Ill.



In the meantime ... may we wish you a Merry Christmas and a prosperous New Year and express our appreciation for the kindly way you have received Admiral during the year now drawing to a close.

Model Number	Retail Price Complete	Cabinet	Kilocycle Range	Power Supply	Number of Tubes
311B	109.50	Cons.	540*19500	AC-DC	11c.
512A	115.00	Table	144-36000	AC	12c.
512B	149.50	Cons.	144-36000	AC	12c.
514	149.50	Table	144-36000	AC-DC	14c.
514B	149.50	Cons.	144-36000	AC-DC	14c.
520	195.00	None	144-36000	AC	20c.
520B	225.00	Cons.	144-36000	AC	20c.
M26	53.50	Table	550*16000	AC	6c.
M26C	74.50	Cons.	550*16000	AC	6c.
M32	55.00	Table	550*16000	AC-DC	7c.
M32C	69.50	Cons.	550*16000	AC-DC	7c.
M33	48.50	Table	550*16000	AC-DC	7c.
M33LW	53.50	Table	140*16000	AC-DC	7c.
M49		Table	144-18000	AC	9c.
M104	75.00	Table	144-18000	AC-DC	10c.

**Giffilan Bros., Inc., 1815 Venice Blvd., Los Angeles, Calif.**

8A	\$67.50	Auto	550-1750	6v. DC	8g.
42A	18.70	Table	550-1712	AC	4g.
43A	24.50	Table	550-1712	AC	4g.
52A	36.50	Table	550-1712	AC	5g.
53A	36.50	Table	550-1712	AC-DC	5g.
54A	27.50	Table	550-1712	AC	5g.
55A	27.50	Table	550-1712	AC-DC	5g.
62B	37.50	Table	550-4000	AC	6mg.
62X	40.70	Table	550-4000	AC	6m.
63B	45.95	Table	550-18000	AC	6mg.
63X	53.95	Table	550-18000	AC	6m.
76A	56.50	Table	550*18000	Batt.	7g.
77A	83.00	Table	550*18000	Batt.	7g.
96B	85.00	Table	550-18000	AC	9mg.
96X	93.50	Table	550-18000	AC	9m.
97B	115.00	Cons.	550-18000	AC	9mg.
97X	122.00	Cons.	550-18000	AC	9m.
116B	125.00	Table	550-18000	AC	11mg.
116X	139.00	Table	550-18000	AC	11m.
117B	165.00	Cons.	550-18000	AC	11mg.
117X	185.00	Cons.	550-18000	AC	11m.

**Karadio Corp., 50 Eleventh Ave., N. E., Minneapolis, Minn.**

150	\$39.50	Auto	Broadcast	6v. DC	5g.
160	49.50	Auto	Broadcast	6v. DC	6g.
180	59.50	Auto	Broadcast	6v. DC	7g.
Police	54.50	Auto	As specified	6v. DC	5g.
Sheriff	54.50	Auto	530-2400	6v. DC	6g.

**Lehman Radio Salon, Inc. (Port-o-matic), 1013 Madison Avenue, New York**

10	\$139.50	Table	535-1650	AC-DC	5g.
12	165.00	Table	146*1525	AC DC	6g.
12A	149.50	Table	535-1650	AC-DC	6g.

**Lang Radio Corp., 3611 Fourteenth Ave., Brooklyn, N. Y.**

60PC	\$39.95†	Table	540-4500	AC-DC	6g.
60UP	13.50†	Table	540-4500	AC-DC	6g.
80NA	31.50†	Table	540*16000	AC-DC	8g.

†Net price to dealer

**Noblitt-Sparks Industries (Arvin)—additions to Sept. listing**

51-B	\$24.95**	Table	Broadcast	Batt.	4g.
61-B	42.95	Table	Broadcast	6v. DC	5g.
62-B	54.50	Cons.	Broadcast	6v. DC	6g.

**Patterson Radio Co., 1320 So. Los Angeles Ave., Los Angeles, Calif.**

86AW	\$59.50	None	550-20000	AC	8g.
106AW	74.50	None	550-20000	AC	10g.
126AW	84.50	None	550-20000	AC	12g.
186AW	64.50	Table	550-20000	AC	8g.
286AW	84.50	Cons.	550-20000	AC	8g.
386AW	134.50	Cons.	550-20000	AC	8g.
1106AW	79.50	Table	550-20000	AC	10g.
1126AW	89.50	Table	550-20000	AC	12g.
2106AW	99.50	Cons.	550-20000	AC	10g.
2126AW	109.50	Cons.	550-20000	AC	12g.
3106AW	149.50	Cons.	550-20000	AC	10g.
3126AW	159.50	Cons.	550-20000	AC	12g.
PR16	149.50	Table	550-39000	AC	16g.
PR16-CK	209.50	Cons.	550-39000	AC	16g.
PR16-CKP	269.50	Cons.	550-39000	AC	16g.
PR16-CTS	139.50	None	550-39000	AC	16g.
PR16-K	199.50	Cons.	550-39000	AC	16g.
PR16-KP	259.50	Cons.	550-39000	AC	16g.

**Radiobar Co. of America, 7100 McKinley Ave., Los Angeles, Calif.**

107	\$99.50	Spec.	540-4000	AC	5g.
507	174.95	Spec.	540-18000	AC	6g.
510	347.50	Spec.	150-22500	AC	11g.
528	268.50	Spec.	145*18000	AC	8g.
536	294.50	Spec.	145*18000	AC	8g.

**Remler Co., Ltd., 2101 Bryant St., San Francisco, Calif.**

26	\$34.90	Port.	540-4100	AC-DC	5g.
36	59.50	Auto	540*6800	6v. DC	6g.
40	29.90	Port.	540-4100	AC	4g.
41	34.90	Port.	540*13000	AC	5m.
43	49.50	Table	540-18000	AC	7c.
51	19.50	Port.	540-2400	AC	4g.
62	36.50	Table	540*13000	AC	5m.
88	79.50	Table	540*17000	AC	10c.

Model Number	Retail Price Complete	Cabinet	Kilocycle Range	Power Supply	Number of Tubes
<b>Royale Radio Mfg., Co., 1417 W. Pico St., Los Angeles, Calif.</b>					
48	\$14.95	Table	550-1750	AC	4g.
48A	15.95	Table	550-1750	AC	4g.
53A	19.95	Table	550-1750	AC	5g.
63A	29.95	Table	530-16000	AC	6g.
Radiobowl	34.95	Table	530-16000	AC	6g.

**Warwick Mfg. Co., 1700 W. Washington Blvd., Chicago, Ill.**

418		Table	535-1712	AC-DC	4g.
511		Auto	535-1500	6v. DC	5g.
530		Table		AC	5g.
530		Cons.		Batt.	5g.
540		Table	535*4000	6v. DC	5g.
618		Auto	535-1500	6v. DC	6g.
635		Table	535*16000	AC	6g.
635		Cons.	535*16000	AC	6g.
725		Table	535*16000	Batt.	7g.

**Wilcox-Gay Corp., Charlotte, Mich.**

3J4-11	\$19.95	Table	545-1580	Batt.	4g.
3JE5-93	23.95	Table	545*16600	AC-DC	5g.
3JF5-88	19.95	Table	545-1580	AC-DC	5g.
4B6-2	44.90	Auto	545-1500	6v. DC	6g.
5A6-89	39.90	Table	545-1580	Batt.	6g.
5A6-810	49.90	Cons.	545-1580	Batt.	6g.
5B5-89	34.90	Table	545*16600	AC	5g.
5BC5-15	36.95	Table	545*16600	AC	5g.
5BC5-E30	49.90	Cons.	545*16600	AC	5g.
5E7-91	44.90	Table	545*16600	AC	7g.
5E7-790	69.90	Cons.	545*16600	AC	7g.
5F8-90	54.90	Table	545*16600	6v. DC	8g.
5E8-90	59.90	Table	545*16600	AC	8m.
5E9-850	79.90	Cons.	545*16600	AC	9m.
5F8-790	69.90	Cons.	545*16600	6v. DC	8g.

**Troy Radio Mfg. Co., 1142 S. Olive St., Los Angeles, Calif.**

4	\$15.95	Table	550-1720	AC	4g.
4A	16.95	Table	550-1720	AC	4g.
4A	17.95	Table	550-1720	AC	4mg.
5A	23.95	Table	550-1720	AC	5g.
15	22.50	Table	550-1720	AC	5g.
51B	29.50	Table	550-1720	Batt.	5g.
62U	42.50	Table	550*19000	AC	6g.
63	39.50	Table	550-19000	AC	6m.
63B	39.50	Table	550-19000	Batt.	6g.
74B	69.50	Table	550-19500	Batt.	7g.
84	69.50	Table	550-19500	AC	8g.
86	39.90	Auto	550-1500	6v. DC	6g.
151	29.50	Table	550-1720	AC-DC	5g.
163	39.50	Table	550-19000	AC-DC	6c.
184	69.50	Table	550-19500	AC-DC	8g.
711	29.50	Table	550-1720	AC	6m.

**New! MUTER Interference Filters**

**STOP**

**Man Made Interference!**

THIS "Traffic Cop" of Radio absolutely eliminates the man-made interference that comes in over the power line by merely attaching the Filter directly to the set itself.

Sell these filters with confidence and guarantee their operation, because they will do the job. There's a real need for them. Write Dept. T-10. Ask your jobber or take advantage of our trial offer.

---MAIL THIS COUPON---

**THE MUTER COMPANY**  
1255 South Michigan Avenue  
Chicago, Illinois

Please ship me one Muter Interference Filter at your trial offer of \$1.80 (\$3.00 list, less 40%).  I am enclosing \$1.80  Ship it C. O. D. for \$1.80.

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

# SELLING RECORDS

★ RECORD merchandiser of one of the largest department stores in New York City makes the rousing report that not a day passes but that shoppers at the record counter are heard to ask, "a combination radio—what is that—long wave and short wave?"

According to this source, the manufacturers have been talking "machinery" rather than "music," and have failed to make it clear to a large number of very busy and preoccupied people, just what a combination radio and record-player is, and what it can offer. Hundreds of these people would buy the combination, rather than the straight radio, when they choose an instrument, if they were wise to the extra advantage.

Breathless, this wide-awake record seller goes on to say that many fans have missed altogether the amazing difference to be noted between the old-style record-players, and the new reproducers available in combination sets. It appears that nobody has bothered to drive the point home, but

given half a chance, the combinations would sell themselves. This observer is not to be fooled on the subject; the counter has sold 100,000 Red Seal records in the last three years, and in the trend of the business it was noticed that when the store wanted to take the burden of a little enlightenment itself, immediate results were forthcoming. A small and pointed ad, aimed to remove the real difficulty in the business, would drag in buyers a-plenty.

## Popular stuff

For some time, it has been obvious that lovers of fine music constitute a healthy part of record buyers; the angle that many merchandisers have missed on this score, however, is that this serious-minded group can very often be intrigued by a record of the popular sort, if the arrangement is a fine one. In shops where this sales device has been used recently, the rankest jazz tunes have been sold to high-brows because they heard a sample and liked the arrangement.

Many dealers consider that the monthly albums which some manufacturers are featuring should get more emphasis at this particular point. The point is that the quality of the albums is increasing and if record fans really want to keep up with musical trends, they'd better get started. Direct mail is suggested by many as the best medium for promoting this stunt, this fall.

## Get what they want

One prominent dealer has separated, in the back of his sales mind, his record customers according to their generation. His view is that the group of people who switched to radio exclusively, at the expense of recorded music, were the older ones, who were content to fall in line with radio development and let it go at that. He believes that younger people are more open-minded when it comes to getting what they want, when they want it, which is of course the record's big advantage. It would appear that more emphasis should be given to the types of record merchandising which appeal to the young set.

Among record retailers it was also noted that it was a wise trick to play up to the people who make a hobby out of record buying, and seem to

## Best sellers as we go to press

### VICTOR

**Truckin'**—Fox trot. **The Girl I Left Behind Me**—Fox trot. "Fats" Waller and his Rhythm—25116.

**Top Hat**—Fox trot. **Piccolino**—Fox trot. Ray Noble and his Orchestra—25094.

**Cheek to Cheek**—Fox trot. **Isn't It A Lovely Day?**—Fox trot. (Both from RKO film "Top Hat") Eddy Duchin and his Orchestra—25093.

### BRUNSWICK

(Same as last month)

**Cheek to Cheek**—Fox trot. **No Strings**—Fox trot. (Both from "Top Hat"). Vocal and tap dancing by Fred Astaire with Leo Reisman and his Orchestra—7486.

**Isn't This a Lovely Day?**—Fox trot. **Top Hat, White Tie and Tails**—Fox trot. (Both from "Top Hat"). Vocal and tap dancing by Fred Astaire with Johnny Green and his Orchestra—7487.

**The Piccolino**—Fox trot. (From "Top Hat"). Vocal by Fred Astaire with Leo Reisman and his Orchestra. **Toddlin' Along with You**—Fox trot. (From "Broadway Joe"). Leo Reisman and his Orchestra with vocal by Frank Luther—7488.

### DECCA

**Cheek to Cheek**—Fox trot with vocal trio (from "Top Hat") **Broadway Rhythm**—Fox trot. (From "Broadway Melody of 1936") Guy Lombardo and his Royal Canadians—549.

**Without a Word of Warning**—Vocal with Orchestra. **Takes Two To Make A Bargain**—Vocal with Orchestra. (Both from "Two For Tonight") Bing Crosby—548.

**Accent on Youth**—Fox trot. (From "Accent on Youth") VC. **The Girl I Left Behind Me**—Fox trot. VC. Orville Knapp and his Orchestra—554.

want everything new that appears on the releases. This type of buyer, especially this fall when the business has a new stimulus, should get a very complete service from his dealer, so that everybody concerned gets the full benefit of the new era. Several dealers have plans for increasing the number of this sort of fan, too, by passing around the dope on what a kick the vets got out of this hobby, and by giving customers the idea that it certainly is not too late to start now.



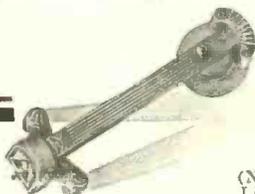
Victor's best-selling Fats Waller

## AUDAX

*"The standard  
by which others are  
judged and valued"*

IN leading Radio Stations, Laboratories and Universities—wherever superlative pick-up performance is demanded—you find AUDAX doing duty. Engineered to the nth power, immune to summer heat and other climatic conditions. Made to suit every demand from the humblest midget-combination to the HIGH FIDELITY requirements of fine transcriptions. List prices from \$9.50 to \$390 each. What is your pick-up problem?

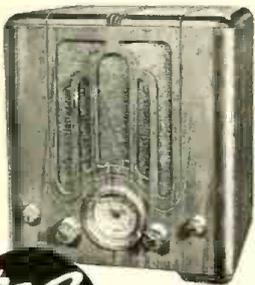
Special Recording Heads to Order  
**AUDAX COMPANY**  
500 Fifth Ave., New York  
"Creators of High Grade Electrical  
and Acoustical Apparatus Since 1915"



No. 33  
(Needle Ballast)  
Listed at \$24.50

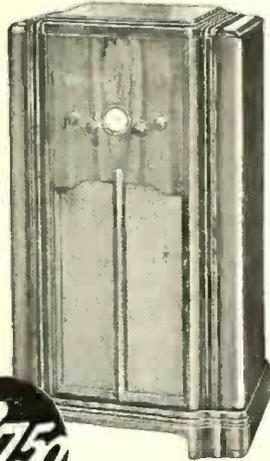
THE **NEW** in RADIO • AND **ALL** THAT IS **NEW!**

# The New 1936 **CROSLEY** Line



**\$19.99**

**THE  
CROSLEY FIVER**  
Table and Console



**\$37.50**

**CHASSIS**—Five-tube superheterodyne. Two bands—Standard and police, amateur, aviation broadcasts. Illuminated full-vision airplane type dial—5 to 1 ratio drive. Tone control. New 6B5 Triple-Twin output tube. Full floating moving coil electro-dynamic speaker.

**CABINETS**—Half an eye can see their beauty and charm—equal in every way to their superb tone. Between these and the Constitution models are a full range of receivers for every purse and type of use.

From the Fiver, giving standard, police, aviation, amateur reception for \$19.99 to the **CONSTITUTION** five-band metal tube all-wave that gets virtually all that's on the air . . . the new Crosley 1936 Line leads the field. In every price range the Crosley gives more for the money in beauty, performance, selectivity . . . in everything that makes for radio satisfaction.

**FEATURES!** Innovations! Master-strokes of engineering. In this new 1936 radio line Crosley has tapped all the resources of experience dating back to the pioneering stage; all the creativeness and inventiveness of today. Never has a line so stepped out to capture the imagination of a country. Never a line with so many "want-able" features. Never a line with equal value for the radio dollar.

The beauty of the line is alone an eye-stopper anywhere. But the more you explain the in-built quality, the new features, the reason for the extraordinary tone, selectivity, truthfulness of reproduction . . . the more your customers will select—from this line—the set that best fits their means and their wants.

Everywhere the groundwork of **SALES** is being laid with this line. Get in on this from the start by getting in touch with your Crosley distributor.

## THE CROSLEY RADIO CORPORATION

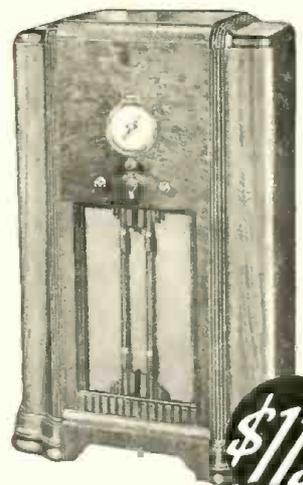
CINCINNATI POWEL CROSLEY, Jr., President  
Home of "the Nation's Station"—WLW—500,000 watts  
—most powerful in the world—70 on your dial.

Prices in Florida, Rocky Mountain States  
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**THE  
CROSLEY CONSTITUTION**  
Table and Console



**\$75.**

## CHASSIS

This all-wave 10-tube superheterodyne using all-metal tubes, commands the air. Five bands, receiving American, foreign, weather, amateur, police, aviation broadcasts. Shadow tuning. Automatic volume control. Full-vision airplane type dial. Tone control. Dual ratio tuning control. Full floating moving coil electro-dynamic speaker.

## AMONG THE FEATURES...

Three-gang tuning condenser with many notable improvements.  
New velvet action two-speed dial—planetary ball-bearing drive.  
New high-wattage, metal-to-metal tone control—far superior to conventional tone control.

New triple-tuned I. F. transformer—far better selectivity, higher fidelity.  
New H-Q-4-layer bank wound Litzendraht broadcast coils—providing better signal-to-noise ratio.

All-metal tube and all-glass tube models—a set for every need.  
NEW SHADOW TUNING. NEW 5-COLOR AIRPLANE DIAL.  
NEW COLOR-BAND DESIGNATION.

You're there WITH **CROSLEY**



*Panorama of W O R 50 KW Broadcast Station*

## **ISOLANTITE PLAYS AN IMPORTANT ROLE IN THE MODERN BROADCAST TRANSMITTER**

The 50 KW. Transmitter recently built by Western Electric for Station WOR employs ISOLANTITE liberally.

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